UNIVERSITY OF SOUTHAMPTON

Faculty of Engineering, Science and Mathematics

SCHOOL OF GEOGRAPHY

The Community Health Worker Programme as a Response to HIV/AIDS in South Africa – a Case Study on oNompilo in KwaZulu-Natal

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ABSTRACT

FACULTY OF ENGINEERING, SCIENCE & MATHEMATICS

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Doctor of Philosophy

The Community Health Worker programme as a response to HIV/AIDS in South Africa – a case study on oNompilo in KwaZulu-Natal by Jana Fried

For more than a decade, South Africa has been confronted with two major developments challenging every aspect of its society: the far-reaching political and social transformation processes after the end of apartheid and the rapidly-spreading HIV/AIDS epidemic. Health system transformation towards a more equitable distribution of resources and an improved access to health care became major governmental goals after 1994. However, the impact of the HIV/AIDS epidemic has left South Africa's public health sector struggling to provide appropriate services. The need to look for alternative strategies returned Community Health Workers (CHWs) onto the national health-policy agenda in late 2003, increasing the need for understanding details of existing programmes and their potential to address the devastating epidemic. KwaZulu-Natal's (KZN) CHW programme has been identified as the most advanced model and became the blueprint for the national rollout. Thus it was timely and useful to contextualise the actual CHW programme structures as they emerge in KZN and to examine their potential in addressing the complex drivers and impact of the HIV/AIDS epidemic.

First, on the basis of an intensive literature review and in-depth interviews an agreed model of KZN's CHW governance structure was developed. Second, the research has identified CHW managers' current understandings of the actual and expected roles CHWs can play in communities strongly affected by HIV/AIDS and unveiled their views on key factors facilitating or hindering their success in fulfilling these roles.

Results indicate that CHWs offer a valuable addition to the overburdened health sector by extending prevention and care services into marginalised communities. However, successful local implementation strongly depends on the existence of effective management and supervision structures and adequate resources. Here, greater awareness of the complex processes characterising the KZN programme may give the opportunity better to deal with arising management issues and improve CHW effectiveness.

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Declaration of Authorship

I, Jana Fried, declare that the thesis entitled

The Community Health Worker programme as a response to HIV/AIDS in South Africa – a case study on oNompilo in KwaZulu-Natal

and the work presented in the thesis are both my own, and have been generated by me as the result of my own original research. I confirm that:

- this work was done wholly or mainly while in candidature for a research degree at this University;
- where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
- where I have consulted the published work of others, this is always clearly attributed;
- where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
- I have acknowledged all main sources of help;
- where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
- none of this work has been published before submission.

Signed: Date: August 2008

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Abbreviations

AIDS	Acquired Immunodeficiency Syndrome
ANC	African National Congress
ART	Antiretroviral therapy
ARV	Antiretrovirals
ASSA	Actuarial Society of South Africa
AZT	Azidothymidine
СВО	Community Based Organisation
CBHP	Community-Based Health Programme
CD4	Cluster of Differentiation antigen 4 (a cell surface receptor)
CDC	Centers for Disease Control
CDW	Community Development Worker
СН	Community Health
CHC	Community Health Committee
CHGA	Commission on HIV/AIDS and Governance in Africa
CHW	Community Health Worker
CHWP	Community Health Worker Programme
CI	Confidence Interval
DHIS	District Health Information System
DNA	Deoxyribonucleic Acid
DoH	Department of Health
DOTS	Directly Observed Treatment, short-course
DOT	Directly Observed Therapy
EC	Eastern Cape Province, South Africa
ELISA	Enzyme–Linked Immuno–Sorbant Assay
FBO	Faith Based Organisation
FS	Free State, Province, South Africa
GDP	Gross Domestic Product
GEAR	Growth, Employment and Redistribution strategy
GP	Gauteng Province, South Africa
GNP	Gross National Product
HAART	Highly Active Anti-Retroviral Therapy
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
HSRC	Human Sciences Research Council, South Africa
HST	Health Systems Trust, South Africa
IATT	Interagency Task Team
IVDU	Intravenous Drug User
IMCI	Integrated Management of Childhood Illnesses
ITPC	International Treatment Preparedness Coalition
KAPB	Knowledge, Attitudes, Practices and Behaviour
KZN	KwaZulu-Natal, South Africa
LP	Limpopo, Province, South Africa
MMWR	Morbidity and Mortality Weekly Reports
MP	Mpumalanga, Province, South Africa
MRC	Medical Research Council

NC	Northern Cape Province, South Africa
NIAID	National Institute of Allergy and Infectious Diseases, USA
NGO	Non-Governmental Organisation
NP	National Party
NPA	Natal Provincial Administration
NPPHCN	National Progressive Primary Health Care Network
NW	North West Province, South Africa
OAU	Organisation of African Unity
OECD	Organisation for Economic Cooperation and Development
OI	Opportunistic Infection
PLHA	Person or People living with HIV and AIDS
PMTCT	Prevention of Mother-to-Child Transmission
PPHC	Progressive Primary Health Care
RDP	Reconstruction and Development Programme
RNA	Ribonucleic Acid
RSA	Republic of South Africa
SAAVI	South African AIDS Vaccine Initiative
SAPA	South African Press Association
SARS	Severe Acute Respiratory Syndrome
SAQA	South African Qualifications Authority
SSA	Sub-Saharan Africa
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
ТВ	Tuberculosis
TVT	The Valley Trust
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNGASS	United Nations General Assembly Special Session
VCT	Voluntary Counselling and Testing
WC	Western Cape Province, South Africa
WHO	World Health Organisation
ZDV	Zidovudine

1 Introduction and Methodology

1.1 Research background

The HIV/AIDS pandemic now has such tremendous scale and reach that, due to the consequent enormous media coverage and information campaigns, some level of general knowledge about the disease and its impact is widespread. In 2007, an estimated thirty three million people were living with HIV/AIDS worldwide, while millions more have already died from the disease since its discovery in the early 1980s. But while the sheer scale of the epidemic is enormous, this is not the only reason for the attention it receives by the international community, symbolised not only by the media focus but also by the first UN General Assembly Special Session on HIV/AIDS in 2001, the first UNGASS on an individual disease; by the introduction of the Joint United Nations Programme on HIV/AIDS (UNAIDS); and by the establishment of the UN Commission on HIV/AIDS and Governance in Africa. The other reason for such high-level attention is linked to the dramatic impact the epidemic has on all sectors of society, especially in sub-Saharan Africa, where the epidemic over the last years has for example dramatically reduced hard-gained improvements in life expectancy.

The severity of the pandemic is directly linked to some of the specific characteristics of HIV/AIDS, including its mode of transmission and long incubation period, the predominant group of people affected (working-age), and the current lack of a vaccine or cure, caused by the complex biology of the HI virus. However, intensive prevention efforts, especially in the 1980s and early 1990s have resulted in a measure of containment of the epidemic in the industrialised countries (though recently some slippage in this trend has been suggested). In sub-Saharan Africa, success stories are harder to find. Nonetheless, internationally numerous guidelines based on best-practice have been developed, which identify the three areas of prevention, treatment and care, and impact mitigation, implemented through a multi-sectoral response as the key to an effective strategy.

However, South Africa, the country with the worldwide highest number of people living with HIV/AIDS, was not only confronted with the effects of its growing national HIV/AIDS epidemic, but simultaneously with major transformation processes following the end of apartheid. Given the results of the apartheid era, health system transformation towards a more equitable distribution of resources and an improved access to health care for the previously disadvantaged population has been one of the major goals of the South African government since 1994. The major restructuring

processes taking place in the country and in the health sector in particular on the one hand limited the attention given to the emerging epidemic, but on the other hand also impacted on the actual possibilities available for response. The health sector, as a key role player in all areas (prevention, treatment and care, impact mitigation), was thus affected in multiple ways: by both the epidemic and the transformation process. With health sector reform focusing on community-centred Primary Health Care to overcome inequity but major shortages in health personnel, the Community Health Worker Programme received, first in the province of KwaZulu-Natal, then also nationwide increasing attention. Community Health Workers, or to use the local term, oNompilo, are community-based workers who receive relatively short training and are subsequently expected to address health and development issues within their communities. However, Community Health Workers themselves are equally affected by the epidemic – and the relationship is complex because of the overlaying of the social. political and medical dimensions of the pandemic. The Community Health Worker programme thus presents itself as a potential practical response to seemingly impossible individual and community pressures - yet its subtle relationship with the complex dual set of drivers (socio-political and bio-medical) makes it difficult to characterise and research. For this reason, it emerged as a fitting topic for a PhD study, and a fitting challenge in view of the extent to which its expression in detail is so recent that even the major role players often know only part of the story.

More specifically, the research project presented in this thesis emerged from the general notion that HIV/AIDS and the complex, and in South Africa highly-politicised, response to it constitutes one of the greatest challenges for this, since the end of Apartheid, so hopeful country. During several (research) visits in the 1990s, I have learnt personally, through exposure to media, bill board advertisements and private anecdotes, of some of the impacts the epidemic is having on individuals, business and administrations, and society in general. From this experience, my interest developed to explore possibilities contributing to a strengthened response to the epidemic.

During the initial visits to KwaZulu-Natal in 2002, the increasing provincial and national interest in Community Health Worker programmes emerged, raising the questions what potential role these Workers could play in a society strongly affected by HIV/AIDS, and what role a national Community Health Worker programme could have within a transforming health care system struggling with the epidemic's impacts. In this respect, this study in KwaZulu-Natal is framed, on the one hand, by the specific challenges that are posed by the epidemic, and on the other hand, by the structural changes in South Africa's public health care system and the specific HIV/AIDS policies developed and

implemented. Thus, while the focus is on the actors, the existing processes and structures of the Community Health Worker programme, the wider health system structures in which this programme is embedded are seen as equally relevant for understanding the programme's potential to contribute to overall HIV/AIDS response. An assessment of this potential, however, requires not only an awareness of the complex facets of HIV/AIDS response, details of the South African health sector and HIV/AIDS policy development, but also a detailed understanding of existing processes and structures as they emerge in KZN's Community Health Worker programme. Here, service providers, *i.e.* the people closely involved with the local and provincial Community Health Worker programme, are ideally placed to provide valuable insights into the programme's systems of practice.

1.2 Aim and objectives of the thesis

Based on the outline above, the aim of the thesis is

To explore the views of service providers as a basis for assessing the potential and actual role of the South African KwaZulu-Natal Community Health Worker programme as a contribution to the provincial and national response to the HIV/AIDS epidemic.

In order to achieve this aim, the following specific objectives have been identified:

[a] to explore in depth the nature of the HIV/AIDS sub-Saharan pandemic as a basis for deducing possible areas in which Community Health Worker contribution might be found,

[b] to examine the structural and policy framework for HIV/AIDS response implementation in the context of a transforming South Africa, thus setting the framework for Community Health Workers' possible areas of activity,

[c] to undertake an in-country qualitative interview-based survey of provider views on Community Health Workers and their role, and of South Africa and KZN structures for responding and coping,

[d] to analyse the survey outputs against the background of the review of the epidemic and the associated review of South Africa's structural ability to cope, and

[e] to synthesise the survey outputs into an overall review of the actual and potential role of the Community Health Worker programme.

1.3 Research methodology

Two complementary information gathering approaches formed the basis for the research presented here – a literature review and expert interviews conducted in South Africa. Starting in 2002, the actual in-country fieldwork took place in KwaZulu-Natal province (see below) and was divided into three phases: an initial familiarisation phase, a phase contextualising Community Health Workers within the broader health care system and the final phase focusing on the programme-specific structures and processes as perceived by local stakeholders. These three phases and the reasons behind the selection of a specific qualitative method will be discussed in more detail below.

Running parallel throughout all field-based phases, the on-going review of relevant literature formed an integral part of the research, bringing together three different bodies of work. It covered the main areas of this research undertaking including publications on the HIV/AIDS epidemic and potential areas of response, on the South African health sector background, and on relevant concepts like Primary Health Care. The purpose of this part of the literature process was to learn about the HIV/AIDS epidemic and its specific conditions, drivers and affects in general, and to develop a conceptual model of a comprehensive response strategy. This provided the basis for evaluating and structuring stakeholder-identified activities of Community Health Workers in the context of the epidemic. Furthermore, the investigation of South Africa's historic and current health care system increased the understanding of local conditions to implement any response (Chapters 2 and 3). These aspects of the research were investigated relying predominantly on academic and policy publications, but also expert interviews.

However, the literature review component concerning the provincial Community Health Worker programme relied on both academic and policy publications, which were then supplemented by various local evaluations, internal reports and other 'grey' literature, which was collected during the fieldwork in KwaZulu-Natal. Community Health Worker programmes are and were – as will be described – not a new development by South Africa (see Chapter 4). Thus, the available publications informed the structure of the description and the evaluation of KZN's approach to Community Health Worker programme implementation (see Chapter 5). They were also used to fill in the gaps and provide a background for understanding challenges and possible solutions. The existing literature evaluating South African Community Health Worker programmes has almost exclusively been published before 1994, and thus predates the transformation processes of the last decade and the dramatically increasing impacts of the HIV/AIDS epidemic. Academic publications after this date mention Community Health Workers as potential deliverers of specific primary health care services (e.g. TB-DOTS; see 2.5.2.1), but rarely focus on issues related to programme implementation. Two, more substantial papers by Friedman published in the South African Health Reviews from 2002 and 2005 provide a valuable overview of the potential of Community Health Worker programmes in South Africa, but do not address the particular challenges related to the HIV/AIDS epidemic nor do they pay specific attention to KZN. As outlined, this research aims to address this gap.

As mentioned above, field-based research within South Africa started in 2002 and was divided into three phases. The first phase of research commenced with an initial investigation of HIV/AIDS response and the health care sector in South Africa and KwaZulu-Natal, respectively. The aim of the fieldwork during this familiarisation phase (in January/February 2002) was to establish an understanding of local organisations and processes in KZN's health care sector, to gain a general overview of the stakeholders involved and to conduct interviews with key informants as a basis for the subsequent more detailed investigations into the Community Health Worker Programme. Given my personal characteristics as a researcher foreign to the country and outsider to the provincial health services sector, this phase served as an important starting point to establish and strengthen contacts within KZN, to build a support network, and to identify potential informants within the Community Health Worker programme framework for the subsequent phases.

At this stage, a decision was also made regarding the qualitative research methods employed. That decision, on the one hand, was informed by the research question, the aim to develop a detailed understanding of local expressions of the emerging programme and the intent to give voice to the various local stakeholders, and, on the other hand, by the need to consider local practicalities and power structures. The qualitative methods originally considered were in-depth interviews, focus groups and participant observation.

As a research technique, focus groups (cf. e.g. Bedford and Burgess, 2001; Cameron, 2005) usually consist of a relatively small group of individuals invited to discuss a particular topic or issue under the moderation of the researcher(s). This allows the indepth exploration of a particular theme similar to a research interview, but with the

additional chance to uncover "how meanings and experiences are negotiated and contested between participants" (Valentine, 2001, p.44). Furthermore, group dynamics can often create unexpected new interpretations and surprising insights. In this respect, the briefly described technique would have been well suited to explore the complexities, various local expressions and personal interpretations of the emerging provincial Community Health Worker programme. However, given the relatively small number and the high level of previous acquaintance of potential focus group participants from a fairly hierarchical professional setting, in-depth one-to-one interviews have been selected as the preferred research method in this particular setting. This approach was chosen to encourage openness and avoid potential programme-internal conflicts.

An in-depth interview, "a conversation with a purpose" (Eyles, 1988), is not just a suitable technique to learn new 'facts' about a specific topic like the Community Health Worker programme, but it can create an opportunity for interviewees to present (describe, explain, contextualize) their own experiences and interpretations of their everyday (working) lives (Valentine, 1997). As such, this method appeared most suitable to uncover emerging processes, changing conditions, existing structures and practices surrounding the Community Health Worker programme, while allowing an investigation of the meanings attached to it in the context of HIV/AIDS. For reasons indicated below, participant observation (cf. e.g. Cook, 1997; Kearns, 2005) only played a minor role in the collection of empirical data during this research. Further details of the employed technique are described below, while a list of interview partners is presented in Appendix A1. However, from this list, exact names and position details have been excluded to guarantee confidentiality.

Returning to the first field phase, interviews and meetings conducted at this stage of the research process focused on HIV/AIDS response, but also included a wide range of interrelated topics like health system transformation, district health management and the District Health Information System. During this phase, in order to obtain a breadth of view points, formal and informal interviews were conducted with a wide range of stakeholders including provincial managers at the Department of Health and the Department of Social Development, members of NGOs and the public health care sector as well as various researchers in academic, government-funded and NGO-sponsored research institutions.

Given the, at this time, still highly controversial and politically charged HIV/AIDS debate (cf. Section 3.3), at this stage a conscious decision was made to avoid the digital

recording of interviews. Instead, during the interviews notes were taken, which were transferred into an expanded digital text immediately or as soon as possible after the interviews. This approach was chosen in order to encourage greater openness when discussing the challenges the epidemic and the continuing transformation process were presenting. It allowed, for example, to reveal political tensions which otherwise may have remained undiscovered.

In this context, it is important to mention that the interviews in South Africa were conducted under a research partnership agreement with the KwaZulu-Natal Department of Health, which provided formal approval of the social research conducted in the province. Furthermore, standard ethical praxis was followed and great efforts were made to ensure that interview partners felt comfortable and unthreatened throughout the interviews and understood the subsequent use of the information they provided. Before notes were taken, or digital recording commenced, interview partners were informed of the aim of the research and of the further research process. When applicable, they were also asked if they agreed with the digital recording of the interview. All participation was voluntary and took place in the environment most convenient for the interviewee – in the majority of cases, these were individual offices at the participant's place of work, with only three exceptions. Further details of the data processing are outlined below.

Thus, the second research phase, including seven weeks in October/November 2002 in the province, initiated the more detailed investigation of the KZN Community Health Worker programme. The interview phase focused on the Community Health Worker programme aiming to include participants from all levels involved in the implementation and management of the programme. Here, it should be noted that a substantial amount of the time during this stay was invested in establishing the necessary support from all parties involved. However, when beginning with the preliminary investigations into the KZN Community Health Worker programme, it became apparent that there seemed to be no officially agreed-upon management structure throughout the province. Given the historic diversity of local programmes (see Sections 4.2 and 5.1), and the relative recentness of attempts to implement a unified programme throughout KZN, the lack of an organizational model was not unexpected. Nonetheless, an emerging aim of this second phase of the research process was to build an agreed organizational model, representing articulations of the way in which the KZN Community Health Worker programme was, or otherwise, will most likely be organised throughout the province.

Different to the other two phases described above and below, this step was a collaborative endeavour. Investigations were conducted throughout several visits to KZN in a combined effort by Prof. Mike Clark, Dr. Emma Treby and myself. However, the implications of the thesis were developed exclusively by the author of this thesis. More details of the employed approach, which was based on the Delphi method, are discussed in Section 5.2, where results of this part of the research are presented. For this study, the iterative and participative process established a framework that served as a guideline for the third and final phase of research conducted in KZN.

Thus, the first and second more explorative phases allowed the researcher to gain an overview of the broader health sector context as well as the different stakeholders involved in the programme. The interviews in the third research phase were conducted in June 2004 and started with a number of contacts within the Community Health Worker field by then already known to the researcher. These contacts were complemented with additional actors identified through the snowball sampling strategy, where interview participants were asked to name further key people relevant to the running and management of the Community Health Worker programme. Despite this seemingly arbitrary approach, the additional interview participants were selected with the aim of obtaining a wide range of perspectives covering all management levels involved. Interview partners came from three different health districts (cf. 5.1.1) and ranged from the community- and clinic-based service-provider level (Community Health Worker and Community Rehabilitation Workers, Primary Health Care Nurse) through the local supervisory and district management level up to the provincial and national level. In-depth interviews were conducted face-to-face mainly in the participant's place of work and lasted from forty five minutes to more than two hours.

Interviews were supplemented by numerous shorter consultations, field visits and participant observation in relevant meetings and workshops, which added substantially to the width and depth of the available data. However, due to a variety of organizational and security reasons, there was only limited scope to accompany Community Health Workers on their daily routine to households. While this may have added another layer of depth to the fieldwork, the privacy required for some of the work conducted by Community Health Worker, the disruptiveness to routine processes and my lack of knowledge of the local language limited the appropriateness of this approach. All interviews were conducted in English, which, though not every participant's first language, was one of the working languages for most. However, in one instance of participatory observation, the services of a translator were used. As mentioned above,

a detailed list of interview partners can be found in Appendix A1, the study area – KwaZulu-Natal – is described in more detail in Section 1.4 below.

In this context, it has to be acknowledged that the responses received during the interview process and the interview dynamic itself will have been influenced by my personal identity, including being female (=not male), (relatively) young (=inexperienced), white (=not African), foreign (=not an insider) academic and geographer (=highly educated, but not a bureaucrat nor a health professional). Considering the complexity of the perceived power relations between interviewer and interviewee indicated above, the person of the researcher has a significant influence on the way stories are told. In this study, this is a fact especially relevant since it was conducted in an area which has experienced tensions between local stakeholders, the historical results of Apartheid and in some areas a degree of research saturation. However, to some extent the way in which I attempted to conduct myself and seem to have been perceived by my interview partners (*i.e.* as a non-threatening outsider with no consequential relationship to other stakeholders but a strong interest in the interviewee's every-day work life experiences) seems to have contributed to an often open and rich description of interviewee's experiences and perception of local conditions.

In-depth interviews at this stage of the research were audio-recorded and transcribed verbatim. During the evaluation phase following the interviews, the transcripts were coded by themes using the QSR NVivo software package for qualitative data analysis. The use of this software allowed the researcher to identify emerging themes and relationships between various groups, and provided a framework for the detailed analysis of the programme.

All interview quotations used in the thesis are presented anonymously, identified only with an approximate title of the interview participant. When deemed respectful, quotations were furthermore slightly paraphrased in order to emphasise the content of the statement and to improve the flow of reading. In order to allow the reader a judgement on the degree of alterations made, a table containing the original quotations and the rephrased wording are attached in Appendix A6. KwaZulu-Natal as the area of this study is introduced to the reader below. Results of the research conducted are presented in Chapters 2 to 5, while the discussion and critical analysis of the research results takes place in Chapter 6. Chapter 7 provides a summary and conclusions to this research.

1.4 South Africa's KwaZulu-Natal province

As mentioned, the field work for this research concentrated on KwaZulu-Natal province in the south-east of South Africa (Figure 1.2, p.25). KwaZulu-Natal, or KZN as it is popularly referred to, is with 9.6 million people South Africa's most populous province. In a way, the province reflects South Africa's wide range of living conditions: its very high socio-economic diversity ranges from highly-industrialised to deep-rural areas, from income-rich communities to those struggling to survive, from centres of international tourism to remote corners hardly visited by outsiders. Approximately half of the province's population is living in rural areas (see Figure 1.1), which offer limited access to roads and public transport.



Figure 1.1: A typical settlement structure in rural KwaZulu-Natal (Photo: Fried)

According to Statistics South Africa, in September 2005 KZN had an official unemployment rate of 32.8 %. This was the highest provincial level in South Africa and approximately six percent higher than the national average. The unemployment rate is one of the main reasons for the high level of work-related migration, both within KZN and also to the urban centres further North, such as Johannesburg.

While many characteristics of KZN including the high unemployment rate are not untypical for the rest of the country, there are also some differences. For example, on a socio-political level, the majority of KZN's population are Zulus, who historically have had strong tribal structures and have been playing an important role in South Africa's past and more recent history. Thus, KwaZulu-Natal has, apart from the elected provincial government, a King and also two capitals, Pietermaritzburg and the traditional capital of KwaZulu, Ulundi. A bi-polarity is also reflected in local, provincial and national elections, where the nationally dominating ANC competes for votes with the 'Zulu-party' IFP, the Inkatha Freedom Party. KZN is one of, at the time of writing, only two provinces where the ANC does not hold an absolute majority and shares its powers in a provincial coalition government (Lemon and Fox, 2000).

As will be described in more detail in Section 2.3.3, South Africa including KwaZulu-Natal is experiencing a devastating HIV/AIDS epidemic. However, KZN is the country's province where the epidemic has spread most viciously. Here, the epidemic became generalised early on, making KZN the province with the highest HIV-infection levels amongst antenatal clinic attenders (cf. Section 2.3.3, Figure 2.11). In 2006, the annual South African prevalence survey revealed that 39.1% of pregnant women tested in KZN's antenatal clinics HIV-positive, with variations in the provinces eleven health districts between 27.9% and 46.0% (Department of Health, 2007c). The difference in prevalence levels between the provinces has been influenced by different starting points of the epidemic and the high migration levels of KZN, while variations in other driving factors may have equally been involved (cf. Section 2.3.2).

The 2004 estimates for the general population in KZN, which were produced using the Actuarial Society of South Africa's (ASSA) population projection package, are presented in Table 1.1.

Age group	Males (%)	Females (%)	Total (%)
0-4	5.7	5.7	5.7
5-14	1.1	1.1	1.1
15-49	22.5	29.1	25.9
50-59	20.7	4.6	11.6
60+	4.0	0.3	1.63
Total	14.2	16.4	15.4

Table 1.1: HIV	prevalence in the general	population (using ASSA	2003 fo	r the year	2004
(Department of	Health, 2004a)					

As will be described in more detail in Sections 2.4.3.2.3 and 2.5.2.1, the explosive increase of HIV/AIDS in conjunction with a related rise in TB cases led to an escalating crisis in the hospitals and the health sector as a whole. With the double strain of the epidemic on health sector demand and supply (cf. Section 2.4.3.2.3), in combination with the simultaneous political and economic transformation processes, KwaZulu-Natal's health services were soon struggling to cope with the ever-increasing burden. As a result, especially in the rural areas, the lack of access to health and other social

services contributed to continuingly-high deprivation levels of the predominantly black inhabitants of KZN. Thus, a strategic plan of the KZN Department of Health estimated that two million of the province's inhabitants have no adequate access to health care (Department of Health, 2002b).



Figure 1.2: Amajuba, eThekwini and uThungulu in KwaZulu-Natal (Department of Health, 2006b, edited by JF)

This desperate situation, together with KZN's relatively-strong independence in provincial decision-making from national policies, contributed to the re-established interest in Community Health Workers and to the progress which the provincial Community Health Worker programme made. These specific conditions in KwaZulu-Natal led to a comparatively early adoption of a revised provincial Community Health Worker policy by the Provincial Department of Health in 1999, and ultimately to the special interest the KZN programme received from the national level some years later (cf. Section 4.2).

1.5 Structure of the thesis

The thesis has been structured into seven chapters in order to address the aim and objectives set out above:

Chapter Two presents the results of a detailed exploration of the HIV/AIDS context. In order to assess Community Health Workers' response capacity to the epidemic, it is necessary to understand the broad fields of reaction that have been identified to minimise current and future impact. However, responses to the epidemic require an understanding of the complex impacts (*i.e.*, 'What needs to be addressed?') as well as the drivers of the epidemic (*i.e.*, 'How can we address it?'). Thus, this chapter provides a comprehensive examination of these factors, and stresses the duality between the medical and social perspectives. Also, a conceptual model informing HIV/AIDS response is developed that serves as a structural guideline for discussing Community Health Workers' role in addressing the epidemic.

Chapter Three contextualises the Community Health Worker programme within South Africa's health sector and its two major challenges, the political and social transformation process after the end of Apartheid and the devastating HIV/AIDS epidemic. On the one hand, this chapter frames the Community Health Worker programme in the context of a health care system strongly influenced by its segregationist history. On the other hand, it illustrates the areas of potential Community Health Worker involvement based on the highly-contentious HIV/AIDS policy development in South Africa. **Chapter Four** provides a detailed analysis of the changing Community Health Worker policy in South Africa against the background of these major societal changes. It is also used to demonstrate the suitability of the KwaZulu-Natal case study side to draw lessons for the wider South African context.

Chapter Five analyses the qualitative survey results on the KZN Community Health Worker Programme by deconstructing the network of role players into its separate components. Constant linkages are created to the HIV/AIDS epidemic and the national health sector's ability to respond. This chapter finishes with a discussion of four key themes, which have emerged as important for successful programme implementation.

Chapter Six serves as the chapter in which the different pieces of the story are merged in order to achieve an overall review of the actual and potential role of the Community Health Worker programme in the context of the HIV/AIDS epidemic.

Chapter Seven provides a summary and conclusions for this research, highlighting the lessons learnt from Chapters Two to Six and outlining some areas for further research.

2 HIV/AIDS Research Perspectives

2.1 Introduction

This thesis looks at the response of the South African health system, in particular the KwaZulu-Natal Community Health Worker Programme, to the challenges posed by the HIV/AIDS epidemic. However, HIV/AIDS can not only be seen as a health sector topic. Such a simplification would ignore the complexity of its causes, impacts and the effects of possible responses. Understanding the difficulties in responding to HIV/AIDS is only possible if the wider context of the disease is provided. Therefore it is considered useful to establish a general framework in which the subsequent detailed analysis of the health sector in South Africa and specifically the Community Health Worker Programme in KwaZulu-Natal can be placed. Particularly, some of HIV/AIDS' specific characteristics are highlighted to provide an understanding of the causes for its dramatic spread, for the stigma related to it and for the manifold problems in formulating and implementing an adequate response to the epidemic.

Therefore, this chapter provides a summarized overview of some of the recent findings from the academic literature on and around HIV and AIDS. Due to the complexity of interlinked factors, this overview is broken down into different sections and subsections, while it is intended to illustrate the interconnectivity of many aspects and continuously to indicate the relevance of reconstructing specific aspects of the HIV/AIDS context. Throughout this review, where appropriate, the focus is on South Africa and its KwaZulu-Natal province, so as to provide a framework for the more detailed analysis of the following chapters. The chapter is structured in a relatively 'conventional' manner, beginning with a medical history of HIV/AIDS and moving to social science studies later on. Thus, Section 2.2 looks at the biology and natural history of HIV/AIDS, while Section 2.3 gives a detailed look at the epidemic and its spread, focusing on the situation in Sub-Saharan Africa and the case study area. South Africa is also the main area used to illustrate the impact the AIDS epidemic has on families, communities and on society as a whole (Section 2.4). Section 2.5 discusses the different areas of response to the epidemic, describing efforts of prevention and attempts to mitigate the impacts by the health and other sectors of society. However, choosing this order of presentation is not meant to imply a biomedical-centric focus of the later discussion, but is used to highlight the increased difficulties inherent in the specific characteristics of HIV transmission and AIDS disease for successful response in today's societies. Finally, Section 2.6 presents a summary of the issues presented in Chapter 2 and offers a conceptual model of the HIV/AIDS epidemic context.

2.2 Bio-medical aspects and natural history of HIV/AIDS

This section summarizes the bio-medical aspects of HIV and AIDS, including how the virus functions, its origin, how it is transmitted and what effect it has on an infected human host. No attempt is made to provide an exhaustive overview of all bio-medical aspects of the disease, but rather to establish the basic details necessary to understand the complexity in dealing with HIV/AIDS.

There has been a widely publicised controversy about the origin of HIV/AIDS and about the link between HIV and AIDS (Duesberg, 1988;1991;1994). This controversy has influenced the public, especially in South Africa, where it had both an impact on the political debate and the response to the epidemic (Cohen, 2000; Baleta, 2002; Cullinan, 2002; Schneider, 2002; Murphy, 2003; Cullinan, 2004; Laurence, 2004). A reflection on the details of the controversy is not attempted at this point – the presented story follows the viewpoint of the majority of peer-reviewed published literature, which agrees like Hutchinson (2001), that the available "virologic, epidemiologic, and immunologic evidence supports the conclusion that HIV causes AIDS." A detailed review of the international discussion and specific response to the sceptics' arguments is provided by NIAID (1995). Nonetheless, the relevance of these contestations for South Africa's HIV/AIDS policies and politics will be considered in Section 3.3.

2.2.1 The discovery of HIV

The publicly-recognised story of HIV and AIDS began in the early 1980s, when clusters of two normally rare diseases were reported by the *Morbidity and Mortality Weekly Reports* of the Center for Disease Control (CDC), USA. These reports described the diagnosis of an uncommon type of cancer (Kaposi's sarcoma) and of pneumonia (*Pneumocystis cariniis*) in previously healthy, homosexual men (Center for Disease Control, 1981a;1981b;1982a). Further rare diseases were discovered in homosexual men (Center for Disease Control, 1982c;1982d), but it became quickly evident that other population groups were affected as well. Amongst the new cases were haemophiliacs, blood transfusion recipients, injecting drug users and children born to drug injecting mothers (Center for Disease Control, 1982f;1982g;1982h;1982e; Barnett and Whiteside, 2002). Shortly after, it became apparent that the described set of symptoms, a syndrome in medical terms, were associated with an acquired immunodeficiency, the causes of which needed to be investigated (Center for Disease Control, 1982c; Fan *et al.*, 1991).

Other occurrences of this newly-discovered syndrome, which was later labelled Acquired Immunodeficiency Syndrome (AIDS), were recognised in patients all over the world, including Australia, Europe and Latin America. Scientific journals published about African cases of AIDS or 'slim disease' - the local term given to the wasting symptoms found in AIDS patients in Central Africa - in France, Uganda, Zaire, Zambia and many other countries (Brunet *et al.*, 1983; Clumeck *et al.*, 1983; Offenstadt *et al.*, 1983; Taelman *et al.*, 1983; Bayley, 1984; Quinn *et al.*, 1986; Nzilambi *et al.*, 1988; Kaleeba *et al.*, 2000; Okware *et al.*, 2001; Barnett and Whiteside, 2002).

The scientific attention given to the search for the cause of AIDS increased with the rise in reported cases. Early on, medical researchers believed the immune system failure to be caused by a virus infection; a hypothesis which was proven when first a French research group around Luc Montagnier and soon after an American group around Robert Gallo discovered the virus in 1983 (Barré-Sinoussi et al., 1983; Levy et al., 1984). Jay Levy's research group at the University of California confirmed a year later that indeed the identified retrovirus was the causative agent for AIDS (Levy et al., 1984). It was first labelled differently by the three research groups: the names Human T-cell lymphotropic virus-type III/ lymphadenopathy-associated virus/AIDS-associated retrovirus (HTLV-III/LAV/ARV) co-existed until the AIDS virus was uniformly referred to as Human Immunodeficiency Virus (HIV) (Centers for Disease Control and Prevention, 2003). More specifically, it became known as HIV-1, since two years later the existence of another strain, HIV-2, was discovered in West Africa (Clavel et al., 1986). Furthermore, it should be noted that thus far nine HIV-1 subtypes have been discovered, which may vary in transmissibility and virulence (Caraël, 2000). HIV-2 varies not only genetically from HIV-1, but has also a lower infectiousness and virulence. Today, the majority of AIDS cases worldwide are related to the HIV-1 virus, but HIV-2 has got a foothold in some countries outside its original area in Western Africa, for example in Angola, Mozambique, France and Portugal (Barnett and Whiteside, 2002). In this thesis, HIV is used as the acronym for both HIV-1 and HIV-2, although it should be emphasized that it is the more virulent HIV-1, which is mainly spread in Southern Africa (Whiteside and Sunter, 2000).

With the identification of the new syndrome and especially with the discovery of its cause, research activities increased dramatically, as did the number of scientific publications on the topic (Figure 2.1). These publications cover a wide spectrum of disciplines, including biology, economy, epidemiology, history, geography,



mathematics, medicine, policy sciences and sociology to statistics and virology. Today, HIV/AIDS has become more intensively studied than any other disease (Webb, 1997).

Figure 2.1: Results of an Internet search. The graph shows the annual number of journal publications on HIV and AIDS found by a search on scirus.com in June 2004, and demonstrates the enormous amount of research done in the field.

2.2.2 Modes of transmission

As with any other transmittable disease, epidemiological analysis has been used to identify the possible routes of HIV transmission (Foulkes, 1998). This knowledge is of importance for the identification of risk factors and the development of prevention strategies. Different to other virus infections, such as influenza or chickenpox, which are easily transmitted by casual contact (e.g. via the respiratory or digestive tract), HIV is relatively difficult to transmit. It requires the direct contact between bodily fluids of an infected and uninfected person. The following major modes of transmission have been identified (Fan *et al.*, 1991; MacQueen, 1994):

- **£** Sexual transmission (hetero- and homosexual unsafe sexual practices)
- R Parenteral transmission (exposure to blood and blood products including blood transfusion, reuse of contaminated needles by injecting drug users and in a medical setting), and
- R Perinatal transmission from infected mother to child (during pregnancy or breastfeeding).

Although other modes of transmission may exist, they are usually considered to be of minor significance for the spread of the epidemic.

2.2.3 Natural history of HIV and AIDS

2.2.3.1 The phases of infection

Intensive research in the bio-medical sciences has created a significant knowledge base about the biology of the virus, its reproductive cycle and its genetic construction. This understanding proves crucial for the ongoing efforts to enhance treatment possibilities and to develop a successful vaccine. Bio-medical research has also identified the specific stages of HIV infection, which are described in this section. These are particularly relevant since some of their characteristics have contributed to the wide spread of HIV and also influence response.

HIV belongs to the lentivirus ('slow' virus) sub-group of retroviruses, which refers to the very long time of chronic infection (Hutchinson, 2001). The mean period of time before onset of disease after the initial infection is considered to be at least a decade (Bongaarts, 1996; Coutinho, 2000). It has been estimated that in Africa the average incubation period might be approximately two years shorter, due to generally more demanding challenges for human health, such as greater exposure to pathogens, poorer nutrition and limited access to treatment for opportunistic infections (The World Bank, 1999; Whiteside and Sunter, 2000). However, a more recent literature review concluded that there is insufficient evidence to support this claim and that disease progression from HIV infection to the onset of AIDS is approximately the same as in countries from the developed world prior to antiretroviral treatment (Jaffar *et al.*, 2004).

The course of an individual's infection can be described in three phases (cf. Figure 2.2). The initial phase after transmission of HIV is characterised by a fast multiplication of virus while the immune system is only beginning to respond. As a result of the viral activity, the number of important immune system cells, specifically CD4 cells, decrease dramatically. This process normally goes unnoticed, since only a short episode of illness, perhaps with flu-like symptoms or swollen glands, may occur. During this so called "window period", which can last from a few weeks to several months, no antibodies to HIV are detectable, but viral load is high. Thus, a recently HIV-infected person is highly infectious, while HIV antibody tests would not show a positive result (Barnett and Whiteside, 2002).

The window period finishes with sero-conversion, after which antibodies to HIV can be detected in tests. During the following incubation period, the immune system battles with the infection, but fails to eradicate the virus.

In the advanced stage, HIV is slowly winning the battle: the amount of virus increases, weakening the immune system, and leaving the body susceptible to other diseases. Without treatment, so called opportunistic infections will occur, ultimately resulting in death (cf. below) (Thomas, 2001; Barnett and Whiteside, 2002).



Figure 2.2: Viral load and CD4 cell count over time (Pantaleo et al., 1993)

2.2.3.2 AIDS case definition and opportunistic infections

The infection process, as described above, explains the characteristics of the last stadium of an HIV infection, which is referred to as Acquired Immunodeficiency Syndrome. In many cases, it is only this final stage of HIV infection that is alerting an infected person to their status.

Exact definitions of what constitutes an AIDS case have changed over time. As early as 1982 the CDC published a first AIDS case definition, in order to be able to monitor the development of the AIDS epidemic. Without the knowledge of the causative agent of AIDS, the case description mainly focused on the symptoms indicative for an acquired immune deficiency including a list of common opportunistic infections. Furthermore, one of the key criteria of the first CDC definition was the absence of any known causes for a weakened immune system like chemotherapy, specific cancers or malnutrition (Center for Disease Control, 1982b). With the discovery of HIV and an increase in knowledge of the disease, the AIDS case definition was further refined by CDC and WHO throughout the following years (cf. Table 2.1).

Table 2.1: Overview of Internationally Used HIV/AIDS Case Definitions (WHO, 2004b)

Year	Definition
1982	CDC AIDS Case Definition
1985	WHO Bangui AIDS Case Definition
1986	WHO/CDC AIDS Case Definition
1987	WHO/CDC Revision of AIDS Case Definition
1989	Caracas AIDS Case Definition
1993	CDC Expanded Surveillance AIDS Case Definition
1994	WHO AIDS Case Definition for AIDS Surveillance
1995	European AIDS Case Definition for Children
2000	CDC Guidelines for National HIV Case Surveillance, including Monitoring for
	HIV and AIDS

There are two ways to define the AIDS stage of HIV infection: the CD4 count and a clinical definition (see below). The most widely used definitions today state that an HIV+ patient is described as having AIDS when the amount of CD4 cells per mm³ blood sinks below 200. For example, in South Africa a CD4 count below 200 is one criterion making patients eligible for public sector antiretroviral treatment. In health care settings, in which such intensive laboratory analysis cannot be carried out, it has to be ensured that no other causes for immunodeficiency in a patient exist. That guaranteed, occurrence of one major AIDS-defining illness and a positive test for HIV antibodies is sufficient. For situations where no HIV tests are available, one of the clinical definitions has to be applied to define an AIDS case (Center for Disease Control, 1982b; WHO, 1985;1986). In the developing world, the definition mostly used for HIV/AIDS cases is the World Health Organisation Bangui definition from 1985 with the additional use of HIV antibody tests to clarify the HIV status of a patient (WHO, 1997).

Clinical definitions rely on the occurrence of illnesses symptomatic for AIDS. Such AIDS-defining illnesses belong to four groups: opportunistic infections (see below), neurological problems, specific cancers and the HIV wasting syndrome "slim disease". Opportunistic infections are infections, which a healthy immune system would normally be capable of fending off or which would be much less severe. Among the most common opportunistic infections are *Pneumocystis carinii* pneumonia as well as other fungal, bacterial and viral infections (candidiasis, mycobacterium avium, cytomegalovirus, *etc.*). Kaposi's sarcoma is one of the most common forms of cancer in AIDS patients (WHO, 1986).

Generally speaking, HIV infection has a similar progression in patients worldwide. But there are slight differences between the developed and developing world. These variations have their origin in differences in disease patterns (e.g. latent tuberculosis (TB) is very common in developing countries), levels of nutrition and in access to treatment of early opportunistic infections (cf. also Section 2.4.3.2.3). In Africa, the most common clinical symptoms for AIDS are opportunistic infections like tuberculosis, pneumococcal disease, *pneumocystic carinii* pneumonia, toxoplasmosis, candidiasis, cryptococcosis as well as a diarrhoea-wasting syndrome and cancers like disseminated Kaposi's sarcoma (The World Bank, 1999; Quinn *et al.*, 2001). In South Africa, the HIV/AIDS epidemic is closely linked to the TB epidemic. An above average percentage of people living with HIV/AIDS have active tuberculosis and *vice versa*. Naturally, one of the most important factors influencing disease progression and survival is the availability of appropriate medications, including antiretrovirals (cf. also Sections 2.2.4 and 2.5.2.2).

2.2.3.3 HIV tests

The clinical definitions allow the diagnosis of AIDS based on a patient's symptoms. However, the detection of an HIV infection before onset of AIDS always requires the testing of bodily fluid for the existence of the virus or antibodies to it. The availability of HIV tests is of great importance. Thanks to the development of widely available blood tests, it has been possible to increase the safety of donated blood and thus reduce the number of people being infected by blood transfusion dramatically (Prusiner, 2002). However, testing for HIV infection is not only necessary for the security of blood transfusion. It can also help people who voluntarily want to know their status, which enables HIV-positive individuals to access prevention and treatment services. Furthermore, HIV testing is crucial for epidemiological surveillance of HIV prevalence and incidence, as well as for research into effective prevention and intervention strategies (WHO, 1998).

The most common techniques for testing someone's HIV status are based on the detection of antibodies to HIV (Safai *et al.*, 1984). Over the years, a number of HIV antibody tests have been developed, all with different characteristics in terms of costs per test, equipment and training requirements. One of the positive outcomes of recent research efforts has been the development of various tests, which have much lower requirements on training and laboratory infrastructure and can be easily employed in remote areas. These recent developments have been especially important for
developing countries, which often experience a lack of laboratory infrastructure and trained technicians (Martin, 2004). The decreased waiting time – test results can usually be produced within 10-30 minutes – also reduces a number of practical obstacles for Voluntary Counselling and Testing (VCT) (cf. Section 2.5.1.1) (WHO, 2004a). The ability to obtain quickly the HIV test results increases the number of tested people actually receiving their results. Although this does improve VCT services, it also requires additional care from pre-test counsellors. One of the major obstacles for expanding VCT programmes, for example in South Africa, more rapidly was the lack of qualified counsellors. However, today a high percentage of the country's health facilities offer VCT services. Nonetheless, levels of utilization of these services still need to be increased, for example through a widespread community-based awareness campaign.

A further innovation in HIV test technologies was the development of tests which can make use of different specimens than blood serum or plasma. The use of whole blood, saliva or urine involves less laboratory equipment and skills and, in case of the latter two, is less invasive. Thus, they are very suitable for epidemiological population screening, which requires the consent of randomly selected volunteers (Center for Disease Control, 2001). Furthermore, tests which do not require the taking of blood and which can detect HIV in saliva or urine in a short period of time has proven especially valuable in many developing world conditions.

Despite improvements in the ease of handling of the tests, there still remains the problem of testing in the "window period" straight after an infection, when antibodies to HIV are only starting to be produced (Horsburgh *et al.*, 1989). One way to deal with this problem is the recommendation to test only three months after a possible exposure to HIV.

2.2.4 Treatment and vaccine

The most effective prevention of any transmittable disease is a vaccine. Vaccinations allow the immunization of people by stimulating the production of antibodies to a specific etiologic agent. This enables the immune system to immediately react if the specific disease causing germ is encountered, thus preventing the establishment of the infectious disease (Fan *et al.*, 1991).

Despite the enormous amount of research investigating different potential approaches, no effective vaccine against HIV infection has been found yet. One of the difficulties in developing a successful vaccine is the virus' high genetic diversity (NIAID Division of AIDS, 2003). Since the efficacy of a vaccine may be strain or subtype specific, HIV's high mutation rate with variations both within and between hosts makes it extremely difficult to achieve a protection rate of 80% or higher (Hu et al., 1996; Hutchinson, 2001). Despite the difficulties, there are advances in the search for HIV vaccines, and there have been a number of test trials since as early as 1987 (Esparza, 2001). Most of these trials have been focusing on HIV subtype B, which is mainly prevalent in Western Europe and North America, although there have been efforts to increase the number of trials for other regions as well. Specific vaccine initiatives have been set up for Africa including the African AIDS Vaccine Programme, the Ethiopian AIDS Vaccine Initiative and the Nigerian AIDS Vaccine Programme. The South African AIDS Vaccine Initiative is currently running clinical trials of vaccines for subtype A and subtype C, but it is to early to assess their effectiveness (South African AIDS Vaccine Initiative, 2004). Additionally, it should also be noted that even with the development of a successful HIV vaccine, it takes many years until the susceptible population in the developing world is one hundred percent immunized. Notwithstanding, prevention planning should incorporate ideas on distribution of a potentially developed vaccine (Esparza, 2001). The existing structures of a successful Community Health Worker programme (cf. Chapter 5) could potentially play an important factor in promoting and distributing future vaccines.

With the current absence of a successful vaccine or cure, and millions of people infected, effective treatment for AIDS remains of fundamental importance. During the early stages of HIV infection, treatment is focused on boosting the immune system by healthy living. Later on, the focus shifts to the prevention and treatment of opportunistic infections and cancers. Prevention and medication of diseases such as TB, diarrhoea and thrush does temporarily improve the wellbeing of patients, but does not stop the deterioration of the immune system to its complete destruction and finally death. The first ever medication to fight the cause of AIDS, rather than treat the symptoms, was the anti-HIV-drug azidothymidine (AZT), which was introduced in 1987 and is sometimes also referred to as zidovudine (ZDV) (Fan *et al.*, 1991; The World Bank, 1999; WHO, 2002). AZT belongs to a group of drugs called antiretrovirals (ARVs), which act against the reproduction of retrovirals such as HIV by inhibiting certain retrovirus-specific processes.

For a number of years, AZT remained the only approved ARV, resulting in an increase in many patients' life expectancies without completely inhibiting HIV replication. However, the spread of AZT-resistant HIV strains has lead to a discontinuation of the treatment with AZT as a single drug therapy. Meanwhile, the increased understanding of the biology of HIV has contributed to the development of several new and very effective antiretrovirals. Highly Active Anti-Retroviral Therapy (HAART), a drug regime involving at least two different ARVs, was introduced in 1996. Currently, WHO is solely recommending treatment with a minimum triple therapy, *i.e.* the combination of at least three different anti-retroviral drugs, with the aim of minimizing the ability of the virus to develop resistance. HAART has led to a remarkable increase in life expectancy for those able to access it (WHO, 2002).

Despite the enormous advances in treatment development, numerous problems are still left to tackle. Some of these problems are related to the medication itself, including widespread difficulties with adhering to the complicated drug regime, the increase in drug resistances and the sometimes severe side effects. Another aspect in many rich countries is the changed image of HIV/AIDS, which is often perceived as a chronic disease, comparable to diabetes. This view may have contributed to an increase in risk behaviour. Since ARVs are not a cure and patients remain infectious, this perception is endangering the success of earlier prevention campaigns. Yet the biggest problem is that for the majority of people living with HIV and AIDS (PLHA) worldwide, access to ARVs continues to be very limited. The World Health Organisation estimated that in 2003, 400.000 people in developing countries were having access to appropriate treatment. This was less than ten percent of the then estimated 5.5 million adults in urgent need for antiretroviral treatment in low- and middle-income countries. Increasing this number was the aim of a WHO-initiative, the '3 by 5' Programme, that hoped to bring ARV-treatment to 3 million people in low and middle income countries by 2005 (UNAIDS, 2004; WHO, 2004a;2004c). In 2005 this goal had not been achieved, despite massive support by many NGOs like South Africa's Treatment Action Campaign. However, in sub-Saharan Africa an estimated 1.3 million are on ART now, which is a substantial increase from the 100 000 on treatment in 2003 (WHO, 2007). '3 by 5' was certainly one component increasing the pressure on South Africa to provide ARVs in the public sector (see Sections 2.5.2.2 and 3.3).

One of the reasons that, despite increased efforts and improved treatment regimes, only approximately 7% of the millions of people in need of ARVs were actually receiving treatment at the end of 2003 were the (until recently very high) costs associated with the drugs (UNAIDS, 2004). An additional and perhaps more difficult

problem to overcome is the lack of adequate health services infrastructure, including qualified staff, for test and treatment provision. The lack of sufficient and appropriate nutrition for many of the infected people constitutes a further challenge to successful treatment in developing countries. These issues, which are of key importance for the current study, are addressed in more detail in Section 2.5.2.2.

With the absence of an effective vaccine, prevention is still the only way to reduce the spread of the HIV/AIDS pandemic. The increasing availability of treatment in countries like South Africa implies that ARVs undoubtedly will have a role to play in these prevention efforts, especially in preventing mother-to-child-transmission. It can also be argued that the availability of treatment may increase the number of people participating in VCT, thus indirectly impacting on behaviour change. The achieved changes in sexual behaviour are one factor important in influencing the development of the epidemic. Some of these factors are discussed in the next section, which also provides an overview of the past developments and the current situation of the HIV/AIDS epidemic.

2.3 The spread of the epidemic

Epidemiology, as the science investigating distribution, spread and control of all forms of ill-health within and between populations, plays a key role in creating an understanding of epidemic diseases like HIV/AIDS. Studying "the distribution and determinants of health problems in specified populations", *i.e.* the who, what and where, is part of descriptive epidemiology, whereas analytical epidemiology is looking at the how and why and is "applying the learned information to control the health problems" (Centers for Disease Control and Prevention, 2004).

In this section, results of the epidemiological study of HIV/AIDS are presented while showing their relevance for prevention and mitigation in the context of the disease. Thus, this section may give already a first indication of the potential for involvement of Community Health Workers. Data on the epidemic is needed to evaluate the success of intervention methods and to provide managers at all levels of society with the necessary information to make informed decisions. This section looks at the factors influencing the spread of the disease. It presents some of the methods used in measuring the epidemic and modelling the spread and distribution of HIV/AIDS. Furthermore, it provides an overview of the current situation of the HIV/AIDS pandemic, first broadly on a global scale and then followed by a more detailed description of the situation in Sub-Saharan Africa, and specifically in South Africa and its KwaZulu-Natal province.

2.3.1 Epidemiology and HIV/AIDS

In order to illustrate the spread of the epidemic, it is useful to define a number of epidemiological terms and concepts. Of particular interest are the ideas of prevalence and incidence, which provide possibilities to characterise an epidemic (cf. Figure 2.3). Prevalence describes the proportion of a population that has a disease or infection at a particular time, which for HIV is usually given as the percentage of the total population. Quite often, HIV prevalence is also expressed as a percentage of HIV infection in specific subgroups of the population, especially in so called 'risk groups' (discussed below). Prevalence can also serve to classify different stages of HIV/AIDS epidemics (cf. Table 2.2).

STAGE OF HIV/AIDS	DESCRIPTION
EPIDEMIC	
Nascent	HIV prevalence is less than 5 percent in all known subpopulations presumed to practice high-risk behaviour for which information is available.
Concentrated	HIV prevalence has surpassed 5 percent in <i>one or</i> <i>more</i> subpopulations presumed to practice high-risk behaviour, but prevalence among women attending urban antenatal clinics is still less than 5 percent.
Generalized	HIV has spread far beyond the original subpopulations with high-risk behaviour, which are now heavily infected. Prevalence among women attending urban antenatal clinics is 5 percent or more.

 Table 2.2: Typology of HIV/AIDS epidemics (classification according to prevalence rates) (The World Bank, 1999)

Incidence, on the other hand, denotes the number of new cases, e.g. of infection or disease, over a specific period of time - usually a year. Since prevalence is an indication for past events as well as more recent ones, the monitoring of the annual incidence of key stages – infection with HIV, onset of AIDS, and death – can help to understand the progression of the epidemic in a specific region and thus is a useful indicator to support evaluation and planning processes (Bongaarts, 1996).



Figure 2.3: HIV, AIDS and AIDS death incidence and prevalence

The course of an epidemic can usually be described by an S-curve (cf. Figure 2.4). which is influenced by the number of newly infected people (incidence), the total amount of infected people (prevalence) and the number of people either overcoming the disease or dying of it. In the case of HIV/AIDS, the long-term development of the epidemic curve is still unknown. However, two important features can be identified which shape the epidemic curve. First, there is as yet no cure for HIV/AIDS, hence people only leave the 'epidemical statistic' if they die. An increase in treatment will allow HIV-infected people to live longer and not 'leave the statistics' as fast as without treatment. This process is observable in Western Europe and North America, but has yet little effect in the developing world where treatment is available to a guarter of those who require it (WHO, 2007). Second, HIV has a long incubation period, which creates what could be referred to as 'two' epidemics: the epidemics of HIV infections and of AIDS cases. The long incubation period implies that in a population, into which HIV was introduced only recently, the virus can spread relatively unnoticed, without the more obvious signs of an increase in AIDS cases and deaths. Only after a number of years will AIDS prevalence and the number of AIDS deaths start to rise accordingly (Figure 2.4). This causes one of the fundamental difficulties in responding to HIV/AIDS: although the beginning years of increasing HIV prevalence are important to tackle the epidemic and avoid an increasing spread to the whole susceptible population, the dramatic effects of the epidemic are hardly noticeable at this point. Hence political

pressure remains often minor until the effects become harder to ignore, causing response to the epidemic to lag behind (UNAIDS, 2004). South Africa's, as many other countries', difficulties in response are an example of this phenomenon, which has been further enhanced by the country's parallel transformation process (cf. Chapter 3).



Figure 2.4: HIV, AIDS and AIDS death curves (adapted from Whiteside and Sunter, 2000)

2.3.2 Drivers of the epidemic

"All diseases have social, ethical and political dimensions. Diseases affect individuals, not abstract entities or collectivities, and affect(s) them in variable ways, according to their general social condition and bodily health. What makes disease culturally and historically important, however, is the way in which meanings are attached to illness and death, meanings and interpretations which are refracted through a host of differing, and often conflicting and contradictory social possibilities. These shape the way we interpret illness, and therefore organize the ways in which we respond (Weeks, 1989, p.1)."

In order to tackle a disease like HIV/AIDS, one of the major questions to be asked is what is driving the spread of the epidemic. What are the factors, which lead to a dramatic spread of the epidemic in some regions whereas others seem to have been able to contain or even decrease incidence and prevalence levels? What are the drivers which make some individuals and populations more vulnerable? And thus, what are the areas which prevention efforts can target? During the last decdes, different research approaches in answering these guestions have emerged. Several authors describe these approaches, which have been conceptualised by Webb (1997) as study themes looking predominantly at either physiological and psychological variables or at culture, political economy/structure and agency. Caraël (2000) identifies the epidemiological approach, the cultural approach and the social-economic model approach. These approaches describe different paradigms, underlying the analysis of determinants of the epidemic. These paradigms are not only influencing the way we understand the causes of the epidemic; they are equally relevant in their influence on the ways in which we respond to it, and may for example also affect the response mechanism chosen by the Community Health Worker programme.

Many, especially earlier, epidemiological studies on HIV/AIDS have mainly focused on certain biological differences or specific behaviour patterns and their socio-cultural backgrounds in order to determine disease and epidemic causes (Hrdy, 1987; Caldwell *et al.*, 1989; Shannon and Pyle, 1989; Turner *et al.*, 1989; Reddy *et al.*, 2000; Auvert *et al.*, 2001; Morison *et al.*, 2001; Weiss *et al.*, 2001) (see also Frankenberg, 1989; Horton and Aggleton, 1989). However, social, economic and political sciences as well as social epidemiology (Myer *et al.*, 2004; Poundstone *et al.*, 2004) emphasize the importance of societal differences for the local and global variations in the spread of the disease. "HIV transmission is not a random event; the spread of the virus is profoundly influenced by the surrounding social, economic and political environment (UNAIDS, 2004, p.16)." In line with Louis Pasteur's assumption that "the microbe is nothing, the terrain everything" (quoted in Poku and Cheru, 2001, p.43), research is increasingly focusing on various societal variables in order to explain health inequalities, including differences in the spread of HIV (Garrett, 1994; Farmer, 1996; Fournier and

Carmichael, 1998; Over, 1998; Kim *et al.*, 2000; Barnett and Whiteside, 2002; Gilbert and Walker, 2002). For instance, the role poverty and political discrimination have played in the spread of HIV in the Bronx in New York has been described by Peter Gould (1993a); the influence of, amongst others, poverty, political disruption, sexism and lack of access to medical services on HIV in rural Haiti has been highlighted by Paul Farmer (1995). Nana Poku (2001; 2002) has equally identified poverty as the major driving factor behind the HIV/AIDS epidemic in Africa.

Attempting to incorporate all the above approaches, Figure 2.5 provides a framework to illustrate the various factors influencing the spread of the virus, some of which will be discussed in more detail shortly. A number of recent scientific studies seem to agree that any one-sided approach to analysing the drivers of the HIV/AIDS pandemic will fail; a variety of issues like bio-medical factors, sexual behaviour factors, social risk factors, economic factors, the political environment and the response of government have to be considered (Dorrington and Johnson, 2002). As it is becoming more and more commonly accepted that a complex and multifaceted structure with interlinking factors is responsible for variations in the spread of the disease, it is equally more evident that the development of a successful response to the epidemic requires the recognition of both socio-economic and bio-medical drivers. Again, as UNAIDS (2004, p.16) phrases it: "Efforts to prevent the spread of HIV need to focus both on individual risk behaviour, and on the broad structural factors underlying exposure to HIV - so as to help people control the risks they take and thereby protect themselves." This provides a first indication of the range of areas Community Health Workers can potentially be addressing within their scope of work.

To illustrate this further, the following paragraphs discuss different influencing variables while attempting to illustrate the reciprocal impact different drivers can have on each other. The complexity of the HIV/AIDS issue is further illustrated in Sections 2.4 and 2.5, where closer looks are taken at the impact of and the response to the epidemic. Section 2.6 will then present a conceptual model merging all three of these aspects, offering a comprehensive approach to the processes surrounding the HIV/AIDS epidemic. That final section of this chapter will offer an attempt to merge the central issues discussed throughout Chapter 2, by conceptualising the interconnectedness of various aspects of the epidemic. However, the remainder of this section (2.3.2) will describe in more detail the variables shown in the model below (Figure 2.5). The figure highlights that many of the individual level factors (both biomedical and behavioural) are influenced by the social and structural level (or, as identified by Barnett and

Whiteside, the micro- and macro-environment of HIV/AIDS epidemics). They thus all shape HIV/AIDS transmission and are worth further consideration.



Figure 2.5: Some variables influencing the spread of HIV (JF; based on Barnett & Whiteside (2002), see also Poundstone *et al.* (2004))

Epidemiology often uses the basic reproductive number of an infectious disease in order to describe the number of new infections occurring from an initial infection, thus illustrating the transmission rate of a specific disease germ. The reproductive number of any transmittable disease is influenced by the probability of infection per contact, the number of contacts and the duration of infectivity (Poundstone et al., 2004). In the context of a mainly sexually-transmitted disease, these three components all are influenced by individual- as well as social- and structural-level factors, with duration of infectivity being the least variable and number of contacts the most. As Buvé et al. (2002, p.2011) point out in their study of the HIV/AIDS epidemic in Sub-Saharan Africa, "(d)ifferences in the spread of the epidemic can be accounted for by a complex interplay of sexual behaviour and biological factors that affect the probability of HIV-1 transmission per sex act. Sexual behaviour patterns are determined by cultural and socioeconomic contexts." Although the majority of HIV transmission worldwide is sexual, the following discussion of biomedical factors also takes other routes of transmission into account. The next sub-section thus describes one aspect of individual factors influencing HIV/AIDS transmission (as indicated in Figure 2.5).

Analytical epidemiology has helped to identify four biologic co-factors which influence the transmission rate of HIV during any individual contact: the infectiousness of the person with HIV, the susceptibility of the uninfected person to infection, the efficiency of the mode of transmission and the infectivity of the viral strain (MacQueen, 1994). Clarifying these dynamics can help to explain why people get infected with HIV and provides a starting point in understanding geographical variations in HIV infection rates (Holmberg *et al.*, 1989). Yet, as illustrated later, this discussion needs to be placed in the context of the complex interplay of factors that influence sexual relations and the occurrence of other possible situations for transmission.

Infectiousness of an individual depends on the stage of HIV infection the person is in. The immune system's response influences the viral load in the blood; it is high during the initial 'window' period, then stabilizes during the so-called incubation period and increases again when the immune system starts to deteriorate (cf. Figure 2.2) (Clark *et al.*, 1991; Seage *et al.*, 1993). Due to the epidemiological importance of this fact, it is clear that further improvement of virological research is necessary better to understand the dependence of HIV transmissibility on the viral concentration in biological fluids (Coutinho *et al.*, 2001). Generally, since HIV infection is not yet curable, the duration during which an HIV-positive person can potentially transmit the virus is life-long. However, the viral load of people on ARV treatment is lower, thus they are less infectious.

In the context of sexual transmission, both infectiousness and susceptibility are increased by the presence of sexually transmitted diseases (STDs), especially by STDs causing ulcers or discharge, which enable the virus to leave and enter the body more easily through broken skin or membranes (Galvin and Cohen, 2004). Thus, the widespread lack of access to, or uptake of, STD-treatment in Sub-Saharan Africa is contributing to disease transmission (Wasserheit, 1992; De Lay *et al.*, 1995; Fleming and Wasserheit, 1999; Wallman, 2000). Generally, traumatic lacerations can serve as an entry point for the virus and thus increase the risk of transmission (Hutchinson, 2001). Research also suggests that susceptibility to HIV may be affected by culture-specific practises like circumcision in men (possible decrease) and usage of vaginal drying agents (possible increase) (MacQueen, 1994; Kun, 1998). Research results evaluating the relevance of biomedical factors for infectiousness or susceptibility are summarized in Table 2.3. All these factors have to be recognised if the development of informed health policies and community-relevant prevention strategies, including Community Health Workers, is intended (Fleming and Wasserheit, 1999).

Acquired factors of host or partner	Increased	Increased
	infectiousness	susceptibility
Immune activation due to other infectious diseases	Yes	Yes
Stage of infection ("window" period, advanced immunosuppression)	Yes	NA ^a
Genital trauma or immaturity (menses, first coitus, cervical ectopy)	Yes ^b	Yes
Lack of circumcision in men	Yes	Yes
Mucosal sexually transmitted or reproductive tract infections	Yes	Yes
Behavioural and biological interactions		
Nature of sexual contact		
Insertive	Yes	No ^b
Receptive	No ^b	Yes
Drug use (cocaine, alcohol, nitrites)	Yes ^b	Yes
Vaginal douches, astringents, or abrasives	No ^b	Yes
Anal douches or trauma	Yes ^b	Yes

Table 2.3: Factors increasing viral infectiousness of HIV^+ host or susceptibility of HIV^- partner (Lawson *et al.*, 1999)

^a Not applicable. ^b Data are inconclusive.

According to Segal and Hill (2003), genetic variations in immune response are also likely to contribute to an individual's susceptibility (also see Carroll and Boseley, 2003). Furthermore, susceptibility is influenced by the mode of transmission, and is for example dependent on the type of sexual behaviour. As Table 2.4 indicates, during *heterosexual* intercourse, women are at a two-times greater risk of infection than men (Nicolosi *et al.*, 1994). Further variations in transmission efficiency of different modes of transmissions are illustrated in the table below.

Mode of transmission	Infections per 100 exposures
Male-to-female, unprotected vaginal sex	0.1-0.2
Female-to-male, unprotected vaginal sex	0.033-0.1
Male-to-male, unprotected anal sex	0.5-3.0
Needle stick	0.3
Mother-to-child transmission	13-48
Exposure to contaminated blood products	90-100

Table 2.4: Probability of HIV-1 Infection per Exposure (The World Bank, 1999)

Another biologic factor which can influence the transmission probability per exposure is the infectivity of the virus. There still seems to be some uncertainty on how HIV

virulence and infectivity interact and how they influence the development of the epidemic (MacQueen, 1994; Levin *et al.*, 2001), but recent research advances on the viral infectivity factor of HIV-1 may help to develop drugs to undermine its activity (Rose *et al.*, 2004). Furthermore, there are indications that the introduction of Highly-Active Antiretroviral Therapy (HAART) can lead to a decline in infectivity, and thus could perhaps reduce the further spread of HIV (Porco *et al.*, 2004). This is one example of how societal structures, e.g. health service provision, can influence biologic co-factors.

The above-described factors are all influential for the transmission risk per exposure. It is important to reduce these risks (e.g. through STD treatment, Prevention of Mother-to-Child Transmission programmes), but it is also fundamental to implement strategies focusing on a reduction of exposure to HIV. These strategies vary for different modes of transmission (e.g. needle-exchange programmes for intravenous drug users, usage of disposable needles in medical settings).

However, in Sub-Saharan Africa heterosexual transmission has been identified as responsible for the majority of adult HIV infections (Webb, 1997; Caldwell and Health Transition Centre, 1999). As indicated earlier, one important factor influencing the spread of the epidemic is the frequency of exposure, which in case of homo- and heterosexual transmission depends on the sexual behaviour of people. Some aspects of sexual behaviour include the age of first sexual intercourse, the frequency of partner change, the number of concurrent partners, and specific sexual practices including the use of drying agents and condoms (cf. behavioural factors, Figure 2.5). In this context, besides treatment of STDs and perhaps the provision of ARVs, behaviour change has been highlighted as the key for a reduction in HIV transmission and to encourage behaviour change, like the promotion of condom use or the introduction of Knowledge, Attitude and Practices and Behaviour interventions, will be discussed in Section 2.5.

However, any human behaviour, including sexual behaviour, cannot be understood without an understanding of the context in which it is placed. "While the determinants of an individual's sexual activity are subtle and complex, it is reasonable to expect that at the aggregate level social conditions would influence the frequency of risky sexual behaviour and hence the size of the epidemic" (The World Bank, 1999, p.27). Thus, behavioural factors and partially also biomedical factors cannot be understood without considering the influence that socio-economic and political conditions, *i.e.*, the macro-and micro-environmental contexts, have on the spread of HIV. Figure 2.5 mentions the macro-environmental components wealth, culture and religion as well as governance.

The following paragraphs attempt to shed more light on the role these factors play while using them to also illustrate the influencing micro-environmental conditions.

In the attempt to explain differences in prevalence in particular population sub-groups, early scientific investigations into the spread of HIV/AIDS relied on the epidemiological risk concept. In America, many of the first cases of AIDS were seen in homosexual men and intravenous drug users (cf. Section 2.2). Similarly, in Africa commercial sexworkers, truck drivers and migrants were seen as 'risk groups' (Orubuloye et al., 1993). The approach of identifying 'risk groups' has been criticised as reinforcing the stigma attached to often already-marginalised people (Gould, 1993b; UNAIDS, 2004). Generally, with the public identification of AIDS as a sexually-transmitted disease (and not as a blood-borne disease as is e.g. Hepatitis B), all the stigma and religious connotations of sin, immorality and punishment linked to STDs became equally strongly related to AIDS (Patton, 2002). Stigmatisation is closely associated with discrimination (UNAIDS and WHO, 2001). The fear of stigma and discrimination leads to the avoidance of HIV tests or, in case of a positive HIV diagnosis, often results in secrecy about one's status and the avoidance of health and social services. This can lead to an aggravation of the effect of the disease on the individual, but also contributes to further spread of the disease (Muyinda et al., 1997; UNAIDS and WHO, 2001; UNAIDS, 2004). South Africa is one of the nations, where high levels of stigma are still hampering a more successful response, but which is a field Community Health Workers may be well-placed to target (Department of Health, 2006c).

Not least because of this stigmatisation of AIDS, various researchers argue for an avoidance "of the concept of 'risk groups', based on common social or geographical characteristics; they argue for studies of risk behaviour or practices (Long, 1997, p.87)." More specifically, Farmer (1995, p.6) emphasises "that it is necessary to move beyond the concept of 'risk groups' to a consideration of the interplay between human agency and the powerful forces that constrain social life, especially those activities which promote or retard HIV transmission." A serious analysis of the determinants of the spread of HIV has to focus on the broader societal conditions, including social and economic factors, which influence or even limit individuals' choices about the risks they expose themselves to (The World Bank, 1999).

When investigating the role economic, social and cultural conditions play in HIV prevalence, it is useful to look at different spatial scales of aggregation, since these seem helpful in understanding some of the differences in the spread of the epidemic on a global, national and local level. For example, the statistical analysis of global country-

level data allowed Over (1998) to identify eight variables influencing the urban rates of HIV infection in low- and middle-income countries. The significant variables were the starting date of the epidemic in a country, a variable potentially describing social norms influencing individuals' possible engagement in risky sexual behaviour (percentage Muslim) and six variables potentially influencing either the demand or the supply of commercial sex in an urban setting. The ratio of urban men to women (ages 20-39), the percentage of soldiers in urban populations and the percentage of foreign-born in a country's population have been used to approximate the demand side of commercial sex; the GNP per capita, the Gini coefficient measuring income-distribution inequality and the difference between female and male literacy rates (i.e. indicator for gender equality) as an approximation for factors influencing its supply. In his discussion, Over (1998) acknowledges amongst others the role of poverty, gender and income inequality in facilitating the spread of HIV, a result similar to those of other investigations (Long, 1997; The World Bank, 1999; Gilbert and Walker, 2002; Eaton et al., 2003). For example, his world-wide comparison of GNP per capita and HIV infection level shows a strong negative relationship, *i.e.*, the poorer the country, the higher the prevalence rate.

Interestingly, it can be argued that the link between poverty and prevalence levels is not that straightforward. Looking below the global scale, it can be pointed out that within the poor continent of Africa, countries like Botswana and South Africa have some of the highest GNP per capita as well as HIV infection rate levels. Also, the income-richer KwaZulu-Natal has higher infection levels than some of South Africa's poorer provinces (cf. Figure 2.11). Equally, studies in Uganda indicated that at least in the beginning of the epidemic, relatively income-rich people had higher infection rates than poorer people. One possible route of explanation is the inclusion of aspects of income inequality, relevant for example for the ability to pay for commercial sex. Thus, poverty levels on their own cannot serve to predict HIV prevalence; nevertheless, the role poverty plays in influencing the spread of the virus is obvious.

As Poku (2002, p.531) explains, poverty is closely associated with "high unemployment, hunger and malnutrition, lack of basic services, inability to pay for or access health care, disintegration of families, vulnerability, homelessness and often hopelessness." These factors do not only contribute to people's susceptibility to the virus, they also impact on people's sexual behaviour. On the one hand, poverty is strongly related to migration. Labour-oriented movements, especially long-distance migration, cause at least temporarily break-ups of relationships, which can be linked to an increase in the number of sexual partners. Also, migration into urban centres can lead to a skewed male-female ratio, which raises the demand for commercial sex work, and thus influences its supply. On the other hand, in areas of high unemployment, impoverished women are often unable to support themselves or their families. Engaging in some form of sexual activity in exchange for money, food, or other commodities can often become a last, though dangerous lifeline. In this context, it is also important to underline the influence of cultural aspects of gender, and especially the possibilities, or rather their absence, women have in negotiating their own sexuality. Numerous anthropological studies emphasize that in many cultures men are the major decision-makers in sexual relationships, leaving little room for women to negotiate for example the use of condoms (Kim and Motsei, 2002). Notably, all the above described processes are factors driving the spread of HIV/AIDS in South Africa and KwaZulu-Natal, whose rural areas have been especially strong influenced by labour migration over decades (see Section 1.4).

As indicated earlier, there are several other factors which influence the spread of a disease in a population. Access to health care services (e.g. to treatment of STDs) is one of the issues at the core of this thesis, which is highly relevant in this context. The levels of social disintegration, political disruptions including war, political leadership in the response to the epidemic, social cohesion, legal rights issues and governance are just some of the topics mentioned and discussed in detail (cf. also Figure 2.5). Some of these aspects will be discussed again in Section 2.5, others are analysed in the available literature. The complexity of the epidemic makes it an easy excuse for inaction, which in itself leads to an aggravation of the impacts a widespread epidemic has on vulnerable societies (cf. Section 2.4 and also on South Africa's HIV/AIDS policy contestations, Section 3.3). There is no single ideal response to the epidemic. Any success in confronting HIV/AIDS has to be based on an integrated and multi-sectoral response (see Section 2.5), based on reliable information.

As described above, there are different research approaches looking at the complex issues related to the HIV/AIDS epidemic. Awusabo-Asare and Anarfi (1999) differentiate between the medical sciences, which generally focus on what is described in Figure 2.5 as individual factors (or the proximate determinants), and the social sciences which look at social and structural factors (or the contextual issues). In their paper, the two authors criticise the missing link between the two approaches. With the following analysis of the impact of (Section 2.4) and the response to the epidemic (Section 2.5), it is intended to illustrate this link in more detail and propose a framework, based on Figure 2.5 and Figure 2.15, in which to capture the connectedness of the different levels (see Section 2.6).

2.3.3 The current situation

After the above description of the natural history of the disease itself as well as the epidemic's spread and the ways of measuring its current distribution, the following section gives an overview of the situation of the worldwide pandemic at the end of 2007, reflecting the latest available data which is updated on an annual basis by UNAIDS and WHO. As described above, HIV may have been around for many decades before, but the earliest cases of HIV/AIDS have been recognized in the early 1980s in the USA and soon after also in other countries, notably in Africa. In the decades since then, the virus has spread around the globe leaving no continent or region unaffected. The number of infected people has steadily increased, so that today approximately 33 million people are living with HIV/AIDS (cf. Figure 2.6).



This bar indicates the range around the estimate.



However, this summarised description conceals the actual scale the HIV/AIDS epidemic has reached in some parts of the world. The global spread has not been homogenous, showing different temporal and quantitative patterns. This is partially caused by the different points in time that the virus was introduced into a specific area. Variation in transmission routes may also be responsible for different local epidemics. However, variations in the distribution of driving factors discussed in Section 2.3.2 as well as different response strategies have been equally, if not more important. The UNAIDS and WHO Update Report 2007 gives the following figures as estimates for the regional HIV/AIDS epidemics at the end of 2007 in Figure 2.7.



Figure 2.7: Global estimates of people living with HIV/AIDS in different world regions at the end of 2007 (UNAIDS and WHO, 2007, p.39)

At the end of 2007, a total 33.2 (30.6-36.1) million people were living with HIV/AIDS out of which two and a half (1.8-4.1) million had become newly infected. These increases have not been evenly distributed, the strongest growths over the past number of years taking place in Eastern Europe and Asia. India and China, the two most populous countries, have still low national prevalence percentages; and India's improvement in sentinel surveillance resulted in a lower estimate of prevalence levels (0.36%) in 2007 compared to previous years. However, on the one hand this covers regional variations with partly relatively high prevalence levels, and on the other hand even low prevalence levels still translate into millions of people in these populous countries (UNAIDS and WHO, 2007).

Despite having lower growth levels than some other world regions, Sub-Saharan Africa (SSA) is still the region with by far the highest number of PLHA as well as the highest prevalence levels, as can be seen in Figure 2.7 and Figure 2.8, respectively. Sub-Saharan Africa is also the area in which the continuing feminisation of the epidemic (worldwide 15.4 (13.9-16.6) million women were infected in 2007) can be noticed most strongly. For example, at the end of 2003, approximately 75% of all young people infected with the virus were young girls or women (UNAIDS, 2004). By 2007, 61% of all adult PLHA in SSA were female (UNAIDS and WHO, 2007).



Figure 2.8: Estimates of HIV prevalence levels 1990 - 2007, globally and in Sub-Saharan Africa (UNAIDS and WHO, 2007, p.5)

The country in SSA with the highest number of people living with the virus is South Africa; recent adjustments for India's estimates also confirmed South Africa's global rank as the country with the highest number of PLHA (UNAIDS and WHO, 2007). A detailed list of the epidemic's indicators for South Africa in mid-2006 has been compiled by Dorrington *et al.* (2006) and can be found in Appendix 2.



Figure 2.9: Prevalence of HIV among antenatal care attenders in South Africa, 1990-2006 (Department of Health, 2007c)

Compared to other African countries, the South African HIV/AIDS epidemic started relatively late, with infection levels in pregnant women attending antenatal clinics still below one percent in 1990 (Figure 2.9). But already by 1994, the year major political transformation processes started (see Chapter 3), antenatal care prevalence had reached the levels characteristic of a generalised epidemic. Today the total number of South Africans living with HIV/AIDS has reached an estimated 5.41 million, a number

still unthinkable a decade ago (Department of Health, 2007c). Although the exact reasons for the relative sudden explosion of the HIV/AIDS figures are still not fully understood, an unfortunate combination of driving factors, as described above (cf. Section 2.3.2), can be seen to be responsible (Tarantola *et al.*, 1999). Figure 2.10 below shows the prevalence in women and men of different age groups. The later onset of a rise in male infection levels indicates the later start of sexual activity in men, but also points to women's higher vulnerability (see above) and the feminisation of the epidemic in South Africa.



Figure 2.10: South Africa's HIV prevalence levels by age and gender, 2005 (Shisana et al., 2005)

The high incidence rate in South Africa, leading to its high prevalence levels, has however not been evenly distributed, as can be seen in the wide range of prevalence levels in the country's provinces (and districts). In the provinces of the Western Cape and KwaZulu/Natal, the antenatal HIV prevalence levels increased from 0.6 to 13.1%, and from 9.6 to 37.5%, respectively, in the ten years from 1993 to 2003 (Tarantola *et al.*, 1999; HST, 2007) (also cf. Figure 2.11). Thus, in KwaZulu-Natal (KZN) nearly two out of five pregnant women (39.1%) visiting public sector antenatal services have shown to test HIV positive in 2006, reconfirming KZN's position as the country's province with the highest number of PLHA (Department of Health, 2007c). The substantial variations in the spread of the epidemic are, again, influenced by spatial variations in the initial onset of the epidemic as well as in socio-economic, bio-medical and behavioural driving factors.



Figure 2.11: HIV prevalence by province among antenatal clinic attenders, South Africa, 2003-2006 (data from DoH SA, 2006d; 2007c)

While there has been some good news about a decline in the latest HIV prevalence rates for 2006 throughout the country (cf. Figure 2.9) and for both 2005 and 2006 for KZN, suggesting a decline in incidence in previous years, the impact of the AIDS epidemic will continue to increase. Thus, it is timely and appropriate that the HIV/AIDS epidemic in KwaZulu-Natal (in Section 1.4), and a specific part of the response to the enormous impact of the devastating epidemic, the KZN Community Health Worker Programme (in Chapters 5 and 6.3), deserve closer attention. However, in order to develop a suitable range of responses, one needs to understand the wide-range of impacts of the epidemic. Any appropriate response in such a far advanced epidemic like the one in South Africa can not only look at prevention, but needs also to address existing impacts.

2.4 The impacts

Like any other fatal disease, HIV/AIDS impacts on the infected individuals and on their families. Like any other major epidemic in history, the effects on the family extend to the communities and even to society at large, if the epidemic is widespread enough. But unlike any other epidemic thus far, in high-prevalence regions HIV/AIDS will have a much longer and perhaps more devastating impact on societies, due to the high rates of infection, the long incubation period and especially due to the majority of infections being amongst young working-age adults, the group which is normally the least vulnerable to disease and which is often considered to be the backbone of any society.

Since its discovery, the disease has had an enormous impact on the most affected sectors of society not only in terms of the number of people suffering and dying. In the USA, for example, it has also changed the voice and status of organisation of gay people and perhaps increased the openness of discussions on sexuality and discrimination. In many countries, the new syndrome has had a strong influence on cultural interpretations of disease, including literature, films, theatre and the media in general (Patton, 2002; Eaton, 2004). There have been fundamental impacts on many people's lives, people's behaviour and some specific sectors of society (like culture, law, medicine) even in countries with relatively low overall prevalence rates. However, the impact on countries with widespread epidemics has been more profound.

In conditions of a generalised epidemic (cf. Table 2.2), it is not only the individual people and their families that are affected. Since most adults are at the same time family and community members, producers and consumers (cf. Figure 2.12), a widespread epidemic creates impacts on a country's demography, on many sectors of society like the economy or public services and on society as a whole (e.g. democratic structures, human development). This section discusses some of these manifold effects of the HIV/AIDS epidemic without attempting completeness. However, some of the impacts are discussed below, with the intention of pointing out how some of these effects themselves make societies more vulnerable to further incidence of HIV infections while also affecting the ability to respond to the epidemic and limit its spread and impact. The main aim of illustrating impacts is, first, to demonstrate the need for response to the devastating HIV/AIDS epidemic, and second, specifically to indicate where and perhaps how response is necessary and possible (cf. Section 2.5). The section below starts by looking at the most immediate impact of HIV/AIDS on directly infected and affected individuals and their families (see also Figure 2.15).



Figure 2.12: Individuals as social and economic actors (Whiteside and Sunter, 2000)

2.4.1 Impact on households

As has been described in Section 2.2.3, AIDS is a syndrome related to an immunesystem deficiency, which is caused by the Human Immunodeficiency Virus. Since one of HIV's main transmission routes is via sexual contact, many people who have been infected have not only to cope with the knowledge of having a deadly disease to which there is no cure yet and for which only few have access to treatment, they are additionally confronted with the stigma and feelings of guilt associated with it. Thus, HIV/AIDS for the infected person does not only mean physical suffering and pain, it often also results in emotional trauma, desperation and hopelessness for the individual and all of the affected family (e.g. Community Health Worker programme manager, 2004).

As mentioned earlier, most of the people living with HIV are young adults and just in the beginning or middle of their working life. Thus, besides the direct physical and psychological effects of the disease and the emotional aspects for the whole family, there are also great costs related to an HIV infection of (adult) family members, who often are the household's only income-earner(s) (see also Figure 2.15, individual level impacts). Financial shortcomings firstly occur because of a reduction in income and productivity (due to illness or to responsibilities in care) and secondly are related to high treatment and care costs. Attempts to cope include the reliance on child labour, relatives and wider community support systems (UNAIDS, 2004). Still, in many cases the last savings and/or assets of a household are spent for often-expensive treatment and medications, leading to further impoverishment of the affected family (Whiteside, 2002). A further financial burden occurs for families through the high costs related to

the funeral of deceased family members, which are often using up the last remaining resources or even creating debts. Steinberg *et al.* (2002) found in their study of HIV/AIDS impacts on households in South Africa that funeral expenditures average four times the total monthly household income. In communities with high AIDS mortality, funerals not only become a financial burden for the affected family, their increasing number also effects local productivity and perhaps income and may contribute to a widespread sense of hopelessness.

After the death of one or both parents, their role as provider, carer and nurturer for the remaining household members, often young and now-orphaned children, is transferred to grandparents or the wider extended families (Baylies, 2002). In many cases, this also leads to the total dissolution of households, with siblings split up to be cared for by different families (Whiteside, 2002). Especially in sub-Saharan Africa, the classical safety net of the extended family is today often overstretched, leading to a breakdown of traditional social support systems. Therefore, orphaned children may stay without direct adult care and support, forming what has become known as child-headed households. As a result of the death of income-earning and productive family members due to HIV/AIDS, these child-headed and other impoverished households are left with very limited resources. Hence food insecurity and malnutrition, together with lack of access to education, health and other services become more widespread (Steinberg *et al.*, 2002, see also Figure 2.15). These effects, often occurring in combination with a lack of emotional support, increase the vulnerability of all household members, especially children, to the transmission of diseases, including HIV/AIDS.

In 2000, an estimated eight million African children had been orphaned due to AIDS (De Cock and Weiss, 2000). In 2003, an estimated 4.5% of all children aged 17 and under had been orphaned by AIDS in South Africa, approximately 10.5% in Zambia and 15% in Botswana; these are all numbers which are certain to increase even further in the coming years (Haacker, 2004). Consequently, various attempts to buffer the impacts of the epidemic are focusing on orphans and vulnerable children, e.g. by providing free schooling, child-support grants and fostering or community support schemes (The World Bank AIDS Campaign Team for Africa, 2000; Ewing, 2002). Different approaches to strengthen households' resilience include so-called micro-financing schemes, which often help especially women to increase household resources (Baylies, 2002). This is, as will be discusses in Chapter 5, also an area for Community Health Worker activities.

2.4.2 Demographic impact

In societies in which the above-described scenario repeats itself relentlessly, the impact of the epidemic becomes noticeable at the population level. In the most affected region in the world, sub-Saharan Africa, countries have experienced a significant increase in morbidity and mortality levels due to AIDS. There has been a decrease in life expectancy and a change in population structures. Many of the below-mentioned estimates are results of epidemiological and demographic forecasting models, some of which have been developed for specific geographical regions in Africa (e.g. Way *et al.*, 1991; Gregson *et al.*, 1994; Lee *et al.*, 1996; Stover, 1996; Williams *et al.*, 2000a; Mekonnen *et al.*, 2002). As has been discussed before, there are always sources of uncertainties in model predictions, which have to be recognized and acknowledged if predictions are influencing policy decisions (Stover and Way, 1998; Kault, 2000).

Noticeable changes in population size and structure, if not due to differences in migration patterns, can only be caused by a change in numbers of births and variations in the number and age structure of people dying. A fatal disease like HIV/AIDS evidently has its most obvious impact on levels of morbidity and on mortality rates, although it is assumed that HIV infection can have an influence on fertility. The exact figures following may contain some level of uncertainty, but they are sufficient to indicate the toll HIV/AIDS has already taken.

For some regions of Africa, adult mortality due to AIDS has reached levels around 70%. In South Africa, 40% of deaths of 15 to 49 year old adults in 2000 were attributable to AIDS (Dorrington *et al.*, 2001). In the same country, the mortality rate for 25-29 year old women has more than tripled between 1985 and 1999/2000 (Medical Research Council of South Africa, 2001). Additionally, due to the still high numbers of mother-to-child transmission there are also increases in mortality of children under five years.

According to UNAIDS (2004), 38 countries worldwide have experienced a reduction in average life expectancy since 1999. These values are projected to drop even further (Stephenson, 2000), leading to a reversal of hard-won gains in life expectancy of previous decades. In parts of sub- Saharan Africa, more than 50% of today's 15-years-olds will not reach the age of 60 (UNAIDS, 2004). Estimations for South Africans predict a reduction in their average life expectancy from approximately 60 years in 1990 to about 30 years by 2010 (Buvé *et al.*, 2002). Especially with the assumed continuous lack of access to life-prolonging antiretrovirals for the majority of people in

low- and middle-income countries, this trend will continue and is predicted to reach levels below 35 years for Swaziland, Zambia and Zimbabwe.

The increased adult mortality does not only impact on life expectancy, but can also lead to changes in population growth. In most countries, HIV/AIDS will at most limit the predicted growth, probably without leading to a reduction in total population numbers. However, if no dramatic action is taken, for a few African countries population sizes could become more than a third smaller than predicted (UNAIDS, 2004). Furthermore, since HIV/AIDS mainly affects young adults, a high mortality rate in this population group will lead to changes in population structure (and linked to this, to changes in social structures and networks). For example, based on an empirical study of two Ugandan districts, Low-Beer *et al.* (1997, p.553) identify a "severe but localized impact of AIDS on population structure". The impact of HIV/AIDS on South Africa's population is illustrated in Figure 2.13.



Figure 2.13: Population size with and without AIDS, RSA, 2000 and 2025 (UNAIDS, 2004)

Other areas of impact of high young-adult mortality are the increase in numbers of orphans (cf. above) and often an increase in the dependency ratio. The standard dependency ratio gives an indication for the amount of time, energy, and money the remaining working age population must devote to "non-workers", defined traditionally as the population cohorts under 18 combined with the ones above 65 (Folbre and Nelson, 2000). A slightly different definition is used by Haacker (2004), who mentions a three percent increase in the total dependency ratio for South Africa compared to a without-AIDS scenario for the same year (uses age groups 0-14 years and 50 years and over). However, in the context of widespread HIV infections in the adult age population, a true reflection of the dependency ratio ought to include the increasing numbers of care-dependent, working-age AIDS patients (cf. Arndt and Lewis (2000)).

2.4.3 Sectoral impact

The above briefly-illustrated impacts of the HIV/AIDS epidemic on the household and demographic level translate into impacts on other sectors of society. The extent of these effects does not only depend on the actual number of people infected, but also on the resilience of specific sectors and of society as a whole. Some of the factors influencing resilience to the epidemic are for example the ability of the health sector to provide treatment and care (and thus prolonging infected individuals' productive lives), measures implemented to buffer the loss of qualified people in e.g. management positions (also influenced by the general levels of education), the overall governance capabilities of a country, financial resources, stability and democracy. Unfortunately, the lack of the above factors appears to make a society more prone to intensive spread of HIV and a large epidemic, while limiting its ability to respond. Whiteside (1998) uses the term 'vulnerability' in this context, applying it to any social or economic entity under consideration. An extended discussion of various aspects of societies' susceptibility and vulnerability can also be found in Barnett and Whiteside (2002). Below, the effects of high morbidity and mortality levels on various sectors of society, including the macroeconomy and public services, are discussed.

2.4.3.1 Economic impact

According to the available literature, there still seems to be no coherent understanding of the overall impact of HIV/AIDS on a country's economy. However, the increasingly available literature describes the different mechanisms in which the epidemic influences the macro-economic development of a country (Cross and Whiteside, 1993; Bollinger and Stover, 1999; Guinness and Alban, 2000; Dixon et al., 2001; Haacker, 2002a). Compared to the household level, HIV/AIDS impacts on the macro-economy of a country take place more slowly and are more difficult to identify and attribute. The scale of macroeconomic impacts is defined by the kind and the magnitude of microlevel impacts, whose extents vary greatly between different economic sectors (Whiteside, 2002). Primarily, the epidemic affects an economy through increases in morbidity and mortality, which influence various levels of the economy including labour supply and productivity, total factor productivity, household spending patterns and government spending (Arndt and Lewis, 2001). Thus, any study of sectoral impact should include both the supply as well as the demand side of production and service provision. Moreover, Haacker (2004, p.42) highlights that HIV/AIDS influences the economic development by affecting adversely the social fabric of a society. He applies

the term "social fabric' not only to the social and economic institutions ... households, companies, and the government – but also to more abstract concepts such as governance and social coherence", while noting that any attempt to understand macroeconomic impacts requires a very broad view of factors influencing a society's economy and economic development.

Due to the complexity of an economic system embedded in a global market and influenced by a wide array of variables, it is difficult to quantify or predict the epidemic's exact impact on any high-prevalence country's economic performance. Furthermore, as with any of the aspects discussed in this chapter, the severity of future epidemic implications is strongly dependent on the level of mitigation efforts and success. However, for a number of countries, models have been developed in order to predict outcomes of 'with-AIDS' compared to 'without-AIDS' scenarios (Over, 1992; Cuddington, 1993; ING Barings, 2000; Bureau for Economic Research, 2001; MacFarlan and Sgherri, 2001; Haacker, 2002b). There are great variations in existing assessments, but for worst-affected countries reductions in economic performance are predicted (Haacker, 2004). Results of models applied to South Africa are discussed in some detail by Ford *et al.* (2002). For example, Arndt and Lewis (2001) use a common macroeconomic indicator, the Gross Domestic Product (GDP), to describe South Africa's economic performance in an AIDS and non-AIDS scenario. Some of the assumptions for their AIDS scenario are summarized in Table 2.5.

 Table 2.5: Some of the assumptions applied to the AIDS scenario of South Africa's macroeconomic development (from Arndt and Lewis, 2000)

Effect	Model Assumption
Population/labour supply: AIDS epidemic will	Slower growth in population and in labour force by
slow population growth and have differential impact	skill categories (taken from ING Barings, 2000; see
on growth in labour supply by skill category	appendix)
Labour productivity: Incidence of HIV/AIDS	Effective labour input for each skill type reduced
among workers will reduce labour productivity,	proportionally with projected AIDS deaths (from ING
especially with onset of AIDS	Barings, 2000) one period hence
Total factor productivity: Prevalence of HIV/AIDS	Sectoral TFP growth declines with the onset of the
lowers overall productivity (due to hiring and	epidemic falling to one half the "no AIDS" rate at the
training adjustment costs, absenteeism, slower	height of the epidemic
technological adaptation, etc.)	
Household spending patterns: HIV/AIDS affected	AIDS affected households save nothing and
households will shift spending towards health and	increase their share of health services spending to
related expenditures	10-15% of total spending (depending on quintile), at
	the expense of other (non-food) expenditures
Government spending: Spread of AIDS will	Health share of total government recurrent
induce higher government spending on health and	spending rises from 15% in 1997 to 26% in 2010;
social services, either displacing other spending or	non-AIDS related spending remains a constant
increasing the deficit	share of total absorption.

Using the above assumptions, the Arndt and Lewis (2000) model for South Africa predicts a lower GDP growth in the epidemic situation, with a maximum reduction in

growth rates of 2.6% in 2008 (cf. Figure 2.14). For 2010, the estimated GDP is approximately 17% lower than without HIV/AIDS.



Figure 2.14: Real GDP growth in RSA; two scenarios (from Arndt and Lewis, 2000)

But GDP is not the only, and not always the best, method to measure economic development. Although some analysts remark that for countries with labour-intensive industries and sufficient availability of unskilled labour, increased mortality leads to a decrease in unemployment rates and has only negligible impact on economic development, others argue that the sole focus on unskilled labour availability does not consider the effects of "economic costs of institutional dysfunction, ... intergenerational transmission of knowledge and skills, or of the disruption of lifetime capital acquisition and inheritance" (UNAIDS, 2004, p.57). Furthermore, instabilities in the labour market and increased labour costs may lead to a reduction in investment, both from national and international investors. Additionally, with a potential decrease in formal sector employment, governmental tax intake reduces. Government expenditure might be redirected to HIV/AIDS related services and thus be drawn away from investments e.g. into business-relevant infrastructure like water, electricity and telecommunications (Steinberg et al., 2000; Abt Associates (South Africa) Inc., 2001). Another, less economy-centred way of measuring the development status of a country is the use of the Human Development Index (HDI), which is an aggregate measure of longevity, knowledge and standard of living. The affects of HIV/AIDS on all the indicators used (life expectancy at birth, adult literacy rate, gross enrolment ratio and GDP per capita) are expected to lead to a strong reduction in HDI (Rasheed and Chole, 1994; UNDP, 2004).

On the business level, some of the most noticeable impacts for individual companies are the increasing direct and indirect costs caused by the impact of the epidemic on their labour force. For South Africa, it has been estimated that approximately half of the employed workforce in the year of the report will have died due to AIDS within a decade (Steinberg et al., 2000). HIV/AIDS-related, direct costs include rising expenditures on health care and other benefits (Dixon et al., 2001). Indirect costs, which on average will be the more significant ones for companies, occur due to increasing absenteeism due to high morbidity and funeral attendances. This has an impact on working morale and productivity and also coincides with a loss of skills. As mentioned above, there are variations in impact severity on different sectors, which for example depend on the percentage of skilled labour required and also on the impact on specific markets. Capital-intensive industries are likely to be more vulnerable than labour-intensive ones, if the latter are mainly reliant on easier-substitutable, unskilled labour. However, labour-intensive sectors with high skill requirements (e.g. education, health) have very high recruitment and training costs. Additionally, training of new staff is not only financially but also time-demanding, and contains the risk of losing newly gualified personal to HIV/AIDS as well (cf. 2.4.3.2.1 and 2.4.3.2.3).

Still, in labour-intensive sectors like agriculture, the impacts of the epidemic are also evident. Several sub-Saharan countries noticed impacts on agricultural production, especially, but not only, in the subsistence sector. In South Africa, between 30% and 45% of agricultural workers are assumed to be HIV infected (Njobeni, 2005). Effects of HIV/AIDS (illness, care-giving, *etc.*) are undermining rural households' productivity and thus lead to a declining agricultural output (Baylies, 2002). This analysis is for example applicable to KwaZulu-Natal. In summary, in high-prevalence countries productivity in the private sector is threatened, if no appropriate impact assessment and response planning is implemented. Similarly, the state sector has to adjust and respond to the epidemic in order to retain its ability to provide services (incl. the social cluster, cf. 2.4.3.2) and guarantee the functioning of key state sectors like the military and governmental administration. Some authors argue that the un-buffered impact of HIV/AIDS also threatens democracy and the very functioning of the state (Hickey, 2002; Manning, 2002; Nelufule, 2004) (see also Figure 2.15 for a summary of key social and structural level impacts).

2.4.3.2 Impact on the public sector

After the World Bank's Structural Adjustment Programmes of the last decades, the public sector is in many developing countries no longer a major stakeholder in the manufacturing sector, but does still play a major role in basic service provision and is often the biggest formal employer of a country. Thus, the State sector faces similar problems to the private sector, with increasing numbers of government and public-service sector staff affected by morbidity, mortality and absenteeism due to care obligations or funeral attendances.

However, there is a double-concern for the State, since States' responsibilities can increase if the private sectors fail to provide appropriate services or if increasing number of citizens cannot afford private sector services. Obviously, this also depends on the national definitions of state responsibilities – but if the economic production structure shifts and households' incomes decrease, a country's total tax revenue may decline, reducing investments in infrastructures as well as coverage and quality of public service provision. Furthermore, the increases in loss of ability and knowledge, in numbers of vacancies and in the workload itself, especially in the social cluster, ask for a detailed HIV/AIDS impact assessment and a development of response strategies, which must address the increased needs for co-ordination between different sectors.

The following section will look at three public sectors which have been shown to be strongly affected by the epidemic while potentially also playing an important role in public response. Thus, key impacts identified in the following sections will become part of the conceptual model of impacts (at the micro- and macro- level) presented as Figure 2.15.

2.4.3.2.1 The education sector

Looking at the impact which HIV/AIDS has on a country's education sector requires an analysis of the supply as well as the demand side of education. A simplified approach could assume that with increases in AIDS' demographic impact, the number of teachers as well as pupils will decrease with a minimal impact on the overall functioning of the sector. But the effects of the epidemic are more complex and uneven in their geographical distribution. As stated repeatedly, there is a need to understand the kinds of possible impacts in order to respond to them accordingly.

One visible impact of the epidemic in many African countries is the impact on teachers as well as school officials and other managers within the education sector. This impact, as outlined above, expresses itself in increases in absenteeism and mortality of staff, in a loss of knowledge and experience and increasing numbers of vacancies. A fourcountry study analysing the epidemic's implication for sector-wide planning assumed an annual loss of teachers and educational officers of up to two percent of the studied countries' total number of staff (The World Bank AIDS Campaign Team for Africa, 2000). This estimation is based on an assumed infection rate within the education sector staff on level with the country-wide average of adult infection. However, other studies point out higher levels of infection for teachers, which would increase the burden the sector has to carry and plan for. According to Dixon et al. (2001), for example Swaziland will have to double the number of teachers trained in order to keep the current level of service provision constant. The described impact on teachers and management of education affects the delivery, quality and maintenance of education services (Badcock-Walters, 2002). A noticeable effect is the loss of teaching experience, which will also impact on the quality of teaching.

At the other end of the spectrum are the effects the epidemic has on pupils and their access to education. First of all, there is the potential impact of the epidemic on actual numbers of school-aged children. In most countries, the size of this population group will continue to grow, although with slower growth rates especially in high-prevalence countries (The World Bank AIDS Campaign Team for Africa, 2000). A number of pupils and students are also infected with HIV themselves, although an increasing number of AIDS cases are likely to occur only in older age groups, notably at University level. Furthermore, the epidemic will have an effect on the actual demand for schooling by decreasing HIV/AIDS affected families' ability to afford the direct and indirect costs related to schooling. Some of the factors influencing pupils' school attendance are cost factors such as school fees, school uniforms and perhaps transport-related expenditures. As described, the occurrence of HIV/AIDS infection often results in poverty of the affected households and orphanhood for the affected children, decreasing the chances of regular school attendances and attainment. The impact of HIV/AIDS can be studied by analysing data on pupil enrolment. Additional useful sources comprise data on school attendance as well as repetition, completion and drop-out rates. Unfortunately, these data sets are not available in most developing countries; and it is even more difficult to obtain achievement-related variables, which could help understand the impact on quality of education (Ainsworth and Filmer, 2002).

A number of studies have shown that there is a "positive correlation between educational attainment and safer sexual behaviour" (Ainsworth and Filmer, 2002, p.31). Thus, there is not only the need to strengthen the education sector to increase literacy, educational and developmental levels, the sector also plays an important role in addressing the epidemic itself. Hence there is an urgent need to recognize and respond to the epidemic itself and incorporate HIV/AIDS in educational planning, but also to acknowledge the education sector's role in prevention and mitigation of the epidemic. Interestingly, some of these issues related to school absenteeism have been successfully addressed by a community-based organisation in KZN (see Chapter 5), indicating the importance of community engagement.

2.4.3.2.2 The social service sector

In many low- and middle-income countries, poverty is a widespread phenomenon with all its implications for levels of education, nutrition, life expectancy, *etc.* – even before considering the specific implications of HIV/AIDS. In 2002, the least developed countries only achieved a Human Development Index (HDI) value of 0.42 compared with a HDI of 0.73 worldwide and of 0.95 in the high-income OECD countries. Interestingly, Sub-Saharan Africa, the part most severely affected by HIV/AIDS, is also the area of the world with the lowest overall HDI (0.48) (UNDP, 2004).

Due to the described impacts of HIV/AIDS on households and local economies, poverty levels in affected countries are increasing. However, many of the high-prevalence countries, especially in Africa, have either no or only a very limited formal social security system, which could attempt to mitigate some of the impact. Furthermore, with growing poverty levels, the ability of "semi-formal and traditional approaches to social security" to support households affected by HIV/AIDS is diminishing (Kasente, 2000, p.31). But also countries, in which some kind of public welfare system exists, are noticing the effects of the disease. Some of these effects will be highlighted here, using South Africa as a case study.

As has been mentioned in the context of other economic sectors, there are impacts noticeable on the supply and the demand side of services. In South Africa, at the end of the Apartheid era, social development and welfare became a key goal on the government agenda, illustrated by the passing of numerous welfare specific laws and regulations and the creation of the Department for Social Development. Responsibilities of this Department include the distribution of social assistant grants and the development and implementation of policies for orphans and vulnerable children. Grants available in South Africa include old-age pensions, disability grants, child support grants, foster grants and care dependency grants. None of these grants is specifically for people living with HIV/AIDS, although adults in the last stages of AIDS become eligible for a disability grant. Nevertheless, the availability of these grants can play a major role in increasing standard of living for households affected by HIV/AIDS. In situations where the number of healthy working-age adults is decreasing, old age pensions are often the only source of household income, while child support grants, foster grants and care dependency grants can support households caring for children, including orphans and disabled children (Ewing, 2002; Defilippi, 2003; Legido-Quigley, 2003).

Through the impact of HIV/AIDS, there is not only an increase in numbers of people eligible for social security grants (e.g. foster parents), there is also an increasing number of people who are in urgent need of all the available financial support (cf. 2.4.1). The rising numbers of allocated grants has led to an increase in budget needs of the sector. Still, only a percentage of people qualifying for the different grants are receiving them, which is in part due to bureaucratic requirements (e.g. bar-coded identification documents and birth certificates) (Ewing, 2002), lack of information and the limited ability of the Department of Social Development to provide their services in remote communities. Approaches for dealing with these difficulties include close cooperation with the Department of Home Affairs and the employment of communitybased workers (see Section 5.3.2). At the same time, like any of the other sectors described above, HIV/AIDS has also a direct effect on the workforce through increases in workload and a growth in numbers of people infected and affected by HIV/AIDS cases at all levels of the Department. So, similar to the health sector, which will be discussed in the next section in detail, there is a double strain on the system: while there is an increasing demand for services, capacities to provide the service are diminishing.

2.4.3.2.3 The public health sector

The sector most often discussed and most obviously affected by HIV/AIDS is the public health sector. Impacts of the epidemic are equally noticeable in the private health sector. Yet, in the following section the focus will remain on public service provision, since in many of the countries with generalised epidemics, including South Africa, the public sector remains the only one accessible for the majority of people with HIV/AIDS.

Similar to the welfare sector, but perhaps on an even more dramatic scale, the public health system is experiencing a double strain through the combination of increasing demand on its services and increasing constraints of service provision. The most evident increases in demand for health care are caused directly by the number of patients with HIV/AIDS. In hospitals in KwaZulu-Natal in South Africa, the percentage of HIV-positive patients has reached dramatically high levels. Related to this high percentage is the fact that patients infected with HIV require on average longer treatment for specific opportunistic infections, while re-occurrences of infections like TB and thus the number of re-admissions to clinics and hospitals are rising. The HIV epidemic has been directly linked to an increasing number of tuberculosis patients, as a study in KZN's Hlabisa district has shown already in relatively early stages of the local epidemic (Wilkinson and Davies, 1997b). Equally, the recent increases in multi-drug resistant TB cases in South Africa are also linked to the lower treatment success rates of TB in HIV-positive patients and the difficulties occurring in an overburdened health sector (cf. also Section 2.2.3.2).

At the same time, specific HIV/AIDS related services like Voluntary Counselling and Testing and sometimes the provision of Prevention of Mother-to-Child Transmission services and treatment with antiretrovirals add to the workload of health care staff. These specific services also require additional resources (financial costs, infrastructure, personnel, training, *etc.*), while offering potential opportunities for Community Health Workers. On a different level, the HIV/AIDS epidemic is linked to increases in other transmittable diseases, by lowering directly the immune response of infected individuals and also altering socio-economic conditions, with increases in malnutrition and poor sanitation, which leave societies more vulnerable to disease. In many countries, the increase in burden of health care required for HIV/AIDS patients has worsened the under-provision of health services for non-AIDS cases.

A successful response to the described growing demand for health care requires an expanding health care system with an increase in financial resources, numbers of health facilities and health care staff. However, in reality the epidemic directly diminishes the health sector's ability to provide services, not only but especially through the effects it has on health personnel. As described, there is an increase in work load caused by rising patient numbers. Furthermore, the high number of prime-age patients with terminal AIDS is affecting the morale of health care workers. Combined with work-overload, burnout is not an uncommon symptom amongst the staff and one reason for job migration (to the private sector or abroad). Another, perhaps more important cause of staff shortages are the direct and indirect effects of HIV infection amongst staff or
their families, which again lead to an increase in morbidity and mortality of staff and high percentage of absenteeism.

This short description highlighted the growing impact on the public health care system. Existing pressures are perhaps even further exaggerated due to the role the sector has been ascribed to in combating the epidemic. In many countries, HIV/AIDS is still mainly seen as a health issue, giving the health sector the co-ordinating role for any response to the epidemic. This increases the sector's responsibilities on a managerial level, while also putting it into the centre of an often highly politicised debate on how to respond effectively to the HIV/AIDS epidemic (see e.g. Section 3.3). There seems to be a growing recognition that new responses are necessary, with improved co-ordination within the health sector as well as with other governmental service providers. An example, where increased co-ordination is recommended is the area of prevention, in which both the educational as well as the health sector can play a role. In this context, the role of management structures, data flows and alternative response structures is increasing. Part of this is the necessary integration of alternative sources, like the private sector, traditional healers, and Community Health Workers. The integration of some of these stakeholders will be analysed in greater detail in the KwaZulu-Natal case study (Chapter 6.3).

2.4.4 Impact on society

Generalised HIV/AIDS epidemics affect households, various private and public sectors as well as the macro-economy of a country. However, the implications of increased mortality and morbidity within the working-age population are even more widespread. In Sub-Saharan Africa, HIV/AIDS has had dramatic effects on development and poverty levels, reducing or reversing the development gains of previous decades. In other words, the epidemic not only affects personal well-being, but takes effect on all aspects of society (Kelly *et al.*, 2002). Studies reviewing the impact of HIV/AIDS have described the repercussions for key areas of state responsibility like the military and the jurisdictional system, including prisons. It can be argued that a long-lasting and widespread epidemic will affect all areas of governance and jeopardise democracy (Hickey, 2002). The epidemic can lead to reductions in government capacities and legitimacy, while failing government systems and rising levels of poverty and hopelessness can increase crime, instability and other security problems (Manning, 2002; Nelufule, 2004). In Figure 2.15, some of these key areas of impact are summarized in the category of macro impacts on the social and structural level.

This brief outline of possible effects on society in general is intended to highlight the necessity of a broad response to the HIV/AIDS epidemic. The dimension of the above described impacts, summarized in Figure 2.15, strongly depends on the effectiveness of the response to the epidemic.



Figure 2.15: Some of the possible impacts caused by HIV/AIDS epidemics

Derived from the above discussions of Section 2.4 and in a fashion based on the schematic model illustrating the various levels of drivers behind the spread of HIV/AIDS (see Figure 2.5, p.46), Figure 2.15 above summarises the wide range of impacts caused by a large scale epidemic. It emphasises again that, while infected individuals and their families are the most directly affected, the impact of a huge number of (especially working-age) individuals repercussions throughout society, affecting social networks and structures at both the micro and macro level. This range of effects is dramatic, but even more so since many of these impacts illustrated here are at the same time also contributing to a worsening of the HIV/AIDS epidemic itself (see drivers of the epidemic, Section 2.3.2 and Figure 2.5). It also means that the less is done to counteract the epidemic, the more severe the effects will be not only on individuals and families, but for the stability of whole countries and regions. Thus, in the following section, different areas of response will be described.

2.5 The responses

An infectious, deadly and widespread disease calls for a well orchestrated response. However, the response to HIV/AIDS has never in its history been straightforward. The "classical" response to an infectious disease outbreak, based on the germ theory, consists of the identification of infected and exposed individuals, the introduction of quarantine and other measures to stop further spread of the pathogen and, if possible, treatment of the disease as well as care for the infected patients. This is the established approach consistently taken for managing infectious disease outbreaks like SARS and Congo Fever and fits into "health professionals' collective consciousness: epidemics may be frightening, but can be managed through sanitation, vaccination and case management. Epidemics are the disease that best fit the military metaphors of medicine (Van Damme and Van Lerberghe, 2000, p.511)."

Yet, in the context of HIV/AIDS the response has to be more complex for several reasons. One problem with the quarantine approach relates to the very long incubation period. Another reason can be found in its nature of being mainly sexually transmitted, thus being linked to an active behaviour. Furthermore, the first noticed, epidemic occurrence of HIV/AIDS within the homosexual community in the United States has also underlined the importance of issues of taboo and stigma, which need to be addressed. All these aspects have challenged the importance of classical measures to control epidemics and quickly linked the disease to a number of human rights issues aimed at the protection of individual freedom (e.g. excluding compulsory partner notification) and minimisation of discrimination (e.g. laws prohibiting employment-related discrimination based on proven or suspected HIV status). This human rights approach also strongly shaped South Africa's post-apartheid HIV/AIDS response (cf. Section 3.3).

Based on these differences, after the identification of transmission routes, the first emerging area of response has been aimed at the *prevention* of new infections with the virus. In the original absence of treatment, addressing individual behaviour and behaviour change has become the main focus of the HIV/AIDS movement. A second key element in addressing the HIV/AIDS epidemic has concentrated on the development of biomedical response mechanisms like vaccines and HIV tests. More recently, the importance of reducing structural barriers for prevention has emerged, with an increasing focus on this area (Sumartojo *et al.*, 2000). With only partial prevention success and thus increasing numbers of patients in many parts of the world, questions of *care*, *treatment* and specifically antiretroviral medications have become

increasingly important (cf. Section 2.5.2). Equally, as outlined earlier (Section 2.4), the impact on society caused by growing morbidity and mortality due to AIDS calls for a nationwide response also outside the health sector.

Still, in many, especially developing countries the government-level response to the emerging HIV/AIDS epidemic started slow and was often characterised by denial and avoidance (Patel, 2001). Explanations for this delayed response are manifold and can be seen in the amount of other existing and pressuring development problems, the uncertainty linked to the new disease, an underestimation of the problem and its importance for countries' societies, and the fear of identification as a high prevalence country, which may potentially contribute to a decrease in foreign investment and tourism. All of these factors, in the context of major political transformation, have influenced South Africa's policy response (see Section 3.3). Perhaps personal doubts about the possibilities to identify and implement successful interventions reducing the spread of the epidemic may have also supported inaction. In other countries, any response to the epidemic has been limited due to social and political instabilities or even war. One area, in which response shortcomings are especially noticeable, can be found outside the biomedical and behavioural context - in the widespread lack of analysis of the epidemic's impacts on different sectors of society and the subsequent lack of attempts to mitigate these effects.



Figure 2.16: Three areas of response to the HIV/AIDS epidemic

Yet, all these three areas of response (cf. Figure 2.16) are of crucial importance in fighting the epidemic and its effects. Therefore, the different responses are discussed in more detail in three separate sections (2.5.1 to 2.5.3), with Section 2.6 highlighting the importance of a comprehensive response combining prevention, treatment and mitigation efforts.

Incidentally, as with the causes and the impacts of the HIV/AIDS epidemic, the responses to this catastrophe are relevant at different levels. For the above mentioned different kinds of response, it can be argued that all these three areas of response find their expression on different levels, from the individual and communal to the national and international. For example, individuals in high-prevalence areas may attempt to change sexual behaviour, and families play a major role in caring for infected members as well as in attempting to cope with the impact of the disease on an entire household (cf. Section 2.4.1 and Chapter 6.3). Equally, some communities have reacted to the epidemic by organising themselves to mitigate various aspects of impact (for example in KZN's Uthungulu District, see Section 5.1.3). Additionally, for an effective response the national and international level are of crucial importance, providing structures and conditions allowing individuals to have the choice of safe sexual behaviour, with the access to possible treatment and with possibilities which allow affected families to cope with the ill-health or death of family members. The notion of these various levels of response will be elaborated below, but is also in the development of the conceptual model presented in Section 2.6, which refers to the individual, micro and macrostructure levels of response.

Based on the introduction to this section above, perhaps it is useful to construct a framework structuring the different dimensions of response. The first dimension is based on the distinction at what aspect a specific intervention is predominantly aimed: at the stage before infection (prevention, see Section 2.5.1); at the health impact of infection on an individual (treatment and care, see Section 2.5.2); or at the impact of an epidemic on the different levels of society (mitigation, see Section 2.5.3).

The second dimension consists of different kinds of barriers or facilitators to any of the three aspects of response mentioned. Here, continuing from the theoretical underpinning used in the earlier analysis of drivers of the epidemic, it can be argued that individuals can influence response, but dominant barriers and facilitators of successful response can mainly be found at the structural level. At this level, a possible classification comprises economic, policy, societal and organizational as well as

physical aspects, whereas at the individual level it includes behavioural and biomedical characteristics.

The third dimension describes the governance aspects of response and consists of structures that implement and facilitate different types of response to the HIV/AIDS epidemic. This governance system consists of different spheres of response, including all levels of government, service organisations, business or for-profit organisations, faith communities or organisations, different non-government organisations, the justice system, media organisations, and various public service systems (e.g. the education, the welfare and the healthcare system).

Overall, it is important to emphasize that a country's successful response is linked to an understanding of the severity of the threat and a realisation of this assessment by senior decision makers. Furthermore, the understanding of possibilities to 'correctly' and 'effectively' address the HIV/AIDS epidemic is strongly linked to the understanding of the specific factors influencing its spread. Thus, variations in emphasis on causes also leads to different reactions, since "... society's definition of a situation shapes the nature of its response" (De Cock *et al.*, 2002, p.67). This can be seen in the varying approaches and emphases in ways HIV/AIDS is addressed. Different approaches to response are explained below, using the first dimension described above as a way of structuring this description. Thus, within the remainder of this chapter, Section 2.5.1 introduces prevention, Section 2.5.2 treatment and care and Section 2.5.3 impact mitigation and multi-sectoral response, whereas Section 2.6 will attempt to incorporate all the areas of response introduced in the here mentioned sections into an overall framework conceptualising the complex HIV/AIDS context presented within this chapter.

2.5.1 Prevention

The ideal scenario of dealing with an epidemic is the prevention of its further spread and ultimately the elimination of the disease. The most successful way of preventing HIV infections would be the widespread introduction of vaccination. However, in the continuing absence of a suitable vaccine, there are various other interventions aimed at the prevention of further transmission of HIV. The aim of these interventions is a reduction in HIV incidence, with the long-term hope of eliminating the disease from a population. All the prevention interventions can be distinguished by the kind of intervention and the particular sector or population group they are aimed at. As has been outlined earlier, the choice of target populations should depend on the epidemiological context, for example the stage of a local or national epidemic (cf. Table 2.2), and a specific understanding of what is driving the local epidemic. In early stages with low infection rates in the general population, the targeting of interventions at specific behaviour groups with higher vulnerability (e.g. commercial sex workers) is more promising than in a generalised epidemic, in which population-based interventions may be more successful (Gibney, 1999). Furthermore, the choice of intervention and their suitability is also influenced by the socioeconomic, cultural and legislative framework and the existing capacities of relevant public services (Grassly et al., 2001).

According to Gibney et al. (1999), prevention efforts can be differentiated into biomedical and behavioural approaches. Other authors also emphasise the important role of structural interventions (Sumartojo et al., 2000; De Guzman, 2001; Kumar et al., 2002). The range of biomedical interventions includes treatment of sexually transmitted diseases (STDs), promotion of condom use, testing of potential blood donors for HIV and measures to prevent Mother-to-Child Transmission. In the context of sexual transmission, according to Lawson et al. (1999), biomedical interventions target the probability of transmission during each exposure to HIV (cf. Table 2.3 and Table 2.4), while behavioural interventions focus largely on the reduction of possible exposure frequencies. Behavioural interventions may for example aim at increasing the average age of sexual debut, a reduction in numbers of sexual partners or in the case of intravenous drug users a reduction of syringe reuse. Possible structural interventions aim at the reduction of populations' susceptibility to infection, mainly by addressing environmental factors increasing the number of exposures. The manifold possibilities may be as far-ranging as changes in laws and policies, increased resources in public service sectors or policies and programmes to decrease poverty, stigmatisation and gender inequalities. Interestingly, many of the actual interventions do not clearly fit into

one or the other category. For example, the aim of increasing the use of condoms involves the biomedical aspect (condom as a barrier method), while requiring behaviour change (correct and consistent use of condom) and structural facilitation (e.g. laws requiring condoms in legal brothels (Albert *et al.*, 1995), free provision of condoms (Myer *et al.*, 2001) through, for example, Community Health Workers, or programmes aimed at the reduction of stigma related to condom use (Schoepf, 1992; Oinyaku, 2002). As this shows, the distinction between biomedical, behavioural and structural interventions can be somewhat nominal; it nonetheless is useful for analytical purposes and to focus response beyond the individual level.

In the following section, specific prevention methods will be described in more detail. The section is structured according to the different modes of transmission, with prevention of sexual transmission of HIV the major focus since this is the mode that has been identified as predominant. However, other prevention interventions will also be mentioned, while a brief evaluation of existing prevention efforts will conclude this analysis.

2.5.1.1 Sexual transmission

As has been outlined above, there are a number of both biomedical and behaviour interventions aimed at the reduction of HIV infections through sexual transmission. Since heterosexual transmission is the main driving force of HIV incidence throughout sub-Saharan Africa, this is the field in which the highest number of infections could be avoided and is thus the main focus of many prevention programmes.

There are several levels at which vulnerability of individuals and population to sexual transmission of HIV is increased. As outlined above, the choice of interventions implemented depends on the one hand on the understanding of factors influencing this risk (cf. Section 2.3.2), but on the other hand the selection is also dependent on the kind of implementing agency and their possibilities, which are influenced for example by organizational structures and functions, level and area of activity and resource availability. All of these are also factors influencing Community Health Worker's activities in this area. In the following, the array of possible biomedical and behaviour interventions will be described, before implications of the structural context of prevention for the possible success of specific interventions are discussed.

Interventions include behaviour change programmes, biomedical interventions and programmes aimed at improving structural conditions supporting the success of behaviour and biomedical interventions. The following table (Table 2.6) lists some of the interventions aimed at the prevention of sexual transmission of HIV.

Prevention intervention	Published examples	
Behavioural		
Peer education of male hostel dwellers	Nyawo and Xaba (2002)	
School-based AIDS education in RSA	Kuhn <i>et al.</i> (1994)	
South Africa's loveLife campaign	Stadler and Hlongwa (2002)	
Community-based social marketing of	McKenzie-Mohr (2000)	
behaviour change		
Review of various behavioural	Harrison et al. (2000b)	
interventions in the South African context		
Biomedical		
Evaluation of community-based STD	Hudson (2001)	
treatment schemes		
Social marketing for condom promotion	Price (2001)	
Evaluation of potential role of vaginal	Ramjee et al. (2001), Pilcher (2004)	
microbicides & their acceptability by men		
Structural		
Refocusing reproductive health inter-	Mbizvo and Bassett (1996)	
ventions to increase male participation		
Local community governance intervention	Burris et al. (Burris et al., 2002)	
Comprehensive community-based inter-	Campbell and Williams (1999), Williams et	
vention approach in RSA's mining sector	<i>al</i> . (2000b)	

Table 2.	6: Exam	ples of	prevention	interventions
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Behaviour-based interventions are aimed at reducing the frequency of potential exposure to HIV and are based on the fact that certain sexual behaviour (e.g. large number of partners) exposes individuals to greater risk of sexual infection than others. Thus, the key aim of many prevention programmes is the widespread distribution of information about HIV/AIDS and behaviour which reduces the risk of sexual transmission. The hope is that an increase in information availability will increase knowledge on the subject, increase possible choices and subsequently translate into safer sexual behaviour and a reduction in HIV incidence. These assumptions seem appropriate since increased knowledge forms an important basis for any behaviour change and can become part of the incentives to change behaviour. However, especially sexual behaviour is not only influenced by individuals' knowledge and personal characteristics but by a multitude of structural factors including community and societal norms and values, economic circumstances and gender roles. Reducing some of the structural barriers to behaviour change is paramount for successful prevention interventions (cf. discussion below).

In order to evaluate the local behavioural context, a starting point for many interventions has been the application of so-called KAPB (Knowledge, Attitudes, Practices and Behaviour) surveys. The information provided by these studies can establish the framework for specific interventions, and allows the evaluation of intervention success, if repeated after programme implementation. Programmes aimed at behaviour change are very diverse and can vary from national radio or TV broadcasts, videos, poster campaigns, and drama groups to local faith- or communitybased initiatives (Harvey et al., 2000; Mathews et al., 2002). In many places, peereducator initiatives and the use of social networks as well as opinion leaders and role models have proven to be effective in increasing knowledge as well as acceptance levels of behaviour change promotion (Oinyaku, 2002; Ross and Williams, 2002; Benotsch et al., 2004). Specific aims of these behaviour-change campaigns range from the promotion of openness to discuss sexual health-related questions within families and partnerships, delay in first sexual encounter, a reduction in numbers of sexual partners and the use of condoms. It is important that the chosen campaigns are socially and culturally appropriate while providing correct information (Sumartojo et al., 1997). They should also be relevant for specifically targeted groups, be it adolescents (Campbell and MacPhail, 2002; Leclerc-Madlala, 2002), hostel dwellers (Nyawo and Xaba, 2002), prisoners (Reddy et al., 2002) or commercial sex workers (Ford and Koetsawang, 1999; Marseille et al., 2001).

In many parts of Africa, the ABC-slogan ("Abstain! Be faithful! Condomise!") has played a prominent part in promoting safe sexual behaviour. Influenced by local moral belief systems and religious convictions, the abstinence part of the slogan is specifically aimed at people outside marriage, faithfulness at those inside a steady partnership. Like in South Africa, the propagation of condoms plays a major part in many prevention campaigns as one possible method to make sexual encounters safer. Besides the most commonly advertised male condom, there are other barrier methods like the female condom and microbicidal gels, the later still being the subject of further investigation (Pilcher, 2004).

Many prevention initiatives face the problem that only a small percentage of increasing levels of knowledge is actually translated into changes in sexual behaviour. First of all, sexual behaviour is not only influenced by logic and reason (Donovan and Ross, 2000). But there are several other causes for this problem, some of which will be discussed later. However, a major factor is the common denial of people's own vulnerability despite high prevalence levels. In this context, the widespread introduction of Voluntary Counselling and Testing (VCT) services may help on the one hand to illustrate

personal risk situations, but also to strengthen the will of HIV negative people to remain so. VCT forms an important first step to access any HIV/AIDS related programmes like those offering Prevention of Mother-to-Child Transmission services (cf. Section 2.5.1.2) (Pronyk *et al.*, 2002). It can also support partner notification and provides a possibility for targeting prevention efforts for HIV-discordant couples. Furthermore, VCT can offer an environment to provide necessary information without generating an atmosphere of fear which can create or at least support fatalistic attitudes counterproductive for prevention (see e.g. also Section 2.2.3.3).

Besides HIV testing, biomedical interventions are mainly aimed at reducing the infectiousness and susceptibility during sexual encounters. Thus, without a vaccine, the treatment of STDs, the promotion of male and female condom use, and potentially of microbicidal barrier methods (Ramjee *et al.*, 2001) form a major part of these prevention efforts. In some areas, the propagation of male circumcision has also been considered, since circumcised men might be less susceptible to HIV infection (Lagarde *et al.*, 2003; Scott *et al.*, 2005). The role of affordable antiretrovirals in reducing the infectiousness of HIV-positive people and possible effects for prevention still requires further investigation (Vernazza *et al.*, 1997; Lawson *et al.*, 1999, Vittinghoff et al., 1999, Gray, 2003).

Based on the assumption that high prevalence of specific STDs can contribute to HIV incidence, several prevention campaigns have concentrated on intensive treatment campaigns for ulcerous bacterial STDs, which can increase infectiousness as well as susceptibility to HIV (cf. Section 2.3.2) (Grosskurth et al., 1995; Wawer et al., 1998). In areas where STD prevalence is very high and the public health infrastructure poor, syndromic management methods have been introduced since they are suitable for implementation in resource-poor settings (Harrison et al., 2000a). Apart from the treatment component of STD prevalence reduction efforts, primary prevention of new infections is equally or perhaps even more important. The same principles are relevant for avoiding STD as well as sexually transmitted HIV infection, thus resources for both can be combined to achieve a better outcome. Hudson (2001) for example argues that the well-known STD treatment trials in Mwanza, Tanzania and Rakai, Uganda have not only been successful because of increased STD treatment, but also a change in sexual behaviour. Overall, "(a) multifaceted approach combining, for example, condoms and STD treatment has a higher likelihood of success than a single-faceted approach, because the combined approach has the advantage of reducing both the number of exposures and the transmission probability (Lawson et al., 1999, p.44)."

The overall effect of the above described prevention approaches is amongst others influenced by the reach of these programmes and by the success they have in providing knowledge as well as the necessary equipment like male or female condoms. The sustainability of many of the interventions is strongly influenced by the broader structural context including the existing infrastructure. The structures of the public health sector are especially relevant, since this sector is in many countries together with NGOs and community-based organisations (CBOs) the main implementation agency. Therefore, although it is not the only sector important for a successful response to HIV/AIDS, the service and management of the public health sector are crucial for many interventions. Furthermore, it is important to utilize existing structures and networks innovatively in order to maximise their utilisations as well as increasing the reach of intervention programmes (e.g. informal distribution of condoms in front of health facilities through existing social networks) (Myer *et al.*, 2002). All of these descriptions above seem to point to the major potential a well functioning Community Health Worker Programme could have in addressing these issues.

However, even in areas of successful attainment of high levels of accurate knowledge regarding HIV transmission and prevention methods, there are numerous obstacles hindering the translation of knowledge into changed behaviour. Individuals' behaviour is not only influenced by knowledge, but also by socio-economic and cultural circumstances including stigma associated with HIV, common perceptions of risk and the "social construction of gender in the context of high levels of poverty, unemployment and violence" (Campbell and Williams, 2001, p.137). In many African countries, women are often economically and socially dependent on men and are not expected to discuss questions regarding sexual health (Kim and Motsei, 2002). Thus, they experience strong difficulties in negotiating condom use, which is predominantly depending on male consent (Dempster, 2003; Pilcher, 2004). The female condom, which could perhaps increase women's negotiating abilities, is relatively expensive and not widely available (Patel, 2001). Moreover, sexual encounters for girls and women are often coercive and violent, thus excluding any negotiation of safe sex (Delius and Glaser, 2002). In this context, any prevention efforts not addressing gender issues and especially targeting men's perceptions and determinants of sexual behaviour will be less likely to be successful (Mbizvo and Bassett, 1996).

Furthermore, the success of condom promotion is often limited by the association of condoms with prostitution, disease, promiscuous or unfaithful behaviour and an ascribed reduction in pleasure (Patel, 2001). Condoms are perceived as a symbol of mistrust and as a population control mechanism introduced by Western organisations.

Equally, specific cosmological concepts, e.g. an assumed importance of semen for the growths of a foetus, increase the objections to its use (Schoepf, 1992). In this context, new ways have to be found to adapt cultural concepts in such a manner that prevention measures can be incorporated and become socially acceptable. Social marketing has been identified as one of the possible ways to achieve a re-interpretation of condoms, the co-operation with locally respected elders and traditional healers in reinterpreting traditional concepts to adjust to the new situation and allow for specific prevention methods as another (Schoepf, 1992; Price, 2001) (cf. also Section 5.3.2.3). Likewise, the influence of media, especially of entertainment programmes like movies or sitcoms, can have a positive effect by increasing the levels of perceived personal risk and instigating behaviour change (Snyder and Rouse, 1995; Myers, 2002). An example of multi-media intervention is the Soul City programme in South Africa (cf. Section 3.3).

In summary, the socioeconomic making of AIDS in Africa must be recognized in order to enable prevention efforts to become effective; "viewing AIDS as a development issue can open the way to community-based approaches to primary health care and HIV prevention" (Schoepf, 1992, p.89). And furthermore, "(c)ommunity-based reduction strategies using empowerment methods can help many people to protect themselves and others from HIV infection. However, broader societal change is needed to reverse the tide of the deepening economic and social crisis which continues to reproduce risky behaviour (Schoepf, 1992, p.98f)."

2.5.1.2 Prevention of Mother-to-Child Transmission

Pregnant, HIV-positive women can transmit the infection to their babies, mainly during labour or breastfeeding. In July 2004, an estimated two million children in Sub-Saharan Africa alone were living with HIV, the majority of which caught the virus from their mothers. Clearly, the most efficient way to prevent transmission of HIV from mother to child would be the prevention of infection in mothers in the first place, or the prevention of unwanted pregnancies for woman living with HIV. Yet, in reality there are many HIV-positive and pregnant women, and at them the provision of services preventing the transmission of HIV from mother to child is aimed. Without any interventions, approximately a third of the babies being born to HIV-positive mothers are at risk of being infected with the virus as well. The high numbers of children infected with HIV have already led to an increase in child mortality in many African countries (cf. 2.4.2) (CHGA Economic Commission for Africa, 2004).

The Commission on HIV/AIDS and Governance in Africa (CHGA) identified five components, which, if provided effectively, could lower the transmission risk to a maximum two percent (CHGA Economic Commission for Africa, 2004). The first and major component are maternal and child health care services. An adequate quality and access to ante- and post-natal health care for both mother and child built the basis of any success of Prevention of Mother-to-Child Transmission (PMTCT) efforts. The maternal and child health sector in Africa is often incapable of providing sufficient services due to a widespread lack of financial and human resources, including the lack of adequate management. However, for a successful PMTCT programmes, the expansion of these services is crucial.

As mentioned earlier, the uptake of VCT is an important way to provide people with information related to their own personal situation and on available prevention or even treatment possibilities. In the case of HIV-positive, pregnant women it enables them to access PMTCT services. If available, these services include three mechanisms to reduce the likelihood of virus transmission to the child. The most widely publicised and probably most effective of these interventions is the provision of antiretroviral treatment. A short-course provided to mother and baby shortly before and after delivery can reduce the transmission risk during birth by approximately 30 to 50 percent (CHGA Economic Commission for Africa, 2004). For many countries, difficulties in providing ARVs to HIV-positive pregnant women nationwide are less related to the actual costs of antiretrovirals, instead they are caused by a lack of gualified staff and insufficient infrastructure capacities – a problem relevant for any health sector-based response to the epidemic. A further, in South Africa highly politicised and controversial, issue regarding PMTCT is linked to the potential development of viral strains resistant to further treatment. This is especially relevant if the same antiretroviral drugs are being used for PMTCT as for the treatment of HIV infection in the remaining population (Lawson et al., 1999). However, this topic also became one of several components of the political HIV/AIDS controversy in South Africa, as outlined in Section 3.3.

A further intervention to reduce transmission likelihood is the use of caesarean section, which can decrease infection risks for the baby during birth. However, this intervention requires suitable health care facilities, since otherwise the maternal health risks related to the surgical procedure may outweigh the reduction in risk of transmission (Lawson *et al.*, 1999).

After birth, there is still a 5-15 percent chance of HIV transmission to the baby via breast milk. There has been an intensive debate about the best advice to give to HIV-

positive mothers, since on the one hand breast milk may transmit the virus, but on the other has long-praised positive health benefits for the baby's development. Especially in many poverty-stricken areas, feeding formula is expensive and also harbours health risks, if the lack of clean water and sterilizing possibilities increases the likelihood of often fatal, waterborne diseases like diarrhoea. Furthermore, for many women it is difficult to opt for formula feed, since it is often stigmatised due to its link to HIV. Based on recent research, the advice now given recommends to either only breastfeed or only formula feed, but not to mix the two since this will increase health risks to babies significantly. Formula feed is the recommended option only if there are sufficient resources reliably available throughout the first months of the baby's life. This potentially confusing scenario of different messages points out the importance of community-based personnel (like Community Health Workers) that could give good, locally-informed advice on the subject (see 5.3.2.2).

Despite the described difficulties, in South Africa there seems to be a strong interest by pregnant women to access available PMTCT services including provision of ARVs. However, a major problem remains the necessary infrastructure required. A cost-effectiveness study by Wilkinson *et al.* (1998) in South Africa highlighted the need for increased numbers of counsellors, nurses and laboratory technicians. In many resource-poor settings, this constitutes a major obstacle for a fast and comprehensive roll-out. At the same time, the necessary increase in health sector capacity could also contribute to other health services and could for example support other HIV treatment programmes (Wilkinson *et al.*, 1998). Thus, the expansion of PMTCT services including short-course treatment with ARV seems to remain a visible and cost-effective way of reducing the number of babies infected with HIV (Wilkinson *et al.*, 2000; Kahn and Marseille, 2002; Rely *et al.*, 2003).

2.5.1.3 Prevention of transmission in medical settings

In the beginning of the epidemic, some of the main transmission routes of HIV were linked to the health care sector. Exposures to HIV via blood transfusions or needle sticks have a very high transmission probability, since the virus is directly released into the blood stream (cf. Table 2.4). One of the major successes early on in the epidemic was the increase in safety of blood transfusion services by introducing screening procedures to minimise the numbers of high-risk donors and, since the development of HIV tests, the actual screening of donated blood and blood products. In general, the creation of a central blood bank is recommended, since organizational and other resources can be used more efficiently. Thanks to the development of cheaper tests the possibility for safe blood supply has also increased in resource-poor settings. However, the minimisation of blood transfusion numbers by implementing and adhering to specific guidelines is an equally important way to reduce HIV transmission (Berege and Klokke, 1997; Constantine *et al.*, 1999).

Another possible route of transmission is through contaminated needles. Recommended precautions to increase injection safety include the utilisation of singleuse syringes or, if the reuse of needles cannot be avoided, the application of adequate sterilisation methods. Furthermore, training and education of health practitioners including traditional healers as well the general public can help create awareness and perhaps reduce the prescription of and demand for unnecessary injections (The Cochrane Collaborative Review Group on HIV Infection and AIDS, 2004). For a successful reduction of HIV transmission in medical settings, the available infrastructure and equipment are relevant. But furthermore, the training and actual adherence to behavioural and organizational protective procedures is equally important (Gumodoka *et al.*, 1997).

2.5.1.4 Injecting drug use

Intravenous drug users (IVDUs) are at an increased risk of HIV infection, since they are often exposed to the dual risk of unsafe sexual intercourse and needle sharing. Hence, worldwide prevalence among IVDUs has grown rapidly. High prevalence levels in IVDUs groups can indicate the potential for a growing epidemic in the general population, and should thus be addressed with a concerted prevention effort. The introduction of harm-reduction interventions is recommended, especially but not only if transmission amongst IVDUs is a major contributor to a regional epidemic, as is the case for example in Russia (e.g. Rhodes and Simic, 2005). Interventions can begin with the education of IVDUs on HIV/AIDS related issues, an increased availability of clean needles, e.g. via needle exchange programmes, or education intervention on sterilizing equipment and other prevention methods. The overall aim of many interventions is a general reduction of drug abuse, but the often widespread criminalisation of drug users decreases possibilities to reach the targeted population with suitable prevention interventions (Barnett and Whiteside, 2002). Some additional intervention methods discussed by Abdul-Quader et al. (1999) include the pharmacological treatment of drug addiction, HIV testing and social network interventions. Furthermore, similar to other HIV prevention interventions, wider

structural areas increasing risk should be targeted, including the physical, legal, social and economic environment at micro and macro level (Rhodes and Simic, 2005).

The success of the various described prevention interventions can strongly depend on the existing leadership in promoting these campaigns, which can for example contribute to the reduction of stigma and an increasing availability of resources. These are all aspects which are equally relevant for the implementation of successful health care and treatment programmes.

2.5.2 Health care and treatment

Since the beginning of this millennium, HIV has become the infectious disease responsible for the highest number of adult deaths worldwide. The millions of people currently living with HIV worldwide are evidence that prevention efforts alone are not enough in responding to the epidemic. People living with HIV/AIDS (PLHA) and their families need support in dealing with the impact of the disease on health and well-being. International organisations and local governments agree that a humanitarian response has to include treatment and care, in provision of which the public health sector plays the central role.

Yet, the health sector's capacity to respond to the epidemic is itself also affected by the impact of HIV/AIDS, as outlined in Section 2.4.3.2.3. There is on the one hand, the direct effect on human resources, which are depleted due to increased morbidity and mortality levels directly caused by HIV/AIDS. Furthermore, rising attrition levels caused by increased workload and decreased job satisfaction, stress and job migration put further pressure on the remaining staff. On the other hand, health care demands increased by the epidemic are worsened by the dual epidemic of HIV/AIDS and TB, with Africa being the hardest-hit continent.

The public health care sector carries the main responsibility in implementing comprehensive health care and treatment packages. Thus, the epidemic is putting high pressures on the health care systems of severely affected countries, limiting their capacities to provide accessible quality health care. This leads to the question to what extent Community Health Worker programmes, such as the one in KZN, can contribute in such a complex context to HIV/AIDS response. However, at this point, the following sections will first outline some key points which should become part of a comprehensive health care sector response, while major obstacles to their successful

implementation in resource-poor countries will also be discussed. Furthermore, possible approaches to strengthen response measures are highlighted, before a more detailed discussion of the provision of antiretrovirals follows.

2.5.2.1 Comprehensive health care

There are three major aspects in which health care systems should ideally respond to the epidemic: first, in providing access to health care services (e.g. STD treatment), the health care sector contributes to prevention of HIV/AIDS (cf. previous section). Second, the provision of health care services should be adjusted to provide for the specific health care needs of a growing number of PLHA. Third, the health care system and its delivery structure have to adapt to the above described increasing pressures, which leave a decreasing health workforce with an increasing number of patients. This consideration is not only relevant in the context of treatment and care for HIV/AIDS patients, but is important for sustaining the whole health care system including Community Health Workers. These three aspects are closely interlinked, thus it is attempted to describe them in their complexity. However, given the earlier focus on prevention, here the latter two aspects, especially treatment and care, are at the centre of the following discussion.

Based on the experience of more than two decades, it has been possible to develop a better understanding of health care needs of PLHA. In order to improve the well-being and health of people with HIV infection, a holistic approach to treatment and care has been recommended. This approach includes 'positive living', the treatment of STDs and opportunistic infections (OIs), and if available, treatment with antiretrovirals (ARVs). The availability of VCT facilities is equally important since they provide an important access point to other services. In the absence of life-prolonging ARVs, the provision of palliative care and pain reduction approaches can support terminally-ill AIDS patients.

The concept of 'positive living' has been identified as crucial for sustaining a productive, disease-free life despite HIV-infection. The recommendations, which PLHA should already follow before AIDS-related symptoms and OIs develop, suggest a nutritious and balanced diet rich in vitamins, the avoidance of stress as well as the abstinence from harmful substances like alcohol and drugs. Overall, it is suggested to attempt to lead a generally more balanced life. Following these recommendations could theoretically not only have a positive impact on the infected person's health, but also

for other family members, specifically for dependent children. However, all the above guidelines have to be considered in the context of developing world countries, where it is very difficult or impossible for HIV/AIDS affected, often very poor households to follow these recommendations, especially without any additional support. This underlines again how HIV/AIDS does not only affect poor people more often, but also affects their health and other living conditions more severely. This makes it interesting to investigate what role for example Community Health Workers, who are often described as 'agents of development', possibly could play.

The second component of a holistic approach relies even more strongly on the availability and accessibility of health care services. With progressing infection, the prevention and treatment of OIs (cf. Sections 2.2.3.1 and 2.2.3.2) through appropriate use of relatively cheap drugs (compared to ARVs) is becoming more important. The successful diagnosis and treatment of OIs can help to prolong the survival of PLHA. Therefore, the South African Department of Health has been publishing detailed treatment recommendations suitable for primary health care settings in the country (e.g. Department of Health, 2000b).

In this context it is worth noting that dual infections with HIV and tuberculosis are increasingly common and are complicating treatment. Both diseases have a reinforcing effect on each other, with TB more likely to become active and harder to treat in HIVpositive people, while TB is one of the most common Ols, responsible for a high number of AIDS deaths. Thus, the duality of these two diseases is worsening the epidemic situation and the impact on health sector capacities (see also Sections 2.2.3 and 2.4.3.2.3). Therefore, Nullis-Kapp (2005) not only stresses the duality of TB and HIV/AIDS, especially on the African continent, but also emphasizes the need for joint research, surveillance and treatment initiatives. In the context of treating tuberculosis, WHO recommends the implementation of directly observed treatment, short-course (DOTS) programmes, which have proven to be successful in increasing compliance rates to the complex TB medication schemes in different local settings, including KwaZulu-Natal (Wilkinson, 1994; Pio et al., 1997; WHO, 2001; Borgdorff et al., 2002; Rodger et al., 2002; Colvin et al., 2003). Directly observed treatment approaches have also been recommended for administering ARVs, which provides a valuable possibility to learn lessons from DOTS for the implementation of ART in resource-poor settings (Farmer et al., 2001; Harries et al., 2002). The successful involvement of Community Health Workers in DOTS and DOT-HAART (see Sections 2.2.4 and 2.5.2.2) delivery has been described for example by both Chowdhury et al. (1992) and Wilkinson and Davies (1997a) and for the latter by Farmer et al. (2001).

A further aspect of treatment relevant for PLHA is the treatment of STDs, which does not only improve the well-being of the patient, but also provides opportunities to address specific prevention issues including health education to prevent transmission and re-infection, condom promotion (and provision) and discussion of issues around partner notification (Grosskurth and Mwijarubi, 1997). Syndromic management is the commonly used approach to treat occurring STDs in resource-poor settings (cf. Section 2.5.1.1).

However, in later disease stages with a severely deteriorating immune system the effectiveness of OI medications diminishes and patients should ideally be treated with antiretrovirals (Barnett and Whiteside, 2002). As described above, ARVs are medications developed to suppress HIV reproduction and thus preserve the immune system's capacity to ward off opportunistic infections. A holistic treatment and care approach for PLHA should preferably consist of all of the above components, including antiretroviral therapy (ART). However, ARVs are only available to a small, though increasing, minority of PLHA living in low- and middle-income countries (cf. Section 2.5.2.2). For a successful implementation of ART it is, again, important to consider the micro and macro environment. Successful treatment programmes do not only require the uninterrupted delivery of drugs, they also require a supportive environment including a functioning health service system capable of conducting regular testing and adjustment of treatment to individual requirements. Furthermore, the introduction of treatment is also linked to opportunistic costs for PLHA and their families, including special nutrition needs and transportation costs to the clinic, something which may exclude PLHA's from accessing HAART even in areas where it is offered. The implementation of ART as part of a holistic, life-prolonging intervention in developing countries is very complex, full of obstacles and has over the years been part of a controversial debate. However, international developments, notably WHO's and UNAIDS' '3 by 5' initiative have increased the widespread acceptance of the notion that ART should be part of the global response, and should become available to all PLHA, including those in developing countries. Thus, this aspect of health sector response is discussed separately in the next section (2.5.2.2).

In ideal circumstances, a further significant service provided for PLHA is counselling. Counselling should be a confidential dialogue supporting the patient or client to deal with stressful circumstances and take informed decisions central for the client's wellbeing (van Praag *et al.*, 1997). The counselling service not only provides advice for PLHA, but also for any person about to take an HIV test and family or household members of PLHA. Counselling can play an important part not only in providing for specific health care needs, but also for promoting prevention methods. Specific prevention methods can be adjusted to the specific needs of HIV-positive or -negative people or those without any test results. Furthermore, a functioning VCT system is an important precondition for the effective expansion of other HIV treatment, care and support services. For example, the introduction of VCT services in five rural South African primary health care facilities proved to successfully increase the number of people learning their HIV status, thus providing the basis for a possible implementation of PMTCT or even ART services (Pronyk *et al.*, 2002). However, the widespread availability and accessibility of VCT services is still not guaranteed in most resource-limited settings, often due to the general lack of resources and specifically trained HIV/AIDS counsellors or other qualified health personnel.

Another aspect referred to earlier as part of a holistic health care package is the provision of palliative care. The main aim of palliative care is to make patients in the final disease stage more comfortable and improve their well-being and health while supporting the primary care giver by reducing their care load. Palliative care includes pain reduction approaches and assistance with issues like hygiene, wound care and symptom control (Uys and Cameron, 2003). The current availability of palliative care in most countries in Africa is insufficient for the growing demand, while the few services available are mainly provided by local NGOs.

The above paragraphs of this section have described the different health care needs of PLHA. However, for an analysis of the health sector response to HIV/AIDS it is crucial to understand which levels of the health care system are actually involved or should be involved in the provision of these services. A detailed analysis of the organizational structures and processes enabling or hindering services provision will be carried out in later stages of this thesis using KwaZulu-Natal's health service sector (specifically the Community Health Worker programme) as a case study, however, a general perspective will be given here.

In order to systematise the above-described health sector responses to HIV/AIDS, four aspects can be identified which form part of a *comprehensive health care* package. According to van Praag *et al.* (1997), these include clinical management, nursing care, counselling and social support. Many of these components are not HIV/AIDS specific, and a functioning health care system providing these services is beneficial for many other health related aspects (and thus, impact mitigation within the health sector is relevant beyond HIV/AIDS-related care). However, here the focus remains on the

HIV/AIDS context. Simplified, three levels of health care service providers can be identified: hospital care, out-patient care and community-based care (Uys and Cameron, 2003).

The concept of primary health care based service provision, promoted by WHO since the 1980s, postulates that all people, including those in rural areas, should have access to basic health care, which should be provided at clinic level. Additionally, it emphasises the importance of lay care and of contributions from non-medical sectors for the improvement of people's health, especially but not only by promoting specific health and hygiene related knowledge. Hospital care is reserved for cases in which the severity of the disease or the necessary treatment make out-patient care inappropriate (Walt, 1994). However, a number of issues, related and unrelated to HIV/AIDS, have emerged which complicate the successful implementation of primary health care for all (see also Sections 3.2.2.6 and 4.1).

As indicated above, most of the ideally-available primary health care services are facing various problems and thus are not reaching all people in need. The lack of resources for infrastructure development and staff gualification are not new in many low- and middle income countries. Still, the described effects of HIV/AIDS have added substantially to the pressures on the health care system and have increased the need for sector-internal impact mitigation. For example, as a result of the increased demand by PLHA for appropriate counselling, treatment and care services, care provision becomes scarce and more expensive. There might be a further reduction in access equity. In many African countries, the majority of hospital beds are now occupied by PLHA with the effect that other patients are having greater difficulties in accessing required care. Under-servicing of patients and other health service users may possibly have negative effects on various prevention campaigns (e.g. child vaccination programmes), increasing the risks of epidemic disease outbreaks (The World Bank, 1999). In this situation, an increase in health care expenditure seems necessary but has to be weighed against other expenditure needs, which if not addressed, may actually undermine dealing with the impact of the epidemic in other sectors and thus contribute to undermining any attempts made to reduce structural factors influencing the spread of the epidemic.

A factor which makes HIV/AIDS different to other chronic fatal diseases is the attitudes of health care staff to PLHA, which is often characterised by stigmatisation, lack of empathy and confidentiality. In a situation where psycho-social needs are especially high, this support is often not available. "The behaviours that lead to HIV infection often provoke social and moral judgements, and subsequent discrimination against the infected person" (van Praag *et al.*, 1997, p.309). Irrational fears and stigmatisation of PLHA are not uncommon amongst health care staff, creating a barrier for accessing health services and furthering the feelings of ostracism and isolation.

Therefore, in any of the three settings, hospitals, clinics and communities, HIV/AIDS specific training of the health care workers is necessary. Training and re-training is important not only to provide and update care and treatment-related knowledge and skills, but also to address beliefs, attitudes and prejudices of health care staff regarding HIV/AIDS. The training should also help staff to learn how to deal with the increasing workload and emotional impact as well as raise awareness of issues of privacy and confidentiality (Mkuye *et al.*, 1997).

There are a number of question related to training. Decisions for example have to be made on how training is organised and how difficulties are addressed in reaching health care workers in remote locations, where often increased knowledge is most urgently needed (Uys and Cameron, 2003). A needs assessment could provide information on who and what should be the focus of training. There are training needs for future health personnel but in-service training is equally important, for the selfprotection of staff but also to improve attitudes, symptom identification and treatment. Training schemes ideally should also include private sector health workers, Community Health Workers and perhaps traditional healers; health workers from other sectors including prisons, army and police services, schools and NGOs. A training-needs assessment should include furthermore an assessment of available resources including health education material, condoms and medications (Mkuye et al., 1997). This is one aspect which illustrates the question of interaction between different actors in the health service sector. A detailed understanding of interactions, information flows and the organizational structure could be beneficial to improve efficiency in providing for training needs at all levels, including Community Health Workers'.

The fear of stigmatisation is one of the aspects which hinder access to HIV/AIDS related services, the lack of financial resources being another. There are various cost factors involved in access to facility-based care: in many countries it is on a cost-sharing basis, thus draining the small resources PLHA and their families may have. But even in South Africa, for many people living in remote communities the free primary health service is unaffordable due to the relatively high transportation costs involved in accessing distant health facilities. Combined with the under-resourced situation of many health care service facilities, which decreases the quality of services available,

this suggests that "needs of PLHAs are only partially being met by formal government health and social services (van Praag *et al.*, 1997, p.309)."

Instead, a lot of the actual care is taking place in the home, where the primary care taker is usually a family member or friend. This places an enormous burden on the family members, especially on women who are in most cases the primary care-giver. Families may perhaps have access to traditional healers or local primary health clinics, but this is often very limited due to financial constraints, especially when families start to experience more than one AIDS case. In most situations, support from government levels is minimal to non-existent, and even where social grants are theoretically available, the percentage receiving them is often negligible due to the longwinded bureaucratic process. However, in some areas "communities and NGOs have generated innovative responses to help patients cope and improve their quality to life (van Praag *et al.*, 1997, p.309)." Unqualified carers may be supported by Community Health Workers, by Community Based or Faith Based Organisations (CBO/FBO) or by other locally active NGOs.

The specific aims of these locally active organisations vary and are dependent on the local situation. They may provide support with care like so-called home-based care projects, which sometimes including materialistic support like food or pain relief. They may be income-generating projects which help financially to buy food and perhaps medication or may be any other kind of support groups including awareness raising ones.

In their book on home-based HIV/AIDS care in South Africa, Uys and Cameron (2003) describe some of the difficulties facing home-care initiatives. These include not only the enthusiasm and initiative required in an often desperate situation, but many resourceand management relevant questions. These relate to the development of recruitment strategies, policies and procedures and case recording. An appropriate and effective structural set-up and management approach are relevant, something which is especially difficult to achieve for community-based initiatives in remote rural areas with lack of access to support infrastructure. Furthermore, the ethical issue of using unpaid volunteers, who are often female and already carrying a major burden of the epidemic, needs to be addressed. It is important to take into account the involved opportunity costs of voluntary care workers, who are investing their time and energy in supporting these organisations, thus reducing their time available for income generating work or necessary household chores like collecting water. A more detailed analysis of how these more informal organisations can be incorporated into the formalised health sector response is one of the aspects deserving further investigation. In this context, it is important to note that in order to improve sector-wide management and resource allocation, the recording and reporting of case numbers and activities should also become part of all public health sector activities. However, in resource-poor and often not formalised settings, the collection of data proves very difficult, as has been emphasised during the fieldwork in South Africa.

Numerous studies identified that the HIV/AIDS continuum of care is the ideal scenario, in which self-help groups, community-based, palliative and home care are available alongside VCT programmes and health facilities including blood transfusion services. Ideally, these work together in a comprehensive network allowing for various entry points to service provision and easy referral between different components. Also important are the possible contributions from many sectors of society outside the health sector including social welfare and religious and community groups (van Praag *et al.*, 1997). (The participation and involvement of various stakeholders has also been referred to as multi-sectoral response, which will be addressed in more detail in Section 2.5.3.) In reality, there are many stumbling blocks in setting up and sustaining such a 'continuum of care' system, which include among others the lack of communication, data recording and data transfer between different levels. These issues are also mentioned within the context of the Community Health Worker case study in KwaZulu-Natal, South Africa (see Chapters 5 and 6).

2.5.2.2 Treatment with antiretroviral drugs

Antiretroviral therapy (ART) has evolved enormously over the last years (see Section 2.2.4). With the introduction of highly active antiretroviral therapy (HAART) in 1996, AIDS related hospital admissions and death rates could be reduced dramatically in Western Europe, North America and also Brazil (Barnett and Whiteside, 2002). As has been indicated earlier, antiretrovirals can not heal but in ideal conditions, with sufficient nutrition *etc.*, they can reduce viral load, the occurrence of opportunistic infections and thus the general need for other treatment. This can contribute to an increase in PLHA life expectancy as well as enable a productive life. Therefore, the special prevention needs of PLHA receiving ART have to be considered, since people without symptoms will likely return to a sexually active life (Wilson *et al.*, 2004).

But there are not only the gains in life expectancy and an improved quality of life for infected people, ART may also have positive secondary social gains like the reduction in numbers of new orphans, savings in hospitalisation times and care expenditures and, with the hope of treatment, an increased incentive to take part in VCT, which can support prevention initiatives. Furthermore, the 'treatability' of HIV/AIDS may reduce the stigma, since the perception of the disease as a 'death-penalty' is changed. A reduction in HIV/AIDS-related stigma could equally contribute to an increase in success of prevention measures. On a bio-medical level, there is a noticeable reduction of viral load in patients receiving ARV, which can possibly lead to a reduction in transmissibility of the virus (Wood *et al.*, 2000). UNAIDS underlines the importance of simultaneously expanding both prevention and treatment programmes and stresses the need to recognise "the mutually reinforcing synergy of integrating these interventions" (UNAIDS, 2004, p.105).

However, despite the obvious advantages in providing ARVs to all people who require this treatment, there are many difficulties in satisfying the demand for ART provision globally, not only, but especially in resource-poor settings. Figure 2.17 illustrates this lack of treatment coverage, showing the lowest percentages of treatment in many of the most-affected countries (also cf. Figure 2.7).



Figure 2.17: Estimated percentage of adults covered among those in need of antiretroviral treatment, situation of November 2003 (WHO, 2003, p.4)

In order to overcome this shortage and to develop a concerted effort, WHO and UNAIDS launched in September 2003 at the Second UN General Assembly Special Session on HIV/AIDS the '3 by 5' Initiative. This treatment initiative, as the name implies, intended to provide three million people in developing and transitional countries with ART by the year 2005 (WHO, 2003). This target has not been achieved, for which several causes can be found. Some important challenges for successful rollout of ART have been identified by WHO (2004a), including the sometimes existing lack of political will as well as shortcomings in financial resources and appropriate infrastructure on an international as well as national level.

While Anema *et al.* (2004) have rightly pointed out that even the original (and missed) target of three million people on ARVs would not have provided half of the people in need with the necessary treatment, the initiative has helped to include ART in the package of responses considered feasible in developing countries. Additionally, forty countries had formally signed up to the '3 by 5' Initiative, which played an important role in mobilising national governments and international organisations as well as stakeholders from the private sector and civil society (UNAIDS, 2004). For example, just a month after the official launch of the '3 by 5' initiative, the South African government introduced with its 'Operational Plan for Comprehensive HIV and AIDS Care, Management and Treatment' a programme, which integrated ART into the national response and thus overcame long-time opposition to such a move

(Department of Health, 2003) (cf. Section 3.3). And while the needs for ART-provision in the low- and middle income countries are still far-from fulfilled, recent increases in treatment provision give some cause for optimism (see Section 2.2.4). Nonetheless, more still needs to be done, as indicated in Figure 2.18.



Note: all numbers based on WHO AIDS treatment update reports, 2005, 2006, and 2007



In general, a major resource allocation towards the health sector will be necessary to overcome infrastructure and health personnel shortages. Table 2.7 for example illustrates some of the financial commitments made by different international actors. Furthermore, the long-suggested debt relief for the world's poorest countries could help release some of the necessary funds from national governments. However, structural barriers like poverty and low levels of education remain important barriers and need to be addressed – which points into the direction of alternative approaches like the systematic training of Community Health Workers (Section 5.3.2.4).

In the following, existing obstacles for an intensified ART roll-out are described, while suggested ways to hopefully overcome these challenges are discussed. The pledged financial support is only one, albeit important component of the necessary transformations.

Table 2.7: Commitments made by the international community towards scaling up antiretroviral therapy (WHO, 2004a)

Source of support	Comments	
Government of the United States of America	The goal is to treat 2 million people by 2008.	
Other bilateral partners	Several donors are supporting countries in scaling up treatment through their bilateral programming.	
World Bank multi-country HIV/AIDS programmes	Over US \$1.7 billion has been committed through grants, loans and credits for HIV/AIDS worldwide, most of which has come through the Multi-Country HIV/AIDS Program for Africa and the Caribbean Multi-Country HIV/AIDS Prevention and Control Adaptable Program Lending. These funds can be used to increase access to antiretroviral therapy. In addition, health infrastructure commitments can help strengthen health service delivery.	
World Bank Treatment Acceleration Program	This is a new three-year project (US\$ 60 million) to support expansion of treatment access in Burkina Faso, Ghana and Mozambique.	
Countries supported by the Global Fund to Fight AIDS, Tuberculosis and Malaria	The Global Fund has reported that the recently completed Round 4 grant cycle will support antiretroviral therapy for 932 000 over five years. In addition, the Global Fund projects that grants from Rounds 1–3 will support 692 000 (Round 1: 232 000, Round 2: 283 000, Round 3: 177 000) people on antiretroviral therapy. This would yield a total support for more than 1.6 million people on antiretroviral therapy over the next five years.	
Private sector	The Accelerating Access Initiative reports that it is covering 150 000 people with antiretroviral therapy now and could increase coverage. The Accelerating Access Initiative is driven by the research-based pharmaceutical industry. In addition, several corporations and businesses in affected countries are actively engaged in providing antiretroviral therapy to their employees and additional beneficiaries.	
Faith-based organizations	The large reach of faith-based organizations in delivering health services represents major potential to expand antiretroviral therapy to people in need.	
Nongovernmental organizations	Nongovernmental organizations such as Médecins Sans Frontières, Family Health International and others have contributed and will continue to contribute to delivering antiretroviral therapy. Médecins Sans Frontières estimates that it is currently providing treatment to 13 000 people in 19 countries.	

After the introduction of HAART, one of the earliest identified problems to a comprehensive treatment roll-out worldwide were the price for medicaments charged by pharmaceutical companies. Strong advocacy by PLHA and world leaders helped to reduce the price of first-line WHO-recommended HAART medication, which in 2000 was still at a world market level of approximately US\$ 11.000 per person per year (UNAIDS, 2004). Later on, a number of court cases, most famously in South Africa, and negotiations by the William J Clinton Presidential Foundation have lead to a further reduction in prices for generic ART by more than half within two years – under certain

conditions, the minimum of US\$300 per patient per year in 2002 was reduced to US\$140 per patient per year in 2004 (Aldhous, 2004). There also emerged an accepted way around existing property and patent rights. If countries declare a state of 'national emergency', much cheaper generic drugs can be produced locally, including the production of easy to use single-pill, fixed-dose combination antiretrovirals (Clayton, 2004). This development also increased the number of countries producing generic antiretrovirals locally, including South Africa.

Today, a major barrier to widespread ART is less the price of the actual pills, but the related costs for health infrastructure and health personnel requirements. "As drug prices are reduced, it will become more apparent that the critical constraints are health service provisioning and household's ability to gain access to resources (Barnett and Whiteside, 2002, p.342)." In many developing countries, the health sectors have been severely underfinanced in the last decades, which has at least partially been the result of countries' high expenditures on debt re-payment and the World Bank recommended Structural Adjustment Programmes. This lack of resources in combination with the additional burden of AIDS has led to a lack in health service infrastructure and health personnel, pointing, again, to the need for impact mitigation strategies (see below and Section 2.5.3). Furthermore, highly-qualified staff in poor countries is also lost due to migration abroad, a fact which is particularly true for South Africa. However, doctors, nurses, pharmacists and other health personnel are crucial for a successful ARV-service provision. UNAIDS (2004) recommends several strategies to overcome this obstacle.

A systematic approach is important to guarantee that recruitment and employment can be intensified in the context of ART service development, while it is ensured that the health sector as a whole is profiting from this expansion. Another aspect is the improvement of employment conditions and incentives encouraging for example to work in rural areas, which could help to reduce the 'brain drain' within and between countries. The review of job specifications and job tasks could perhaps lead to stronger specialisation and thus to shortened training requirements for clearly defined tasks. In this context, the role of international and especially national volunteers should be underlined. Worldwide, community-based volunteers, including Community Health Workers, are playing a decisive role in expanding health services to local populations. The role of Community Health Worker and other community-based programmes are discussed below. Another difficulty requiring consideration is the administering process of ART. HAART is known for the complexity of its treatment regime, which involves the combination of different components. Various medications must be taken regularly at exact times while specific food requirements must be observed (Barnett and Whiteside, 2002). This requires education for patients and carers, but also training and regular updates on current treatment developments for health staff. However, poor households' difficulties in affording regular and nutritious food have been identified as major obstacle for successful treatment. In addition, fairly common side effects of ART contribute to the difficulties in treatment compliance. Furthermore, the health of the patient and effectiveness of treatment should be regularly monitored through laboratory tests for CD4 cell counts and other diagnostic tools. The complexity of this treatment is often used to question the possibility of effective implementation in a resource-poor context. However, numerous pilot studies show that successful HIV/AIDS programmes including treatment with antiretrovirals are possible and that the manifold problems can be overcome. Some of these positive examples can be found worldwide, as illustrated by Farmer et al. (2001) in Haiti, by Okero et al. (2003) in Uganda and by Médecins sans Frontières in 25 different countries, including South Africa (Médecins sans Frontières South Africa et al., 2003). Implementing organisations range from the public health sector to private sector companies and from international NGOs to locally active CBOs (Bentley, 2003; Finch, 2003; BBC News, 2004).

One of the recommendations learnt from pilot studies is the importance of reducing the complexity of diagnostic and treatment. The diagnostic test and laboratory procedures available to monitor people receiving HAART are still too complex to implement in many resource-poor settings lacking the required infrastructure and laboratory staff. However, until CD4-cell counts and viral load tests have been simplified in a fashion similar to HIV tests, antiretroviral treatment can be initialised using Simple Rapid tests and clinical guidelines to identify PLHA in urgent need for this life-sustaining treatment (Farmer *et al.*, 2001) (also cf. Sections 2.2.3.2, 2.2.3.3 and 2.2.4).

A way to simplify treatment can be achieved through WHO-recommended fixed-dose combination ARVs, which require patients to take only one pill twice per day. This not only improves adherence to the medication, but also reduces supply-, administering- and other related costs (UNAIDS, 2004). Still, in order to ensure treatment success and avoid the development of drug resistance, innovative approaches to support and monitor compliance are important. In resource-poor settings, the promotion of locally available methods to guarantee adherence might range from roosters to alarm clocks or mobile phones (Miles, 2005). However, the effectiveness of the general support

system for PLHA on HAART is significant to achieve high levels of adherence (Daar *et al.*, 2003). Based on the experience gained from TB control programmes, the approach of directly-observed treatment (DOT) has been implemented (Farmer *et al.*, 2001). If an integrated system has been developed, community volunteers, Community Health Workers or local CBOs, FBOs and NGOs can play a vital part in supporting DOT-HAART provision, while relieving some of the pressures on the health system.

In order to expand ARV-treatment successfully, personal costs for PLHA and their families involved in accessing HAART must also be considered, since they may act as a barrier. Even if ARVs might be free, poor households might find the food requirements, transportation costs and time necessary to enter ART schemes or maintain HAART impossible to afford, especially if there is more than one person living with HIV in the household. Another barrier to access treatment can be the stigma associated with the disease. Therefore, expansion of HAART should also address the social and economic context of affected families, e.g. by providing food parcels or dietary supplements, and supporting economic activities or access to social grants. In order to reduce stigma-related problems, these services should ideally include all the people in need in a community and not only PLHAs and their families. In this context, gender issues must also be addressed. In many societies, existing gender attitudes limit girls' and women's abilities to access health services, and household expenditures will focus primarily on the health and nutrition of male patients. However, many HIV/AIDS related services are provided using existing family planning or similar facilities, which women access more frequently than men (Gupta et al., 2003). Thus, one main objective in rolling out HAART should be the development of mechanisms ensuring the equal access to treatment for both men and women.

The successful implementation of pilot studies illustrate that HAART in resource-poor settings is possible, providing a more equal access to life-sustaining treatment and thus supporting various secondary positive effects. However, this is not to deny that there are huge barriers to overcome to provide treatment to all who need it. First of all, the scale of roll-outs will change the way ART can be implemented. On the one hand, pilot projects often profit significantly from the enthusiasm and vision of an existing organisation or specific passionate leaders, something large-scale or even nation-wide programmes will very often lack. On the other hand, small-scale projects will have occasionally inadvertently attracted suitable personnel and other resources from other areas. This is a strategy which should be avoided in nation-wide ARV roll-outs, since they would undermine other sectors and thus potentially threaten further development efforts. Furthermore, pilot project may have used already existing health programme

structures, e.g. TB-DOTS, for providing ARV treatment, which may provide an especially advantageous starting point. However, this is one of the strategies to be learnt for nationwide HAART. Even in a national programme, local strengths and weaknesses must be considered and should be either incorporated to support the programme or should be specifically addressed and improved. Another aspect differing from smaller scale pilots is related to the continuous, reliable and affordable supply of ARVs. The procurement of drugs for a national programme and national distribution requires a functioning delivery system, which is a major challenge in under-resourced settings. Therefore, WHO and other international organisations have created a network structure providing specific information, guidelines and other support (UNAIDS, 2004).

Another issue which needs addressing relates to the actual process of expanding services. On all levels, resource allocation decisions have to be made. For example, in the context of limited resources, not all health service facilities can immediately start distributing ARVs; the necessary conditions have to be created first. It is practical to begin ART roll-out in clinics and hospitals where necessary infrastructure and qualification levels already exist. However, in the long run a more equitable spatial distribution should be the aim, which requires substantial investments of human and financial resources. The ability to secure these resources will be crucial for many expansion programmes. But even where antiretroviral treatment is available, the demand might exceed the available resources, thus difficult decisions about allocating treatment have to be made (Rosen *et al.*, 2005). Rationing resources, on the facility as well as the patient level, should follow "principles of equity and human rights such as freedom from discrimination, as well as agreed-upon procedures (UNAIDS, 2004, p.111)."

As has been outlined above, antiretroviral treatment should always be part of a comprehensive treatment and care package, linking related activities like VCT, HIV prevention, psychosocial support and palliative care. The achievement of a 'continuum' of care is another of the widely recommended goals. This underlines the importance of efficient co-ordination, communication, support and transferral between different stakeholders, including different levels of health service providers, NGOs, FBOs and CBOs, PLHAs, communities and the government (International HIV/AIDS Allicance, 2002). However, the current predominant isolation of community-based organisations' efforts is one example, where interactions between different stakeholders in health care have to be improved (UNAIDS, 2004). It has also been noted, that there is a need for systematic research into aspects of lay health care work by volunteers and how they are integrated into the framework of existing service providing structures. In the context

of HIV/AIDS counselling, Rohleder and Swartz state (2005, p.397) that "there has been a relative lack of attention to the organizational and systemic issues faced by counsellors and counselling programmes."

In summary, HIV/AIDS will impact on the health sector's capacity to provide treatment and care twofold. On the one hand, the epidemic will increase the demand for health care. On the other, it will reduce the sector's capacity to supply the quantity of care needed while the quality of its services will deteriorate. In developing countries, there are millions of people who are in urgent need for treatment and care. The chances of expanding service provision to cover demand are influenced by existing infrastructure, financial and human resource capacities, which in many developing world countries are limited and further challenged by the HIV/AIDS epidemic. This again points to the need to develop sector-specific (and multi-sectoral) impact mitigation strategies. Thus alternatives, potentially programmes based on community-based health auxiliaries, have to be found. International co-operation, donor organisations and national reallocation could provide necessary financial resources. However, many other limiting factors remain, many of them depending on the specific implementation methods chosen for strengthening the health system's capacity to respond to the epidemic. Innovative approaches to structure and manage the health system will be critical not only in the fight against the HIV/AIDS epidemic, but also to sustain functioning primary health care services as a whole. Political will and successful implementation of efficient co-ordination and co-operation between different levels of health service provisions can improve the cost-effectiveness and quality of services and thus can be of significant importance for the sustainability of health services sectors even in the time of HIV/AIDS. Therefore, a detailed analysis of health service structures and the existence or lack of communication between them can support efficient health sector management. This thesis uses the example of a specific programme in KwaZulu-Natal in South Africa to map existing health service levels, and analyse the structures of management and interaction between the different levels. A detailed analysis of the current situation of the Community Health Worker Programme will enable the identification of strengths and weaknesses and thus will allow for recommendations for future developments.

2.5.3 Impact mitigation and multi-sectoral response

This study focuses predominantly on the health sector and its possible responses to HIV/AIDS. In the sections above, the health sector's role in prevention, treatment and care and even the need for sector-internal impact mitigation (through e.g. specific training approaches and changes in practices) have been addressed. However, the scale and complexity of the epidemic and the inter-linked and long-lasting impact require a different, more comprehensive response than many other diseases, where response often solely focuses on bio-medical and behavioural prevention, treatment and care: in high-prevalence countries, each and every sector of society is affected by the epidemic (cf. Section 2.4). Therefore, all sectors should ideally evaluate the potential areas of impact, assess its size and investigate potential mitigation or coping strategies. Conversely, as has been pointed out earlier, the HIV/AIDS epidemic itself is driven by broader environmental factors, which are not solely shaped by the health sector. These wider micro and macro conditions (see Section 2.3.2) are influenced by activities in other sectors (e.g. through influences on the job market, legal conditions, migration patterns), which thus also need to consider the way in which their structures, decisions and activities are influencing a further spread of the epidemic.

Thus, this section will first consider some of the wider mitigation strategies to the epidemic's impacts. Since the epidemic concentrates on young adults, the increased morbidity and mortality of employees is one of the most direct effects. This is connected with losses in productivity as well as company- or organisation-inherent knowledge and management skill levels. However, there are also many other aspects like the changes in demand and supply structures. As described above (Section 2.4.3.1), the impact of HIV/AIDS can be significant for some sectors and could have widespread and devastating effects for whole societies, especially if no response strategies are developed to mitigate the epidemic's impact. Areas, where this has been indicated in this thesis are, for instance, the education and social services sectors (see Section 2.4.3), while the agricultural sector is another example, where the impact of the epidemic on the sector, and vice versa, have been studied in several African countries over the last number of years (e.g. Ngwira et al., 2001; Cohen, 2002). Agriculture, for example, is affected through the loss of labour and decrease in productivity (especially small-scale farming), a drop in rural household resources, changes in values with a stronger focus on the short-term, a loss in skills and knowledge (especially through intergenerational effects) and an impact on human resources at the institutional level. These effects overall can increase levels of poverty and malnutrition, which can again increase people's susceptibility to HIV/AIDS. Furthermore, agricultural practices can

create risk environments (for HIV transmission), especially through the creation of local movement and migration patterns, but also through the effects of agricultural policies which may, for example, impact on financial security (Ngwira *et al.*, 2001). Therefore, the agricultural sector also needs to consider the way in which its structures and activities impact upon the spread of the epidemic.

Recognising the importance of incorporating the epidemic also in planning and implementation activities outside the health sector, international recommendations often refer to the need of *mainstreaming* HIV/AIDS. According to the HIV/AIDS Mainstreaming Working Group, "mainstreaming HIV/AIDS can be defined as the process of analysing how HIV and AIDS impacts on all sectors now and in the future, both internally and externally, to determine how each sector should respond based on its comparative advantage" (cited in Elsey, 2004, p.8). A similar idea is often expressed through the notion of *multi-sectoral response*, which has, for example, been strongly promoted within and by Uganda. The multi-sectoral approach highlights the need to involve all sectors of society (at an individual and organizational level) in prevention and mitigation activities. This involvement needs to be co-ordinated at the administrative and political level, with a strong focus on general capacity-building to ensure the sustainability of the implemented response activities (Uganda AIDS Commission, 1993).

Generally, an increased awareness should be created for the possible impacts on all public and private sector organisations. Various sectors need to analyse their specific vulnerabilities to HIV/AIDS and need to assess the current situation and predict future impact. Data on HIV prevalence provides an ideal starting point to evaluate the current extent of the problem. Some companies are conducting prevalence surveys amongst their workforce, which should guarantee the anonymity and confidentiality of results, while others use locally or regionally available data. Scenarios and models are other methods which can be employed to illustrate future impacts and the effects different response strategies could have. These methods can be used to set priorities, on organizational, sectoral as well as national level (Barnett and Whiteside, 2002).

Different sectors may be affected by the epidemic in different ways, thus response strategies should be appropriate to sector-specific circumstances and vulnerabilities. Response strategies in the private sectors may aim to reduce their vulnerability by changing production mechanisms or products. More often, private companies use workforce related strategies. They adjust their employment and training strategies, reduce existing employee benefits or introduce prevention as well as treatment
programmes. Numerous studies have shown that the introduction of treatment schemes for employees can be cost-efficient, especially for companies with a large workforce. But also for smaller companies, the running of an HIV/AIDS policy needs assessment and the introduction of HIV/AIDS-related workplace policies are recommended (Roberts *et al.*, 1998). Furthermore, it should be evaluated to what extend specific companies' and sector-wide activities increase their workforce's and the wider community's susceptibility to the disease or undermine their ability to cope with the epidemic's impacts. Future planning and decision-making should incorporate these, ideally on-going, evaluations, and develop approaches to reduce the negative effect of companies' and sectors' activities. However, such 'mainstreaming' of HIV/AIDS will only be successful, if the need for these activities is widely recognised and if political support (and potentially pressure) exists.

Impact assessment and response planning are equally important in the government sector. Here, changes are essential in the way resources are allocated, with shifts necessary to HIV/AIDS related programmes. However, responses to HIV/AIDS are not only linked to the public health sector, they include all sectors of government activity (see Figure 2.19). Sectors like the jurisdiction, the military, the social welfare and education sector should analyse in what way their field of responsibility will be affected by the epidemic; however, there is equally a need to assess government and other sectors' overall role in influencing the spread of HIV/AIDS (also cf. Sections 2.4.3 and 2.4.4).

Any sectoral intervention should be in line with a national strategy developed to respond to HIV/AIDS. Many countries worldwide, including South Africa, have adopted National AIDS Plans, with different levels of political commitment and varying levels of implementation success. A number of studies have been conducted and identified some of the key points which are important for an effective national response to HIV/AIDS. Most analysts stress the importance of political leadership in creating awareness and initiate response (Parkhurst and Lush, 2004). Most countries with successful prevention strategies have been characterised by a strong political commitment at all levels (e.g. Uganda, Thailand, Brazil), which was crucial in creating a multi-sectoral response to HIV/AIDS (see e.g. Uganda AIDS Commission, 1993).

As has been described, the HIV/AIDS epidemic has wide-ranging bio-medical, behavioural, socio-economic and structural causes; thus a successful response has to have a wide focus, of which the health sector is only one, but important component. In the most-affected countries, HIV/AIDS needs to be mainstreamed by making it part of

all important decision-making processes and considering possible interactions with the epidemic (Piot, 1999). Thus, in the conceptual model presented in the section below, the necessary involvement of a multitude of other sectors in the response to the epidemic is represented by the reference to multi-sectoral response.

2.6 Conceptualising HIV/AIDS

This section offers a synthesis of the HIV/AIDS context analysis presented in Chapter 2. The model shown in Figure 2.19 has been developed to conceptualise the complex processes surrounding the HIV/AIDS epidemic: it summarises the issues raised throughout this chapter, drawing on the previously presented models of processes driving the epidemic (see Figure 2.5, Section 2.3.2) and its impacts (see Figure 2.15, Section 2.4), while specifically also incorporating the various areas and levels of response to the epidemic that have been introduced in Section 2.5. The aim of this conceptual model is to, again, highlight the complexity of the HIV/AIDS epidemic and the need for a well-orchestrated response that is recognising and integrating various areas and levels. In the context of the thesis, it also provides the model used for the later discussion and evaluation of Community Health Workers' role within this HIV/AIDS framework (see Chapter 6.3).



IMPACTS

Figure 2.19: Conceptualising HIV/AIDS – an illustration of the interplay between drivers, impacts and responses on the individual, micro- and macro-environmental level

The following brief discussion of the model aims to reiterate some of the main points addressed in Chapter 2 and expressed in the conceptual model above. As has been described in detail earlier on, the spread of HIV is influenced by various structures and processes (DRIVERS). Macro-environmental conditions, including for instance governance structures, the legal framework, culture and the macro-economy, provide the framework within which micro-environmental structures and processes develop. Moving in the direction of the red arrows in the conceptual model from the macro-level drivers inwards, the micro-environment, shaping the day-to-day of people and communities (e.g. local migration and mobility patterns, levels of violence and gender roles, knowledge and attitudes and local access to health care services), directly influences sexual and other behaviour patterns which affect the risk of becoming exposed to and infected with HIV. As has been described in Section 2.3.2 and Table 2.3, this transmission risk is also influenced by specific biomedical factors at the individual level, which are partially shaped by the micro-environment as well (e.g. access to STD treatment).

An example, to illustrate this notion of drivers at all levels once more, are macroeconomic policies that can influence migration and mobility patterns and thus influence local gender ratios, which in turn impacts on local sexual networks and thus individual risk exposure. Equally, in the context of intravenous drug use, local existence of needle exchange programmes influences the likelihood of needle sharing and thus the risk of infection for individuals. Existence of these programmes is, for example, shaped by local and national policies and legal frameworks. Thus, as the upper part of Figure 2.19 attempts to illustrate, specific structures and processes create conditions increasing the risk of HIV transmission, and hence contribute to the spread of the epidemic.

Continuing within the model in the direction of the red arrows, these indicate that a widespread epidemic with increased morbidity and mortality has dramatic IMPACTS on all of the levels already mentioned above. On the individual level, HIV/AIDS decreases the health of people infected, but also impacts on their role as social beings, as family members, income earners, and community members. It furthermore undermines the livelihood and structures of whole families (see e.g. Sections 2.2.3 and 2.4.1). Through the scale of the epidemic, *i.e.* the large accumulated amount of (especially working-age) people infected and affected, impacts are felt at the level of both the micro- and macro-environment. These impacts have been described in some detail in Section 2.4. (also Figure 2.15) and range from influences on social networks at the community level to effects on broad issues like security, governance and macro-economy. While the conceptual model could have represented the above summarised processes in a linear

fashion, the circular form has been chosen to illustrate the potential for selfreinforcement of the epidemic, *i.e.*, the fact that many of the impacts of the epidemic are actually creating conditions even more conducive to a further spread of the epidemic (and as such are becoming drivers themselves). While this, obviously, would not be an ever-increasing process, it is important to highlight that the environment influencing the spread of the epidemic is the same as the one the epidemic is impacting upon and thus influences the overall potential for controlling the epidemic. Two basic examples of such impacts-turning into-drivers are the increasing poverty levels caused by the epidemic, which may contribute to increasing mobility levels and changes in sexual behaviour patterns, and the increasing number of orphans, who are especially vulnerable to HIV infection. Of course, it again needs to be emphasised that the conceptual model is a simplification of the processes involved, and the distinction between the different levels is not always clear-cut. Furthermore, one of the main aims of the model presented here is the integration of the role of response to the epidemic.

As stated earlier (see e.g. Section 2.4.3.2.3), in many countries the HEALTH SECTOR carries the major burden of RESPONSE to the epidemic. This dominant pattern is easily explained since the epidemic is still widely perceived as being mainly a health issue. And indeed, the health care sector is involved in all of the three identified areas of response, while one of the areas, treatment and care, is (almost) uniquely provided through this sector. This role of health services can be perceived as and is treated in the model as MITIGATION of health impacts at the individual level. Besides the sector's activity in treatment and care of infected people, the health sector has an important role to play in the PREVENTION arena, including the treatment of sexuallytransmitted diseases, promotion of VCT and condom use. Thus, while health services are the most active in the provision of biomedical prevention interventions, they also participate in the promotion of behavioural change. Furthermore, through the provision of accessible services, a functioning health care sector also shapes the structural conditions supportive for HIV/AIDS prevention. Equally, considering micro environmental impacts, specific health sector strategies and interventions can contribute to impact mitigation at this level. A potential example could be the introduction of Community Health Workers, since, conceptually, they are ideally positioned to expand local health services and to address developmental issues (see Chapter 4). Furthermore, adjusting health policies and legislation to support the prevention of HIV transmission and strengthen capacities to deal with the epidemic's impacts (e.g. provision of free Primary Health Care services) is a significant way in which the health sector can contribute to mitigation at a macro environmental level.

However, international experiences, including the recognition of social and structural drivers and impacts, have led to the recognition of the need for involvement of sectors beyond the health arena (see Section 2.5.3). In the conceptual model, the still existing dominant role of the health sector is recognised by presenting health sector-based response on the left side of the figure, while the need for involvement of a wide variety of stakeholders has been expressed through the notion of a MULTI-SECTORAL RESPONSE on the right. Both should be connected and co-ordinated. As has been outlined, response to the epidemic should be implemented at all levels of society. Thus, prevention and mitigation efforts should be mainstreamed to include all sectors and all levels, creating conditions that are conducive to a reduction in high-risk behaviour and that strengthen individual as well as micro- and macro-level capacities to mitigate the impact of the epidemic (for a detailed discussion, see Section 2.5.3 above).

Finally, it should be emphasized that the placement of the various 'responses' on either side of 'drivers' and 'impacts' is to indicate that only strengthened response integrating the health and other sectors can actually be successful in interrupting the flow from conditions driving the epidemic to an increasing impact. The blue arrows on the sides of the graph highlight the multitude of areas that need to be targeted in order to interrupt the inter-connectivity between drivers and impacts, the self-reinforcing process of the epidemic. Again, it becomes evident that health sector response needs to be part of a multi-sectoral response targeting both the individual and structural levels of drivers and impacts in order to interrupt 'the cycle'. However, the indicated placement of response within the multiple layers of individual, micro- and macro-environmental conditions reflects that the sectors responsible for response are again also affected by the epidemic themselves and thus are part of the above described circle. This furthermore emphasises the complexity of the HIV/AIDS context. Thus, strong political will, sufficient additional resources and some level of creativity will be needed to implement response successfully.

Here, it is suggested that Community Health Workers, positioned right at the interfaces of community – facility level (individual and micro-scale) as well as within the health care – development arena (bio-medical and behavioural), are potentially ideally positioned to address the epidemic. Their placement at community level (and outside the health facility context) within a Primary Health Care approach may allow them to address the issues surrounding HIV/AIDS from a broader framework than just the bio-medical aspect of health care. Thus, the here introduced conceptual model (Figure 2.19) will also be used to structure the evaluation of Community Health Workers' role in HIV/AIDS response (see Chapter 6.3).

3 South Africa's Health Care Sector

3.1 South Africa's two major challenges

As mentioned earlier, since the early 1990s, and even more so since 1994, South Africa has had to deal with two parallel challenges, whose impacts are felt on nearly every level of society: the dramatic HIV/AIDS epidemic, which started late in South Africa but grew rapidly; and the nearly synchronous developments in the political arena, leading to the end of the Apartheid system and a major transformation process. The HIV/AIDS epidemic and its specific development in South Africa have already been analysed in Section 2.3.3. The aim of the following sections is to illustrate the specific conditions faced by the country's health sector by analysing on the one hand the processes characterising South Africa's health sector capacity to address the epidemic by focusing on the historic and more recent health policy development (see Section 3.2); while on the other hand looking to the challenging processes involved in developing appropriate HIV/AIDS policies in a country undergoing a major societal transformation (see Section 3.3).

3.2 Health Sector transformation and health policy development

3.2.1 Introduction

Any study looking at the current processes of and challenges to the health sector in South Africa has to acknowledge the continuing influence of the country's specific past. The Apartheid system, which was based on the ideology of strict racial segregation, has had a fundamental influence on all aspects of South African society and thus also on the health sector. Despite more than a decade having passed since the end of the racist regime, the impacts of Apartheid are still noticeable and influence current conditions of policy making and implementation. Thus, although the main focus of this thesis is on HIV/AIDS, PHC and Community Health Worker in South Africa, a brief discourse on apartheid, its impacts on South African health care and the transition processes since the early 1990s is crucial. The section will examine the evolving ideology of the health care system against this background of apartheid politics. This will be followed by an introduction to the main transformations that have been taking place in the health care sector since 1994. This analysis sets the scene for the subsequent discussion of Primary Health Care and Community Health Workers in South Africa.

3.2.2 Health policy development in South Africa

According to a comprehensive overview by van Rensburg and Harrison (1995), South Africa's national health policy development can be divided into six distinct historic phases. It is notable – although perhaps not surprising – that there are clear parallels between changes in the general political environment of South Africa and coinciding alterations in the debate on the country's health policies. Table 3.1 serves to summarize all six identified health policy phases, and puts them into the context of general historical developments in South African politics. As stages in a continuous historic evolution, the early phases of health policy development in South Africa are significant. However, in the following description the focus is directed towards more recent processes, whose impacts on the current health system are more immediate. Thus, the first phases of health policy development in South Africa are only summarized briefly, while developments during and especially since the end of the apartheid era will receive more attention. The above mentioned overview by van Rensburg and Harrison (1995) serves as the main source of information on health policy before 1994.

Health phases	Historic events	Key events during health policy phases
Phase I Prior to 1919	 17th century – begin of colonization of Cape Region, first by Dutch (Afrikaner), later by British frontier warfare against African peoples 1899-1902: South African (Anglo- Boer) War 1910: Creation of Union of South Africa 1912: founding of the African National Congress (ANC) 	 establishment of first hospitals 1807: first health legislation in Cape Colony, which marked an increase in organisation and regulation of health care 1883: Public Health Act (Cape Colony) lack of synchronisation and uniformity in different areas even after unification, fragmentation of the health sector remained
Phase II 1919 – 1940	 end of first world war; Global influenza epidemic segregation policies including reservation of skilled jobs for whites, limitations to black ownership (1913 Natives Land Act) and segregation in urban areas (1923 Natives Urban Area Act) 1929: National Party (Afrikaner Party wins national elections) 1934: Status of Union Act – claiming full sovereignty of SA 	 1919: Public Health Act, which led to the establishment of the first national Department of Public Health segregation policies also influenced health system, with continuing reluctance to create a unified national health service Public Health Amendment Act of 1935
Phase III 1940 – 1950	 economic boom caused by resource needs for World War II 1943: United Party wins the national elections increasing urbanisation of black Africans 	 attempts to restructure and reform health care 1942-1944: National Health Service Commission led by Henry Gluckman: "vision of a unified, comprehensive and state-funded national health service" – however, suggestions made by the Commission not implemented for the next five decades focus on primary care with establishment of community-based health centres (established under Gluckman as Minister of Health)

Table 3.1: Overview of health policy development throughout South Africa's history (partially based on Van Rensburg and Harrison, 1995)

<u>Phase IV</u> 1950 - 1990	 1948: National Party becomes government party Apartheid laws: legislated complete racial segregation and discrimination with far-reaching restrictions for non-white South Africans affecting nearly all aspects of life since 1970s: creation of 'homelands' and withdrawal of citizenship from black South Africans 1984: tri-cameral parliament increasing internal resistance and international criticism incl. boycott 	 systematic racial (and spatial) fragmentation of health services with fundamental differences in quality and access strong fragmentation led to high inefficiency 1977: National Health Act increasing focus on privatisation and hospital- based care Apartheid system had direct effect on health of people, with differing quality of life and life expectancy for different racial groups
<u>Phase V</u> 1990 - 1994	 slow "dismantling of Apartheid" release of political prisoners meetings between ANC and government repeal of Apartheid laws National Peace Accord agreement 	 1990: National Policy of Health Act integration of 'own affairs' health departments into National ANC initiated process of drafting a National Health Plan based on the Primary Health Care Approach
Phase VI After 1994	 first free elections in April 1994 Government of National Unity under Nelson Mandela (ANC) introduction of RDP & later GEAR Truth and Reconciliation Commission 1996: finalisation of new South African constitution, including the Bill of Rights creation of nine provinces and district structure national elections in 1999 and 2004 	 ANC National Health Plan Process started to create a district-based national health system with a unified National Department of Health and equivalent provincial and district structures 1997: White Paper for the Transformation of the Health System for South Africa Health Sector Strategic Framework 1999 - 2004 2003: National Health Act Health Sector Strategic Framework 2005 - 2009

3.2.2.1 Prior to 1919

In the first hundred and fifty years of European colonization of the Cape Region, "the structure of health care was amorphous, control non-existent, and health policy coincidental" (Van Rensburg and Harrison, 1995, p.42). The first health legislation on South African territory was only introduced shortly after the final re-occupation of the Cape Colony by the British, in 1807 (Phase I). From then on, the next century saw the emergence of an institutionalised and more regulated approach to health care and to

the control of epidemics, with increases in hospitals as well as laws and directives regarding the health sector. The laws passed during this time included the so-called Public Health Act (1883), the first segregationist law, which was used for mass resettlements of native Africans during the bubonic plague in Cape Town of 1900 (Fassin and Schneider, 2003).

Similar regulatory processes were replicated in the other three self-governing colonies (Natal, Transvaal, Orange Free State), which, together with the Cape Colony, formed the Union of South Africa in 1910. Despite the unification and previous regulatory processes, health care in South Africa remained characterised by a lack of centralisation with uncoordinated legislation and administration in the provinces. The disadvantages of health sector fragmentations within the country and the lack of a central coordinating body were illustrated vividly through the enormous difficulties in mounting an effective nationwide response to the global influenza epidemic, which hit South Africa in 1918. In some ways, this can be seen as a poignant precursor to the similarly partial and fragmented response to HIV/AIDS some 70 years later.

3.2.2.2 1919 - 1940

Partially triggered by this event, demands for a centralised approach increased and led to the passing of the Public Health Act 36 of 1919. Despite good intentions and the establishment of a central Department of Public Health, neither effective central control nor nationwide coordination was achieved during this second period of health policy development (1919-1940). On the contrary, the struggle for national coordination with delegation of powers to the provinces remained unresolved for many more decades. Beside the spatial divisions between the four provinces, health services were further fragmented along racial lines (Van Rensburg and Harrison, 1995).

Access to health care had been unequal for different population groups since the beginnings of a regulated South African health system. It was marked by major differences in service provision between non-white and white people. These differences in health service access reflected the wide dissemination of segregationist thinking. Principles of this ideology were manifested in the 1905 South African Native Affairs Commission report, which served as a basis for building the legal structures of racial discrimination. Segregation policies led for example to the restriction of land purchases and rent tenancy by Africans to the thirteen percent of South African land, which were declared reserves (Natives Land Act; 1913) and to the introduction of the Natives (Urban Area) Act in 1923, which limited the freedom of movement of black

people and cemented segregation in urban areas. Further legislation, which was mainly aimed at the preferential treatment of whites in economic terms, reserved qualified jobs for whites and denied non-white employees the creation of unions (Anonymous, 2002). These processes of segregation also affected the health arena: the Public Health Amendment Act of 1935 enabled the subsequent creation of a specific "native health and medical service" (Van Rensburg and Harrison, 1995).

3.2.2.3 1940 - 1950

Within the health sector itself, the prevailing conditions resulted in a growing critique voiced by a number of public health officials, who had already called in the 1930s for changes in the existing structures. But especially in the decade from 1940 to approximately 1950 (Phase III), increasingly progressive reform ideas were being discussed with the aim to completely redirect previous health policies and substantially improve all people's health.

The most influential element in this debate was the National Health Services Commission, which was established in 1943 and tasked with investigating the country's health and health care situations. Two years later, in their report to the Union Parliament (known as Gluckman Report, cf. Table 3.1), the Commission highlighted several problems, including the lack of national co-ordination, shortages of health services in general and their unavailability for specific groups of people in particular (Van Rensburg and Harrison, 1995).

The Gluckman Report reflected the Commission's vision of a unified and state-funded National Health Service (NHS) based on a network of comprehensive health centres providing primary care to all local communities. The recommendations of the Commission were officially accepted – however, within the framework of the constitution. This factually guaranteed the continuing fragmentation of health administration and services. Some partial successes were achieved including the establishment of several dozens comprehensive health centres. This included the Pholela Health Centre, which was the first in South Africa to train local community members to become auxiliary health workers (see Sections 4.1 and 4.2). However, these successes were not of permanent nature. The victory of the National Party (NP) in the 1948 national elections signalled the end of any progressive changes at the policy as well as at the service delivery level (Harrison, 1995).

The above outlined third span in South African health policy is especially significant from today's perspective, since it was then for the first time that important ideas including the participation of community and NGO representatives at all three tiers (local, regional and national) of health governance were promoted and discussed in the mainstream of the health policy arena. Unfortunately, the existing constitutional and especially political conditions were not favourable and even deteriorated after 1948. Only more than four decades later had conditions finally arrived that were conducive for the implementation of ideas manifested in the Gluckman Report.

3.2.2.4 1950 - 1990

In the meantime, the fourth period in South African health policy history (ca. 1950-1990) coincided with the period of strict Apartheid politics in the country. In a development opposite to other African countries, South African segregation policies, which had already been established during the first half of the 19th century, were reinforced and taken to a new level under the National Party government. The government's Apartheid policies were based on the ideology of 'separate development' for different sectors of the population with the aim to preserve white minority rule.

An important part of the implementation of Apartheid was the creation of 'ethnically clean' areas, with the majority of the land being allocated to white ownership. This resulted in the forceful removal of approximately 3.5 million black South Africans into the thirteen percent of the country designated originally as 'reserves' (Bredekamp and Messina, 2002). Now referred to as 'homelands' or Bantustans, these areas were economically underdeveloped, overpopulated and suffering from severe soildegradation. For instance, in 1985 the population density of KwaZulu 'homeland' had reached 137.4 people / km², which was more than seven times higher than in 'white' South Africa. Furthermore, homelands were often divided into multiple enclaves, which gravely impaired conditions for governance. The most severe example, KwaZulu was divided into twenty nine unconnected enclaves distributed throughout the 'white' Natal province (Egerö, 1991) (also see Figure 3.1). Reinforced by these detrimental conditions, at least eight out of ten homeland inhabitants lived in poverty (Worger, 1996). Despite their lack of economic viability, the NP government's aim of a stepwise transition of the homelands into supposedly independent nation states was pursued. Out of the ten 'self-governing' homeland areas, four (Transkei, Bophuthatswana, Venda and Ciskei) were declared as 'independent' - a status never recognised outside the South African Union (Bredekamp and Messina, 2002).



Figure 3.1: KwaZulu-Natal's administrative structure prior to 1994 (HST & DoH KZN, 1996, p.10)

The Apartheid laws and policies had a direct impact on the health of the non-white population. Amongst them, and especially in the homeland areas, malnutrition and infectious diseases like tetanus, measles and malaria were widespread (Thornton and Byrnes, 1996). As a symptom of the high population density and poor housing conditions, there were approximately 90,000 new TB cases annually in South Africa, predominantly among the black population (Benatar, 1997). By the end of Apartheid, health measurements of the varying population groups were characterised by significant differences, as shown in Table 3.2.

Statistics from 1990	Black Population	White Population
Infant mortality (per 1000 live-births)	48,3	7,4
Infectious disease mortality	13%	2%
(in % of total deaths)		
Life expectancy at birth (female)	67	76
Life expectancy at birth (male)	60	69

Table 3.2: Population disparities resulting from Apartheid policies (Benatar, 1997)

However, these disparities in health outcomes were not only a result of negative economic conditions, but were also reinforced by the highly unequal access to health services. For example, white areas were serviced by an average of one doctor per 1,200 inhabitants, while this ratio was one to 13,000 in some of the homeland areas. Like all other sectors of society, health services were characterised by racial discrimination and suffered from fragmentation and poor coordination of services (Thornton and Byrnes, 1996).

Especially since the 1980s, the increasing support for private medicine acted as a mechanism reinforcing inequitable access to health services. The enthusiasm for health sector liberalisation resulted in private health care growing "into a large, uncontrolled entrepreneurial industry with no public accountability" (Benatar, 1997, p.891). By 1992, in little more than ten years, the number of doctors working in the private sector had increased from 40% to 60%. By the early 1990s, 64% of all health expenditure were spent on servicing the 17% of the population, who were covered by health insurance (Benatar, 1997).

In the public sector, hospital-based care formed the core of South African health services. At the same time, community facilities servicing poor patients and prevention at primary care level were neglected. Although some health workers ignored Apartheid-regulations, most health facilities followed the rules of systematic racial fragmentation and were either offering services for only one racial group or had designated facilities for each (Benatar, 1997). This system was not only inequitable, but also led to duplication of services and wastage of resources.

The above mentioned high levels of inefficiencies also continued at the administrative level. Health management in Apartheid South Africa was highly complex, due to the creation of the tri-cameral parliament in 1983, which led to the establishment of three 'own affairs' departments for the white, Indian and coloured population groups, and due to the existing ten 'self-governing' or 'independent' homelands, the role of the national

Department of Health and Population Development was far from clearly defined (Van Rensburg and Harrison, 1995). In combination with the powerful four provincial health departments, there were a total of eighteen administrations responsible for health care services in the country. These multiple management structures and the existing lack of co-coordination between them left a difficult legacy for any progressive health care reform.

3.2.2.5 1990 - 1994

This fifth and comparatively short period in South Africa's health policy development coincides with the country's first steps of breaking away from the Apartheid system. Due to a multitude of reasons including the major international developments in the early 1990s, mounting economic difficulties, and increasing internal and external pressure, South Africa's government under Frederik de Klerk started with the abolition of various Apartheid laws. The most symbolic event of this period was the release of the imprisoned ANC leader, Nelson Mandela, an event which was accompanied by the return of many ANC members from exile. This period was also the time which ANC and government members used to prepare the first free and democratic elections intended for 1994 (see also Table 3.1).

In the health arena, these developments were mirrored by increasing internal pressure from within the health sector to overcome the inequity and the spatial and racial fragmentation of health administration and service delivery. Progressive elements in the health sector further pushed for a higher level of regulation for the private sector and for a stronger move towards primary health care provision in the public sector (Van Rensburg and Harrison, 1995).

Some of these demands resulted in changes in health legislation, with the "National Policy for Health Act" of 1990 increasing the powers of the National Department of Health and Development by, for example, incorporating the 'own affairs' health departments. The aim of this Act was to centralise the power of national policy development in the hands of the national Health Minister. However, the effectiveness of this attempt of greater coordination of health service activities in the country was hampered by the financial control remaining at provincial level and by the continuing exclusion of the most under-serviced homeland areas. Furthermore, all progressive reform attempts then undertaken still took place in the context of a racially-divided and undemocratic society.

Outside the government spheres, health and development activists together with members of the ANC started to prepare policy-documents highly influential for the post-1994 period, namely the Reconstruction and Development Programme (RDP) and the ANC National Health Plan for South Africa.

3.2.2.6 Since 1994

After the election in 1994, which resulted in the establishment of an ANC-dominated Government of National Unity, the developments that had already been started mounted in a transformation process encompassing all levels of society, including reforms within the legislative, executive and judicial spheres of governance (see Table 3.1). A number of reforms took place immediately in 1994 – including the abolition of any remaining racially-based legislation, but this can mainly be identified as the year in which processes started whose effects are still noticeable today. The major legislative reforms were accompanied by equally significant changes in governmental structures. One of the most important changes taking place over a substantial period of time was a reform of all administrative structures. The restructuring of administrative units including the establishment of nine new provinces was designed to overcome fragmentation and to incorporate former provinces, independent homelands and homelands into coherent spatial structures.

All the transformation processes taking place in South Africa's society also had an impact on the health care sector. For example, the large exodus of highly-qualified people in the late 1990s left many government administration and other sectors struggling to fill mid-level posts with sufficiently-qualified and experienced people. The high emigration levels also had a noticeable impact on the number of qualified nurses and doctors that continued to work in the public sector (Loewenson and Thompson, 2004) – a process that had already begun to be exacerbated by the rising tide of HIV/AIDS cases and mortality.

Equally, spatial reforms also took place at the health administration level. For example, the creation of the new province of KwaZulu-Natal implied that the newly established KZN Department of Health developed from five different parts, being originally under the jurisdiction of the Natal Provincial Health Department, the Department of National Health and Population Development, the KwaZulu administration and three areas belonging to former Transvaal and Transkei (cf. Figure 3.1). This process of spatial restructuring continued in a second step with the creation of new municipal and district

structures, which subsequently formed the basis for the establishment of the present District Health System.

The main aim of all the developments initiated in the health sector after 1994 was to overcome inefficiencies and inequity in health service provision. This was to be achieved through the implementation of a district-based primary health care approach. This primary health care approach (see also Chapter 4), as understood in the South African context, focuses on the delivery of free primary care and health promotion services. It emphasises community participation and close cooperation with sectors affecting health and environmental health (e.g. housing, water, and sanitation). Furthermore, it aims for improvements in health services coordination, for "efficient administration, and effective systems of referral to secondary and limited tertiary levels of care" (Benatar, 1997, p.892). Clearly, this provided a firm foundation for the continued expansion of the Community Health Worker programmes that lies at the heart of this thesis.

These major changes were driven by the development, adoption and implementation of new health policies and legislation. The early years of health policy transformation were informed by the RDP and the ANC National Health Plan, which also provided the basis for the 1997 White Paper for the Transformation of the Health System in South Africa (African National Congress, 1994c;1994b; Department of Health, 1997). Thus, the RDP set out, for example, guidelines on the restructuring process within the health sector towards the development of a unified NHS:

"one of the first priorities is to draw all different role-players and services into the NHS. This must include both public and private providers of goods and services and must be organised at national, provincial, district and community levels" (African National Congress, 1994c, p.43).

It also set out a list of specific health service targets, including, but not limited to the ones listed below:

- % "Free health care for children under six and for all homeless children at public clinics and health centres;
- R Preventive and promotive health programme for children must be improved including a more effective, expanded programme of immunisation with 90% coverage in three years;
- Improved communication between the formal health sector and traditional healers;
- Programmes to reduce the spread of sexually transmitted diseases (STDs) and Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) must include active and early treatment and mass education. AIDS education for rural communities and especially women must be a priority;
- An effective National Health Information System must be implemented and an Essential National Health Research (ENHR) programme initiated;
- A human resource strategy must include: provision of core teams; training and reorientation of all existing health workers in the primary health care (PHC)

approach; redistribution of personnel; programmes to attract health personnel to the public sector; implementation of human resource planning and management system; and review of all training programmes and selection criteria;

- **X** Shift budgets in favour of primary health care and
- Provision of essential drugs in all PHC facilities (with essential drug lists)." (Pillay and Marawa, 2000, p.4)

In the context of this research, it is useful to highlight the focus on HIV/AIDS, which underlines the importance given to the epidemic at this point. This is reiterated in the following chapter on South Africa's HIV/AIDS policy development, but will be contrasted there with the soon emerging high levels of political contestation around this topic.

While the RDP, as stated, was an important policy framework in the first years after 1994, the White Paper for the Transformation of the Health System in South Africa was the main policy document informing the most dramatic restructuring processes within the health sector, with its main goals summarised in the seven objectives below:

- % "To unify fragmented health services at all levels into a comprehensive and integrated NHS;
- **X** To promote equity, accessibility and utilisation of health services;
- **X** To extend the availability and ensure the appropriateness of health services;
- **X** To develop health promotion activities;
- 1 To develop the human resources available to the health sector;
- **X** To foster community participation across the health sector; and
- X To improve health sector planning and the monitoring of health status and services." (Department of Health, 1997, p.6f)

The White Paper furthermore set out roles and functions of the different spheres of health governance. It proposed detailed strategies of financial, physical and human resource development and established a framework for health research and for the yet-to-be-established National Health Information System. Furthermore, several health and disease-specific topics were addressed – focusing for example one chapter on HIV/AIDS and STDs – which informed further policy development in these areas.

The major developments in the health care system since 1994 which are of particular relevance for this research are the restructuring of the health care system to a districtbased health system and the strong emphasis on Primary Health Care delivery, predominantly at clinic level. Both of these processes influenced significantly the policy debate, programme development and current management processes of the Community Health Worker programme, as will be shown in Chapters 5 and 6.3.

Starting with these three mentioned policy documents, the health sector transformation and development of legislations and policies continues. It would, however, be beyond the scope of this thesis to discuss all of these in detail. It is, nonetheless, worthwhile noting the passing of the long-awaited new National Health Act in 2003, which finalised previous developments and now provides a framework for all health-related policy development and implementation processes (Republic of South Africa, 2003). For example, it makes provision for all health facilities to set up clinic or hospital health committees, and for health districts to develop mechanisms to increase community participation (via community health committees). These structures are of fundamental importance for the Community Health Worker Programme, and will be described in more detail in Section 5.3.4. Furthermore, specific strategic priorities and plans are published, updated and evaluated on a frequent basis, and are intended to guide national health sector development as well as to provide targets for performance evaluations (DoH SA, 1999b; 2004g; 2004f; 2006e). Provincial strategic plans, in line with the national ones, are equally relevant to guide provincial policy implementation and financial resource allocation (Department of Health, 1999b;2002b;2002a;2006a).

While the examination here mainly focuses on health policy development, one important question which remains to be answered is how all the defined goals and ongoing policy processes have actually translated into health care provision on the ground. Two positive developments in the attempt to combat the former inequity need to be mentioned. Firstly, South Africa's legislation now entitles the country's inhabitants to free Primary Health Care provision. Secondly, as a result of the RDP, there was a substantial increase in newly-built or reconstructed clinics, which today provide services to people without any previous or limited access to health care. Despite these promising developments, there still remains inequity in access to health services. Apart from continuing differences in quantity and quality of services and health workers available for private compared to public health services users, differences also continue within the public sector itself (Loewenson and Thompson, 2004). Differences exist in terms of density of facilities and the number of vacant posts between provinces (see Table 3.3), but especially also between rural and urban areas. Further examples are specific HIV/AIDS-related programmes (like VCT and PMTCT), whose coverage again varies widely between individual provinces as well as between rural and urban areas.

Provínce	Primary Care Physicians	Specialist Physicians	Nurses	Dentists	Pharmacists	Physical Therapists	Occupational Therapists	Speech Therapists	Dietitians	Radi- ographers
				172	mber served pe	r health care	worker			
Eastern Cape	8825	47,529	1278	190,117	53,662	237,646	554,507	950,583	475,292	26,616
Free State	422	11.342	786	71,491	31,881	45,369	3,932	157,279	65,533	14,212
Gauteng	273	3,398	606	25,458	18,994	29,117	31,575	79,714	54,635	8,104
KwaZulu-Natal	4362	15,641	901	145,607	27.239	43,289	79,291	170,391	148,304	21,528
Limpopo	8544	92,129	1001	141,736	48,067	106,302	76,774	197,418	110,554	60,084
Mpumalanga	5772	143,698	1124	54,605	34.003	75,841	65,006	151,681	60,672	5,056
Northern Cape	823	6,635	1079	74,066	47,535	86,076	99,526	244,986	109,821	49,763
North West	3352	39,296	776	64,303	32,151	5,441	101.047	235,777	70,733	24,391
Western Cape	2979	2,746	796	28,074	13,789	32,126	33,152	35,489	61,103	691
National average	4829	10,403	910	65,406	29,578	55,698	64,722	172,793	98,282	17,878
Ratio of highest to lowest	3:2	52:3	2:1	7:5	3:9	8:2	16:7	7:0	8:7	8:7

Table 3.3: Number of People Served by Health Care Workers in the Public Sector in South Africa as of February 2003* (Benatar, 2004, p.85)

* Data are from Intergovernmental Fiscal Review 2003.

One of the approaches aimed at overcoming health facilities and health worker shortages in rural areas is the provision of health care services through a Community Health Worker Programme. However, when considering developments still necessary to achieve greater equity in service provision, the impacts of the HIV/AIDS epidemic on the health sector can not be ignored. Debates on how to address the epidemic have been an important component of the post-1994 public policy process, especially on the role of the health sector.

3.3 HIV/AIDS policy in South Africa

"The vision which fuelled our struggle for freedom; the development of energies and resources; the unity and commitment of common goals – all these are needed if we are to bring AIDS under control. Future generations will judge us on the adequacy of our response." Nelson Mandela

"Many argue that both the apartheid and the post-apartheid government failed to respond to HIV and Aids effectively. The apartheid government failed to act due to a lack of political commitment, whilst the post-1994 government was simply overwhelmed with restructuring and developing new policies and programmes."

Ann Strode and Kitty Barett Grant

South Africa's progress in the transition of the country from the apartheid state, and the successes already achieved in overcoming structural causes for inequity (for example, in health service provision), highlight the country's capacities. However, many of these successes are threatened by the HIV/AIDS epidemic. Thus, the development of sound policies in the HIV/AIDS field is important, since they are the framework shaping and influencing any responses, including those provided by Community Health Workers. Progress in international HIV/AIDS response recommendations, national political development and restructuring processes have all had an influence on South Africa's HIV/AIDS policy development. This analysis of HIV/AIDS policy response starts with the emergence of the disease in the country, keeping in mind the general political context. Where appropriate, it will also highlight the areas of policy development that make specific provision on Community Health Workers or which have an impact on the scope of their work. Additionally, Table 3.4 at the end of this section will summarize these developments.

After the first two AIDS cases were confirmed in South Africa in 1985, the Department of National Health and Population Development established a disease-specific AIDS Unit in 1988. A year later AIDS Training, Information and Counselling Centres were created in urban areas (Campbell and Williams, 1996). Despite these efforts, the overall response of the apartheid state was influenced by its inefficient structures and lack of political commitment, which was expressed by the absence of any national coordination via a national institution or strategy (Strode and Barrett Grant, 2004). In this context, Abdool Karim (2004) describes the response at the time as "insufficient and lack(ing) credibility" (see also Section 3.2.2.4).

Although there were no noticeable changes in disease-specific policy implementation in the early 1990s, the 'thawing' process leading to the end of Apartheid (cf. Section 3.2.2.5) was reflected in the extensive consultation processes characterising the

development of future HIV/AIDS policies. They involved a wide range of stakeholders including the ANC, international and national experts as well as the existing government. There was also an active involvement of NGOs, as indicated by the National Progressive Primary Health Care Network's creation of a community mobilisation project in 1990 and the establishment of the AIDS Consortium in 1992, a collaborative group with the aim of networking and information dissemination. The same year, at a convention jointly organised by the ANC and the National Department of Health and Population Development and including governmental as well as civic society-stakeholders, the National AIDS Committee of South Africa (NACOSA), was launched. This body was established to coordinate response and included a task team which, based on wide participatory processes, developed the future HIV/AIDS policy framework of the country (Schneider and Stein, 2001). Key principles of the resulting Plan have been summarised:

"The AIDS Plan assigned a central role to government, as leader, funder and implementer of a comprehensive response to AIDS. It envisaged a coordinated network of technically competent and progressive cadres at national level and in the nine new provinces, who together would form the core infrastructure of the government AIDS programme. The Plan proposed a multi-sectoral structure with implementing units in key ministries (Health, Education, Welfare, Defence). It recommended that final authority rest with a coordinating structure in the President's office nationally, and the Prime Ministers' offices at provincial level (NACOSA, 1994, cit. in Schneider and Stein, 2001, p.725)."

Early on after the first democratic elections in 1994, the NACOSA National AIDS Plan was accepted by the new ANC-led government and guided the Department of Health's response (Hickey, 2002). With the establishment of the Government of National Unity, there were multiple positive signs that the response to the epidemic would be strengthened and expanded. Making HIV/AIDS the topic of one of the country's twelve RDP projects and one of the twenty three presidential lead projects was evidence for the recognition of the epidemic's importance for the country's development by President Mandela and its government (see also Section 3.2.2.6). However, inherent to the National AIDS Plan was an overestimation of the country's implementation capacities (Schneider and Stein, 2001). Contrary to the Plan, there was no central coordination unit established in the President's office but rather within the national Department of Health. This made the achievement of a strong multi-sectoral response less likely and shifted the main responsibility permanently towards the health sector. Given the major challenges inherited from the Apartheid era and the far-reaching transformation processes necessary, in combination with the still relatively-low number of AIDS cases, it is perhaps no surprise that political attention shifted elsewhere. This resulted in the lack of more concerted response, which may have had a greater impact on the future development of the epidemic.

Implemented initiatives under the National AIDS Plan were based on the principles of equity and a rights-based approach and mainly focused on prevention. For people already living with HIV and AIDS, the recommended but not always available services included the treatment of opportunistic infections, psychological support and community-and home-based care. Overall, policy development was strongly guided by standard international recommendations (see also Section 2.5).

However, the actual implementation process was quickly overshadowed by numerous controversies around HIV/AIDS and the government's response to the epidemic (see also Table 3.4). Topics being contested were mainly linked to specific responses to the epidemic and often involved a conflict between the national government and non-state actors like social movements and HIV/AIDS scientists. Starting with a public critique of the financial handling and the contents of the AIDS musical Sarafina II (1996), and by the government's strong promotion of a potential HIV vaccine (virodene) developed in South Africa, which had however never passed scientific scrutiny of efficacy and safety (1998), the controversies continued with a long-lasting debate on the status of HIV/AIDS (Schneider, 2002). This controversy centred around the question whether HIV/AIDS should be made a notifiable disease. There were frictions between those who saw notification as a means to improve prevention and response planning, and others who judged it as endangering confidentiality and undermining individual human rights. More on the background and chronology of this specific debate can be found in the published literature (e.g. Seidel, 1996; van der Linde, 1997; Schneider and Stein, 2001). Later on, the initial lack and then very slow expansion of a national PMTCT programme was one of the first issues around which the Treatment Action Campaign (TAC), founded in 1998, mobilised. Even wider international attention (and criticism) was focused on President Mbeki's establishment of the Presidential AIDS Advisory Panel, which was made up of 'orthodox' and 'dissident' scientists in order to investigate the appropriateness of the HIV explanation as the cause for AIDS in an African context with high levels of poverty (see also Section 2.2). The controversies later continued with a debate on the national roll-out of antiretrovirals and the Minister of Health's, Tshabalala-Msimang, insistence on the dangerousness of ARVs as a reason for the lack of support for a national roll-out of antiretroviral therapy (see below).

Many of these controversies were characterised by a conflict between the national government on the one hand, and social movements as well as scientists on the other hand. However, differences became also apparent in stances taken by the national government and actual implementation policies at the provincial level. This is exemplified by the debate on the expansion of a PMTCT programme where, after the

establishment of pilot sites, the public health care sector outside these dedicated facilities was prohibited to offer these services. However, some provinces ignored this and started a provincial expansion before the approval of a national roll-out (e.g. Mtshali, 2002). Notably, PMTCT Programmes were implemented early in the two provinces with government participation of parties other than the ANC (Western Cape and KZN), but also by the ANC-led Gauteng province. The highly-charged style of the debate on the expansion of the PMTCT programme is illustrated by the public criticism exchanged by some of the stakeholders (e.g. statements by KZN's Premier Lionel Mtshali (2002), TAC's Berger and Geffen (2004) and Tshabalala-Msimang (2004)).

However, extensive debates about the 'high-politics' of HIV/AIDS in South Africa have not only been led and analysed in the country's mainstream media, but also in the scientific and social science literature, where detailed analyses of these debates and their backgrounds can be found (Schneider and Stein, 2001; Schneider, 2002; Schneider and Fassin, 2002; Fassin and Schneider, 2003; Strode and Barrett Grant, 2004). Thus, Schneider for example evaluates:

"Many would see in the contradictory stances of political leaders (e.g. unquestioning support for virodene vs. extensive criticism of anti-retrovirals; a focus on poverty as the cause of AIDS vs. the realpolitik of macro-economic adjustment), an attempt to deny the enormity of the problems of AIDS in South Africa, and the challenges it raises for the allocation of resources, nation building, and, ironically, the need to address the fundamentals of poverty and inequality.

Equally plausible is that the conflict around AIDS, in the context of an emerging postapartheid state, represents a battle between certain state and non-state actors to define who has the right to speak about AIDS, to determine the response to AIDS, and even to define the problem itself. Ultimately it can be seen as an attempt on the part of the political leaders to establish who will legitimately be accepted as civil society partners with the new state and the extent to which non-state actors can define government policy. High level state interventions in the AIDS field have thus perhaps less to do with the differences in the context of policy than with a discomfort, and at times active exclusion of, social movements that express certain styles of activism and that fall outside of the immediate networks of political patronage and influence within the tripartite alliance."

However, conflict has tended to occur largely in the political domain and at national level, involving mainly the presidency and the Health Ministry, with the day-to-day bureaucratic realm and provincial governments functioning relatively autonomously and sometimes in contradiction to central political stances (Schneider, 2002, p.152f)."

Despite these controversies, which were, according to Schneider (2002) as much about a struggle over power and the question of who influences policy making as it was about the actual topic of HIV/AIDS, South Africa developed an extensive set of policies in response to the epidemic, which are detailed in Table 3.4. Equally, the health sector received an increasing financial share since 2000, with an allocation of R2.1 billion to HIV/AIDS-specific programmes for three years (Ndlovu, 2004). Nonetheless, based on interview experiences in KwaZulu-Natal, it is safe to assume that the continuing public battles being fought over sometimes important response questions negatively impacted not only on the country's international image, but also on the morale of service providers "on the ground".

The above roughly-outlined debates should also be seen as a backdrop to the policy development further described below. As stated earlier, the first post-Apartheid policy document guiding policy implementation was the National AIDS Plan. The effectiveness of this plan in addressing the accelerating epidemic was evaluated in 1997, and highlighted too strong a concentration on the health sector and the lack of co-ordination with various stakeholders outside the health domain. This review led to the establishment of the Inter-ministerial Committee on HIV/AIDS (later replaced by SANAC, the South African National AIDS Council), which aimed to facilitate a strengthened multi-sectoral approach (Strode and Barrett Grant, 2004). The review of the original AIDS Plan furthermore led to the development of the 2000-2005 HIV/AIDS Strategic Plan for South Africa, which set the framework for all identified areas of response (prevention; treatment, care and support; research, monitoring and surveillance; and legal and human rights) (Department of Health, 2000a).

The strongest focus of the response as outlined in the strategic plan remained on prevention, with treatment and care given second priority (Ntuli *et al.*, 2003). The prevention programmes run in South Africa include both biomedical as well as behaviour change approaches, including the treatment of STIs, condom distribution, behaviour change campaigns, post-exposure prophylaxis and PMTCT. However, the last two have only played an increasing part in the prevention strategy in more recent years. The prevention campaigns initiated from governmental departments are further supported by public information campaigns and outlets like the Red Ribbon Resource Centre, the multimedia campaign loveLife and the TV-soap SoulCity, and Khomanani (see Table 3.4).

But while poverty was raised as an influencing factor in the political debate, the main response strategies centred on typical health sector responses and did not directly address this underlying social issue. Nevertheless, social grants, food fortification and food support programmes can be seen as an important part of the response to poverty and its effects. Here, local structures increasing the access to such services are crucial, and might be found in the Community Health Worker programme (see Chapter 6.3).

These services are also equally or even more important for already-infected people, where the main focus of the public health sector response has been for many years on improving their quality of life through treatment of opportunistic infections and STIs. According to Ntuli *et al.* (2003), the Department also developed treatment guidelines and supported patients on privately-paid ART through for example conducting necessary laboratory tests. Until the implementation of the Operational Plan (see below), access to ARVs was only available through medical (insurance) and workplace schemes and increasingly through NGO services provided e.g. by MSF (Doctors without borders) (Ntuli *et al.*, 2003).

Other important policies which are continuing to direct the response to the epidemic are the Health Sector Strategic Framework 1999-2004 and the subsequent Strategic Priorities for the Health Sector 2004-2009 (Department of Health, 1999b;2004g).

However, considering the originally extremely-high prices for ARV and the complex administering structures required in combination with the outspoken opposition by the Health Minister, the most remarkable change in policy response was the 'Operational Plan for Comprehensive HIV and AIDS Care, Management and Treatment for South Africa', which was launched in November 2003 and for the first time included a public-sector ARV treatment component (Department of Health, 2003). The inclusion of ART into the package of comprehensive responses was supported by the decrease in drug prizes, but also the result of ongoing internal pressure (especially prior to national elections) as well as numerous international developments including the International Conference in Durban (which had a strong focus on ART expansion), the establishment of the Global Health Fund, TRIPS agreement, and the WHO/UNAIDS '3 by 5' initiative (see Section 2.5.2.2 and Table 3.4).



Figure 3.2: National Election Posters, 2004 (Photo: Clark)

The Comprehensive Plan continues to highlight the importance of prevention in tackling the HIV/AIDS epidemic, but also appreciates the need to further strengthen the NHS in order to be able to provide a continuum of care and interventions mitigating the impact of the disease. Areas highlighted in the Plan needing additional attention in order to strengthen facilities' capacities are additional human resources at national and provincial management level, specifically developed training guidelines and improvements in the VCT Programme including strengthened laboratory capacities (Department of Health, 2003). Additionally, in order to track implementation progress, the Monitoring and Evaluation Framework and a training manual for Health Care Workers involved in data collection and monitoring of the Comprehensive Plan were developed (Department of Health, 2004c;2004d; Health Systems Trust and Health Information Systems Programme, 2005).

The Plan also sets out specific interventions for people living with HIV (PLWHA) in relation to their CD4 count (see Section 2.2). Part of the intended support package for PLWHA with a CD4 count above 200 are counselling, psycho-social support and advice on a healthy lifestyle, in combination, where necessary, with additional

nutritional support (Department of Health, 2003). According to a speech given by the Health Minister Thsabalala-Msimang (2004a), an additional 4 million Rand were allocated for supplementary meals in the context of the Comprehensive Plan. The provision of micronutrient supplementation for people with TB, HIV/AIDS, and other chronic illnesses has started to be implemented in 2004 (Department of Health, 2004f).

Most of this support requires mechanisms which also deliver services outside a facilitybased context and bring these services into the communities. The suitability of Community Health Workers in this context will be investigated below. An additional area with potential for their involvement is the area of collaboration with traditional healers. The Comprehensive Plan encourages traditional medicine, with 6 million Rand allocated to the Medical Research Council to investigate its safety and quality (Tshabalala-Msimang, 2004a).

For HIV-infected people who have reached the AIDS stage of the infection (CD4 count below 200), increasing numbers of facilities are providing antiretroviral treatment (see below). In supporting the large-scale roll-out of this programme, the Department developed ARV treatment guidelines and published tenders for ARV procurement. Further technical aspects of this programme, like the establishment of electronic patient records and of a pharma-covigilance programme evaluating the safety of ARVs and other AIDS drugs, have taken longer to be fully established (Tshabalala-Msimang, 2004a). Social mobilisation and communication campaigns, again areas for potential Community Health Worker activities, are on-going. A short-coming of the government in this respect has been identified by Strode and Barett Grant (2004, p.9):

"However, in subsequent year, communities have become more and more mobilised around HIV and Aids issues. Levels of openness are increasing and more and more people wish to contribute to the fight against the epidemic; however, this is not being harnessed by the government or national institutions such as the South African National Aids Council (Sanac)."

Before health facilities can start to provide HIV/AIDS patients with the complete HIV/AIDS treatment and care package including the provision of antiretroviral treatments, facilities need to be accredited. An important condition for accreditation is a sufficient number of qualified staff – thus, training is a very import element and should be provided to all the main implementers of the ARV component, including hospital doctors (prescriptions), professional nurses with additional training (PHC level; training in clinical assessment, diagnosis, treatment and care), dieticians/nutritionists and also lay counsellors and Community Health Workers (Department of Health, 2003). The training of all levels of health care workers should be based on a standardised national curriculum. In this context, the Minister of Health emphasised: "The Programme should not be a vertical programme but should form part and parcel of the overall public health system. The health personnel added by the programme to various facilities will serve all patients not only HIV positive patients. This should compliment and strengthen the health care system for the benefit of all our patients." (Tshabalala-Msimang, 2004a)

Training standardisation has been developed for all levels of health care workers, including ancillary health workers like Community Health Workers (see Appendices 3 and 4; and Section 5.3.2.4). Nonetheless, the HIV/AIDS epidemic continues to provide major challenges to the functioning of the Department of Health and the rest of the country. However, the major commitments made by the country's government – for the financial year 2007 a total of ZAR 4 billion was allocated to all HIV/AIDS responses – in combination with some of the successes achieved, are sending positive signals:

- In 2007, PMTCT services were provided in more than 90% of the public health facilities (Department of Health, 2007d)
- 8 Home- and community-based care programmes were government-supported in more than 60% of the sub-districts (Tshabalala-Msimang, 2007)
- \$ by September 2007, more than 370,000 people had been initiated on ART, which indicated an increase of nearly 100,000 people within six months (Department of Health, 2007d; International Treatment Preparedness Coalition (ITPC), 2007), and are making South Africa's the worldwide largest ARV treatment programme

However, the management and further expansion of this programme continues to provide major challenges in all areas of implementation. It also requires the active involvement and communication of all levels of service providers to ensure a continuum of care. Especially considering the dangers connected to ART (development of resistances, heavy side-effects), continuing supervision even at community levels is important to guarantee the effectiveness of the therapy and of a programme as ambitious as this. Equally, the areas of prevention and care as well as impact mitigation will continue to be relevant – all of these open up the question to what extent Community Health Workers can contribute to South Africa's response to the epidemic.

Year	South Africa	International		
1985	First two confirmed AIDS cases ¹	First international AIDS		
		conference		
1988	AIDS Unit established with National Department of Health ²			
1989	Establishment of AIDS Training, Information and Counselling Centres in urban areas ²			
1990	1990 to 1994: participatory consultation process on principle and content of future AIDS policies Maputo Statement on HIV and AIDS in Southern Africa ³ NPPHCN initiated national AIDS community mobilisation project ³			
	First annual national antenatal clinic survey ^{3A}			
1991	Discussions on possible action around AIDS between ANC Health Secretariat and DoH ^{3A}			
1992	National Convention of South Africa, leading to the creation of NACOSA (umbrella body for response coordination; developed national strategy) ² The AIDS Consortium (NGO) and ³ Soul City Institute for Health and Development Communication (NGO) established ⁴			
1993	Founding of the legal and advocacy organisation The AIDS Law Project ⁵			
1994	National AIDS Plan launched by NACOSA and subsequently adopted by DoH ^{2.3} ANC National Health Plan highlighting the importance of a multi-sectoral, rights- and community-based response ⁴ HIV/AIDS as one of the twelve RDP projects and one of the 23 presidential lead projects ⁵ Strengthened Directorate of HIV/AIDS/STDs in the national DoH ⁶ Founding of the National Association of People Living with AIDS ⁷	Establishment of UNAIDS		
1996	Public critique on Sarafina II AIDS musical ³	UNAIDS' official launch ¹⁸ Introduction of ARVs ¹⁹		
1997	Review the Past, Plan the Future, Work Together ² 1997/98 HIV/AIDS Operational Plan ⁷ Virodene announced ³			
1998	Government AIDS Action Plan ² Establishment of Inter-ministerial Committee on AIDS ² Launch of Presidential Partnership Against AIDS ³ South African National AIDS Council (Sanac) established ² HIV/AIDS Budget for 1998/99 fiscal year cut from 100 million Rand to just over 50 million Rand ⁷ Founding of TAC (as an alliance of three activist groupings) ³	Announcement of successful trials of PMTCT using AZT in Thailand		
1999	South African AIDS Vaccine Initiative founded ⁸ HIV/AIDS and STD Strategic Plan for South Africa 2000-2005 ² Start of the national HIV prevention programme for the Youth loveLife ⁹			

Table 3.4: HIV/AIDS policy and policy contestation in RSA and related international events

2000	Multi-sectoral National Integrated Plan (NIP) on AIDS focusing on life skills education, VCT, and community-based care and support ³ NIP for Children Infected and Affected by HIV/AIDS ²	189 countries endorse the Millennium Declaration including the Millennium Development Goals (Target 7: Combat HIV/AIDS, Malaria and		
	activist and scientists) ³ President Mbeki questions HIV and AIDS link in	other Diseases) ²⁰		
	letter to world leaders, asking for consideration of socioeconomic causes Presidential AIDS advisory papel established ⁹	The Global Initiative on AIDS in Africa ²¹		
	Government decision to implement pilot programme for PMTCT ¹⁰ HIV/AIDS/STD Strategic Plan for South Africa: 2000-2005 ¹¹ VCT programme started	XIII International HIV/AIDS Conference in Durban (the first to be held in the South)		
2001	Pharmaceutical companies' court challenge on affordable drug policies ⁵ MSF begins free-of-charge ART programme in collaboration with public health care services in Khayelitsha in the Western Cape Province ¹² Use of ARVs in the public sector rejected by the Ministry of Health ³ Start of the Khomanani Campaign (a Government- funded mass media & communications initiative) ¹³	UN General Assembly Special Session on HIV/AIDS adopts the UNGASS declaration on commitment on HIV/AIDS ¹⁸ Abuja Declaration on HIV/AIDS, tuberculosis and other related infectious diseases ¹⁹		
2002	Constitutional court orders government to provide drugs for PMTCT of HIV at all public health-care facilities ⁵	Formal commencement of activities of Global Fund to Fight AIDS, TB & Malaria ²⁰ XIV International HIV/AIDS Conference in Barcelona WHO guidelines for antiretroviral use in resource-constraint settings ²⁰		
2003	First South Africa AIDS Conference in Durban Operational Plan for Comprehensive HIV and AIDS Care, Management and Treatment for South Africa ¹⁴	WHO/UNAIDS launch their '3 by 5' ARV treatment initiative ²¹		
2004	Announcement of AIDS treatment roll-out in 27 pilot sites in four of nine provinces ⁶	XV International HIV/AIDS Conference in Bangkok		
2006	Progress Report on Declaration of Commitment on HIV/AIDS ¹⁵	XVI International HIV/AIDS Conference in Toronto		
2007	HIV and AIDS and STI Strategic Plan for South Africa 2007-2011 ¹⁶ RSA judged as being on track to reach UNGASS targets for PMTCT in 2010 ¹⁷	Clinton Foundation's agreement with generic pharmaceuticals (price reduction of 16 AIDS medicines for 66 developing countries) ²² PMTCT High-Level Global Partners Forum 2007 ²²		
¹ Campbell and Williams (1996); ⁵ Hickey (2002, p.39); ⁵ Schneider (2002); ⁴ ANC (1994b); ⁵ Abdool Karim (2004) ⁶ Strode & Barrett Grant (2004); ⁷ Parkhurst and Lush (2004); ⁸ South African AIDS Vaccine Initiative (2004); ⁹ Fassin and Schneider (2003); ¹⁰ McCoy et al. (2002); ¹¹ DoH (2000a); ¹² Coetzee <i>et al.</i> (2004); ¹³ DoH (2007e); ¹⁴ DoH (2003); ¹⁵ RSA (2006); ¹⁵ DoH (2007b); ¹⁷ DoH (2007d); ¹⁸ UN General (2004); ¹⁹ OAL (2004); ²⁰ (MHO, 2002); ²¹ UNDC (2007b); ¹⁷ DoH (2007d); ¹⁸ UN General (2007b); ¹⁹ OAL (2007b); ²⁰ (MHO, 2002b); ²¹ UNDC (2007b); ²² (14 + 15 Grand (2007b); ¹⁰ DoH (2007d); ¹⁰ UNDC (2007b); ¹⁰ DOH (2007b); ¹⁰ DOH (2007d); ¹⁰ UNDC (2007b); ¹⁰ DOH (2007b);				

4 Primary Health Care and Community Health Worker

4.1 Primary Health Care and Alma Ata

With the end of the apartheid social system, the new South African government inherited a health care system that was strongly shaped by racial separation policies of nearly fifty years of apartheid politics (see Section 3.2.2). One of the main aims stated by the African National Congress (ANC)-led government was to redress the inequity and mismanagement in the health sector by focusing on the improvement of Primary Health Care provision. Primary Health Care is a relatively long-standing approach that, on the basis of research interviews, appears to have been well-suited to application in the emergent new South Africa.

The Primary Health Care (PHC) concept has been widely promoted on an international scale since the Alma-Ata Declaration of 'Health for All by 2000' was signed by 137 countries in 1978:

"Governments have a responsibility for the health of their people which can be fulfilled only by the provision of adequate health and social measures. A main social target of governments, international organizations and the whole world community in the coming decades should be the attainment by all peoples of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life. Primary health care is the key to attaining this target as part of development in the spirit of social justice." (Excerpt from the Declaration of Alma Ata, September 12, 1978 (WHO and UNICEF, 1978))

Primary Health Care is closely linked to the WHO's 1948 constitution's definition of health which broadly defines "(h)ealth (as) a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 1948)." This definition indicates that in order to achieve an improvement in the health levels of people, not only is the provision of facility-based curative care important, but the whole range of "preventive, promotive, curative, rehabilitative and palliative measures" (Makan and Bachmann, 1997, p.11). Furthermore, the health status of a people is clearly linked to general social and economic conditions, which underlines the need to deal with broader developmental issues including malnutrition, poverty and environmental degradation. The Primary Health Care approach is furthermore emphasising concepts of equity, inter-sectoral collaboration, and community participation. In this context, Community Health Worker (CHW) schemes have been identified as an appropriate mechanism to expand access to such comprehensive health services for poor and hard-to-reach rural populations, while at the same time allowing active community participation in addressing local health-related problems. However, while there is a sense that CHWs are a pragmatic bridging mechanism to

kick-start improved access, the need for different approaches to development and health service delivery nonetheless makes them also a symbol of inequity.

Internationally, attempts at improving basic health care provision through the employment of local auxiliary health workers had already existed on a small scale since the 1940s and 1950s. The earliest example in pre-apartheid South Africa dates back to 1942, when the Pholela Health Centre in Natal (in today's Sisonke district) was established. At the centre, key aspects of what was labelled 'community-oriented primary health care' were developed and included the appointment of people from the local community as CHWs as well as other assisting staff members (Tollman, 1994) (see Sections 3.2.2.3 and 4.2). Also in other parts of Africa, there were some projects utilising the CHW approach since the late 1960s. For example, in Botswana first attempts on implementing a CHW programme started with a pilot project in 1969, while the nation-wide programme of family welfare educators commenced in 1973. The Ethiopian programme initiated in 1978 comprised more than 4000 community health agents by 1984 (Meche *et al.*, 1984; cit. in Walt, 1988). A similar number of village health workers were active in Zambia, were a national programme was implemented in 1981.

However, already by the 1970s, the Chinese model of so-called 'Barefoot Doctors' had proven to be especially successful in delivering what is today known as Primary Health Care. Local peasants, who received basic levels of health care training, provided services to populations previously without any access to health care (Sidel, 1972). Based on the substantial improvements in public health levels achieved in China, and with the subsequent adoption of the Alma-Ata declaration, the expansion of Primary Health Care has become a central aim for public health services in many countries. Conceptually, CHWs are highly valued within the Primary Health Care approach as a vehicle to "(a) extend health services to the places where the people live and work; (b) support communities in identifying their own health needs; and (c) help people to solve their own health problems (WHO, 1987, p.9)." In a publication released soon after the Alma Ata conference, WHO and UNICEF justified the importance given to CHWs in Primary Health Care similarly, highlighting especially the perceived opportunities to expand health service provision in developing countries:

"For many developing countries, the most realistic solution for attaining total population coverage with essential health care is to employ Community Health Workers who can be trained in a short time to perform specific tasks. They may be required to carry out a wide range of health care activities, or, alternatively, their functions may be restricted to certain aspects of health care (WHO and UNICEF, 1978)."

Worldwide, this has led to the development of a range of programmes utilising CHWs or similar but differently-named auxiliary health cadres. As Table 4.1 indicates, there is

not only a variety of names for general health auxiliaries, but also a diverse list of tasks in which specialised CHWs continue to be involved.

Community-based health workers				
Generic cadres	Specialised cadres			
Community Health Workers				
Health Auxiliaries	Community Rehabilitation Facilitators			
Barefoot Doctors	Community-based DOTS supporters			
Health Agents	HIV/AIDS Communicators			
Health Promoters	Home-based Care Workers			
Family Welfare Educators	First Aid Workers			
Health Volunteers	Lay Health Workers			
Village Health Workers	VCT Counsellors			
Community Health Aides	Water and Sanitation Workers			
Community Resource Persons	Family Planning Advisers			
oNompilo				

 Table 4.1: International examples of community-based health workers (based on: International Medical Volunteers Association, 2004; Lehmann et al., 2004)

4.2 Community Health Worker programmes in South Africa

Although the Pholela Health Centre in Natal already employed CHWs from the year of its establishment, 1940, onwards (Tollman, 1994), a significant increase in similar projects in South Africa could only be noticed in the 1980s. The value of CHWs in expanding basic health care to people neglected under apartheid law was mainly recognised by local NGOs and some of the 'homeland' governments, which initiated various programmes utilising mostly voluntary health auxiliaries to provide a range of health related services. Descriptions of some of these NGO- as well as government health service-run CHW projects can be found in the literature, like the one initiated by the Western Cape Regional Services Council in the Khayelitsha township close to Cape Town (Mathews *et al.*, 1994; van der Walt and Mathews, 1995) and a village health-worker programme established in 1983 in the Hewu district of Ciskei (today part of the Eastern Cape) (Kuhn *et al.*, 1990). Another CHW project established in the Cape Town area has been run by the South African Christian Leadership Assembly in four peri-urban townships – the same organisation also had further programmes in Montagu and Ashton, two rural towns in today's Western Cape Province (Mathews *et al.*, 1991).

The KwaZulu administration was amongst the homeland governments recognising an opportunity in employing CHWs. In 1985, they decided to expand an originally NGOinitiated programme within their area (The Valley Trust, 2005a). Some of this programme's CHWs, or oNompilo as they are called in Zulu, are still active today. Both components, the original programme established by The Valley Trust in the early 1950s as well as the programme run by the KwaZulu government, are today part of KwaZulu-Natal's CHW programme and have been examined in the case study discussed below (Chapter 5)(The Valley Trust, 2004). However, at the time of this investigation, the merger was not fully completed yet and small differences remained in e.g. remuneration and working hours.

Perhaps due to the success of such programmes and due to the slowly changing political landscape in the early 1990s (see Section 3.2.2.5), there was a noticeable increase in awareness and acceptance of CHW schemes by the national Department of Health. Already in 1990, a CHW forum workshop took place, at which the importance of functioning CHW programmes for the success of Primary Health Care was emphasised (Department of National Health and Population Development, 1990). Yet even intensive lobbying and various CHW workshops organised by health professionals and activists did not lead to any national policy or standardisation at this point (Friedman, 2002).
Nonetheless, even after the end of the apartheid era, in many parts of South Africa CHWs were working for their communities, since NGOs and CBOs continued running health programmes including CHWs. However, due the localised nature of those programmes, the national coverage was highly variable with significant differences in the number of CHWs per region (cf. Table 4.2). The table shows the relatively high number of CHWs working in KZN, with similar numbers only in one other province (Northern Transvaal). While it has to be acknowledged that it is South Africa's population-richest province, the scale in programme implementation already achieved was an important basis for its continuing relevance (see below and Chapter 5).

Area *	Full-time CHWs	Trainee CHWs	Total	%
Border	232	26	258	3.6
Eastern Cape	177	18	195	2.7
Transkei	189	0	189	2.7
Western Cape	322	95	417	5.9
Eastern Transvaal	51	0	51	0.8
KwaZulu-Natal	2111.**	197	2308	32.8
Northern Transvaal	1269	1014	2283	32.4
Free State	1093	9	1102	15.6
Traansvaal – PWV	243	1	244	3.5
Total	5687	1360	7047	100.0
	(81%)	(19%)	(100%)	
Source: NPPHCN CHW Directory 1995 and HEU validation by Makan, B. 1997 (Health Economics Unit, University of Cape Town, Cape Town) [cit. in Cruse (1997, p.27)]				

Table 4.2: CHWs in South Africa's provinces around 1994 (Cruse, 1997, p.27)

cording to the pre-1994 South African provincial boundaries

** Part-time CHWs operating in KwaZulu Natal province.

Due to their localised nature, the various South African CHW programmes differed from each other not only in scale, but also in the mode of employment, remuneration, and training, and thus also in the kind, amount and quality of services being delivered. Efforts to create a more formalised approach to CHW programmes and to standardise their training, especially throughout the early 1990s by the National Progressive Primary Health Care Network (NPPHCN) and by other health activists and organisations, had limited impact. Hence, after the elections in 1994, the new ANC-led government found itself not only confronted with the highly fragmented health system (see Section 3.2.2.6), but also with a similarly patchy CHW programme (Tshabalala-Msimang, 2003d).

In preparation of their future government role, the ANC had spelt out their vision for South Africa's future health care system in the ANC Health Plan as well as in the Reconstruction and Development Programme (RDP) (both 1994) (see Section 3.2.2.6). This vision focused strongly on a district-based Primary Health Care approach, while emphasising the critical role communities should play in influencing local (health) decision making (Friedman, 2002). The draft version of the ANC Health Plan highlighted the role CHWs would play in delivering services, especially to rural communities:

"Community Health Workers can play a unique role in promoting health and in expanding and improving health services provided they have effective support structures and referral systems and they receive ongoing training. They can also be catalysts for community development, mobilizing people around health issues like the need for clean water, sanitation, waste disposal, safe playgrounds and so on. and they can play an important role in empowering people with knowledge and involvement in health issues (African National Congress, 1994a, p.80)." [Note: Part of the draft version removed from the final Plan in italic; by JF]

After the 1994 elections, however, the possibility of a CHW programme that was fully integrated into public health services at a national scale, reduced considerably. Already, the final ANC Health Plan had readjusted expectations by amending the draft version and stating:

"Community Health Workers can play a unique role in promoting health and in expanding and improving health services provided they have effective support structures and referral systems and they receive ongoing training. They can also be catalysts for community development, mobilizing people around health issues. *Local programmes will be encouraged provided they are integrated into the local health services, but no national programme will be launched at this stage* (African National Congress, 1994b)." [Note: Changes to draft version highlighted in italic; by JF]

The Minister of Health at the time, Dr Zuma, specified one of the reservations by declaring that "(n)o health service could be built on CHWs. They can supplement the nurse but under no circumstance could they replace her (Barron and Strachan, 1996, p.xiii)." While none of the earlier documents indicated an intention to substitute established health personnel – rather to complement them – statements like the previous indicate the reservations an extended CHW programme seemed to be facing.

Still, in the government's policy framework RDP, sections relating to the National Health System emphasized that "(t)he system must encourage the training, use and support of CHWs as cost-effective additional or alternative personnel. ... Core teams must be provided for every Community Health Centre and clinic. This will require incentives to attract staff to under-serviced (especially rural) areas and increased training of CHWs and Environmental Health Officers (African National Congress, 1994c, §2.12.5.7 and §2.12.10.1)." The feasibility of an increase in community-based health programmes (CBHPs), especially of CHW programmes, was shown in a study

published in 1995 (Lomax and Mametja). It concluded that a shift towards communitybased services was recommendable, especially because a "nationwide programme of CBHPs with 60% coverage would cost an affordable 5% of the national health budget (Pick, 1995, p.94)."

Nonetheless, with the onset of the complex transformation processes throughout the country, which has encompassed all aspects of society but especially government's administrative structures, the strong emphasis on community participation faded. In a research interview as part of this investigation, one official of the National Department of Health described the situation in the following way:

"There was a lot of interest in the beginning, but then the Department, under the ANC government, actually worked on the transformation of the Health Services. That is why the interest waned a bit. Because in 1994, the major changes that happened in the country already started to have an effect. So there were all the things related to the transformation. That is why the interest on Community Health Workers waned a bit." (Manager, NDoH 2004)

At the same time, the lobby from the formal health sector would have favoured basing health-care delivery on the network of clinics and nurses (later, however, national viewpoints adjusted with the appointment of a Minister who herself had a history of links with the CHW system).

One expression of the change in policy focus from the ideals of the ANC as a 'government in waiting' to the more Realpolitik stances after 1994 can be inferred from the shift from the original RDP to the Growth, Employment and Redistribution strategy. The GEAR strategy, which ran from the year 1996 to 2000, was an economic policy embracing the neo-liberal principals of open markets, privatisation and the creation of a favourable investment climate in order to achieve its name-giving goals of economic growth, increased employment and redistribution. However, compared to the RDP there was a much stronger weight given to economic development than to redistribution and community-development aspects (e.g. Cheru, 2001). Although not directly a World Bank-driven policy, similarities to Structural Adjustment Programmes existed. This meant that South Africa practiced a conservative public spending policy, which consequently had some impact on health sector expenditure.

As outlined earlier (Section 3.2.2.6), as part of the national transformation, the health sector went through a challenging restructuring process, with a shift from the apartheidera emphasis on tertiary, hospital-based health care provision to a stronger focus on primary, clinic-level health care delivery, with the health district as the core management unit. Due to these far-reaching re-organisation processes and despite the lobbying activities of some NGOs, the CHW programme lost its place on the national

policy agenda for a number of years. This resulted in a reduction in political and financial support through the national government. Thus, the 1997 White Paper on the Transformation of the Health System in South Africa states on the relationship between community health workers and the public health system:

"The incorporation of community health workers with the public service should not be considered at this stage. Where necessary, training should take place at the district level, with accountability to the provincial health authority. The feasibility of district financial support for such training should be investigated. Community rehabilitation health workers and health carers should only be trained through the addition of skills to physiotherapist or occupational therapist assistants, where a distinct career path with exit points has been identified, and not on an ad hoc basis (Department of Health, 1997, §4.1.2.a(vi))."

The referral of the CHW schemes to provincial and district authority level responsibility at this stage of the restructuring process increased difficulties for many communitybased programmes. Especially, the resulting lack of financial support from the national treasury during a time in which South African NGOs generally received less international funding - the democratisation process prompted a re-routing of financial flows directly to government structures – further aggravated the situation. Thus, although a provision for provincial solutions was made within the White Paper, the newly created provinces and the respective Departments of Health paid relatively little attention to the existence of CHW initiatives. This led to a country-wide demise of organised programmes especially in the mid- to late-1990s. CHW schemes did not completely disappear from the national landscape, but decreased in size, scope and coherence (cf. Friedman, 2005).

The lack of clear support from the national level continued for nearly a decade. In this time, the Eastern Cape and KwaZulu-Natal provinces did acknowledge the considerable role that nongovernmental and community-based organisations could play within the district health system structure. But only KwaZulu-Natal (KZN) actually started to discuss a provincial CHW policy which, after extensive stakeholder input, was adopted in 1999 (Department of Health, 1999a). Throughout the 1990s, KZN had continued to support its approximately 2600 CHWs remaining from the former KwaZulu government-initiated programme. However, only in the year 2000 did it cautiously start to expand these numbers again (Makan and Bachmann, 1997; Baloyi, 1999; Kvalsvig *et al.*, 2002; The Valley Trust, 2005a). This development is also summarised by a provincial KZN manager:

"The CHW programme existed already in the early 80s in old KwaZulu and was set up to deal with primary health issues. After 1994 the programme was put to a hold, but it was restarted in 1999. Now, in the middle of the HIV/AIDS epidemic, it seems to be a very critical tool." (CHW programme manager D, 2002)

Around the same time, health care providers (hospitals, hospices, *etc.*) in different parts of the country started increasingly to train home-based care workers (Friedman,

2005). This development was marked through a national conference on home-based care in 2002. By spring 2003, nearly ten thousand volunteers were working in 644 home- or community-based care programmes. A year later, the number of volunteers had more than doubled (Burger, 2005).

But despite the success of these home-based care programmes, it was not until 2003 that a change in national policy on CHWs started to manifest itself. At a conference entitled "Celebrating the achievements of Alma-Ata: Strengthening Primary Health Care in South Africa" in August 2003, the Minister of Health indicated a change in policy with the following statement:

"We took a conscious decision that nurses will be the front line health worker and that a fully trained PHC nurse will be available in every facility. We remain committed to reaching this target. In order to assist the PHCN and other health professionals, precisely because of we are not able to retain all personnel trained in South Africa for a variety of reasons, we have embarked on a process of creating mid level workers in a range of areas, including pharmacy, nursing, medicine, etc. In addition, we recognise that community outreach and community development is as important as services rendered in a clinic and have re-examined the role of the community health worker cadre. In this regard we have decided to strengthen our community health worker programmes throughout the country (Tshabalala-Msimang, 2003b, p.57f)."

In an interview, a civil servant at the national Department of Health described the change in policy in 2004, while indicating some additional reasons for the growing national support for CHWs:

"With the advent of the new development, HIV/AIDS and so on, the interest (in Community Health Workers) is coming up again. Because it will not be possible to get enough health professionals, they are important additional resources for the national development. But the government has never been keen to employ them as civil servants." (Civil servant, NDoH 2004)

As seen in these two statements, the shift in policy regarding the national deployment of CHWs can be explained mainly through the increasing pressures of the maturing HIV/AIDS epidemic on the health sector (cf. Section 2.4.3.2.3) as well as through the partly-related difficulties in providing sufficient health personnel, especially for rural and remote areas.

Additionally, the renewed focus on community involvement in health and other development issues contributed, together with the promising example of KZN and the long-standing personal involvement of the national Minister of Health (MoH) in CHW programmes, to the revived political interest at national level (Tshabalala-Msimang, 2003c). The seriousness of this turn in national policy was clearly highlighted when the Minister of Health called for a national Lekgotla (*i.e.* workshop or forum) on CHWs, which took place in Durban in October 2003.

At this workshop, numerous stakeholders including representatives from different spheres of government, from NGOs, CBOs, the private sector and especially CHWs themselves participated in the discussions about the expansion of such a programme. The workshop was used to introduce and discuss several models of CHW schemes within South Africa and to raise issues concerning various aspects of programme management. The national Department of Health introduced its framework on CHWs and encouraged provincial involvement in expanding appropriate programmes especially to disadvantaged communities (Tshabalala-Msimang, 2003a; Department of Health, 2004b). The final end of uncertainty over government-led support for CHWs came with the national launch of the CHW programme in February 2004, at which the national MoH recommended the payment of a minimum monthly stipend of ZAR1000 (≈ 70 GBP) to all CHWs, approximately 40 000 at the time (Tshabalala-Msimang, 2004b). Thus, the national Strategic Plan for 2004-2007 states:

"Another strategy to extend the work of health professionals is the decision to extend and strengthen the community health worker cadre. They are the community members trained to be the link between families and communities with the public health system (Department of Health, 2004f, p.33)."

A high-level interest in the CHW programme has remained, as was illustrated for example through the participation of the Minister of Health at the CHW workshop in QwaQwa in June 2005 (Tshabalala-Msimang, 2005) and at the Social Cluster Meeting in July 2006. There, the need for integration of CHWs with other community-based social sector workers was emphasised (Government of South Africa, 2006). The sustained attention has also been expressed in the 2006 Department of Health's Strategic Plan for 2006/2007 to 2008/2009, which reiterates key strategic issues already identified in the Ten Point Plan of the "Strategic Priorities for the Health Sector 2004-2009" policy framework (Department of Health, 2004g), and contains amongst its key activities the aim to "Strengthen implementation of the CHW programme and expand the mid-level worker programme" (Department of Health, 2006e, p.12). Furthermore, as set out in the CHW Policy Framework, the South African Qualifications Authority has developed registered qualifications and unit standards in the area of Community Health Work and Ancillary Health Care, which provide a standardised framework to train CHWs and Facilitators nationwide, while ensuring transferability of gualifications and the potential for career pathways (see Sections 5.3.2.4 and 5.3.3.3) (e.g. SAQA, 2007c;2007f;2007d; 2007g, in Appendix A3 & A4).

An essential component for the successful performance of a nationwide CHW programme is the existence of suitable "models for organisation, management and implementation" (Pick, 1995, p.94). Taking the lack of any nationwide implemented model into consideration, South African policy makers identified the CHW scheme of

KwaZulu-Natal as the most advanced in the country, with a comparatively long time of experience gained and positive results in programme expansion.

"A lot of this is based on the KZN model. Although some provinces have expressed that the KZN model is a very sophisticated model suited to their own environment and that it won't work in all provinces. However, the model is already adopted. It was adopted. That's why we are now developing the principles." (Manager, NDoH, 2004)

Thus, the shift in national policy towards a renewed focus on CHWs has increased the need for understanding the details of existing programmes, and especially of KwaZulu-Natal's CHW programme. Given that it was declared the main model – with its training and management structures used as a blueprint for the national expansion of the CHW programme, a closer look at the situation of the provincial CHW programme in KZN seems timely and useful and was therefore chosen as a core focus for this thesis.

"So, there is a whole underlying change coming up, which will force the whole Community Health Care Worker issue to get formalized and to get a structure that is not just in one province. Although the KZN structure is extremely powerful, we will have to come up with a model that we can take national." (Civil servant, NDoH, 2004)

In this context, it appears appropriate to examine and contextualise the actual programme structures as they emerge in KwaZulu-Natal. The generation of a detailed understanding of existing processes and structures may on the one hand serve the national roll-out, while at the other it may also offer the opportunity to identify province-specific merits and pitfalls. Thus, a greater awareness of the complex processes characterising the KZN programme may also give the opportunity to better deal with arising management issues. Furthermore, this evaluation also allows for an assessment of the extent to which the existing KwaZulu-Natal CHW programme can contribute to the response to HIV/AIDS and what areas need to be addressed in order to increase its success.

5 oNompilo in KwaZulu-Natal – a Case Study

5.1 Introduction

Historically, CHWs in the area of today's KZN province were not organised under one single umbrella. Like in the rest of the country, they were part of several programmes, which started their existence in different areas, promoted by different actors and at different points in time. Although the 'KZN CHW programme' is seen externally as a coherent model for South Africa, spatial and temporal variations are shaping local adaptations in KZN's different health districts and sub-districts. This manifests itself not only in variations in the stipend different CHWs receive (cf. Table 5.1), but also in details of their local organisation and management.

Table 5.1: Remuneration for various CHW categories in KZN (Bonga, 2007, conversions: JF)

Community Health Worker category	Monthly stipend
Part of the Ex-KwaZulu group	+ ZAR 2046.88 (≈ 145 GBP)
Contracted by the NGOs	ZAR 1448.00 (≈ 100 GBP)
Employed after August 2004	ZAR 1000.00 (≈ 70 GBP)

Two CHW managers indicate the continuing existence of variations based on the historically different backgrounds:

"Do you know, according to our background here – we were divided into Ex-KwaZulu – there were people from ex-KwaZulu government and there were people from ex-NPA. So, ex-KwaZulu, they had this programme for some time, for some years. So now, we have got two types of Community Health Workers." (CHWP manager A, 2004).

"There hasn't been a shift. We have still two systems of Community Health Worker: the ones who are paid by the hospital and the ones who are paid by the contractors – those who have a contract with the NGOs." (CHWP manager B, 2004)

These statements highlight the existence of different historic backgrounds even within health districts, which lead, for example, in the cases mentioned to variations in working hours and remuneration as well as in financial and managerial structures. Thus, while core actors like CHWs, Community Health Facilitators and Community Health Worker Supervisors seem to be consistent within the programme throughout the province, exact processes and structures seem open to local negotiations and interpretations, which are influenced by local histories and current individuals and power negotiations. Furthermore, the multiplication and parallel existence of management structures leads to a duplication and complication of management processes and thus increases the potential for inefficiencies and errors. This

complexity is not surprising, given the very diverse experiences of health care provision across the province, but it renders definition of a single KZN model difficult.

Nonetheless, the policy review and the interviews conducted in South Africa at the national level (cf. e.g. Section 4.2) strongly suggest that a specific perception of the KZN CHW scheme's modus operandi seems to exist, while preliminary investigations in KZN itself indicated that the implementation model is still seen as being 'in flux' with varying perceptions of different aspects of the programme. At the onset of this study, this was reflected by the non-existence of an officially-agreed organizational structure for the KZN CHW programme. However, people involved in the programme all appeared to have an understanding of that part of the programme structure that fell within their own area of activity, and an awareness of the related part of the chain of control.

Thus, a significant part of the earlier research efforts aimed to integrate the diverse range of experiences of the various CHW programme managers and stakeholders into a single conceptual model representing a consensus on KZN-specific CHW programme implementation. A consensus model was developed through an interactive process that is described in more detail in Section 5.2. There, the results of this process are presented as well. The model achieved embodies the key characteristics of the provincial programme on a generalised level as identified by the research participants.

In a second step, the development of a conceptual model of programme structure was complemented by a more detailed study of organizational practice focusing on the various identified role players involved in the CHW programme. In order to capture manifestations of the historic diversity and of local expressions of the CHW programme, interview partners were selected from three of the eleven health districts in KZN. Interviews were held in the health districts eThekwini, Amajuba and uThungulu (see Sections 5.1.1, 5.1.2 and 5.1.3), but also in the provincial Department of Health in Pietermaritzburg and the national Department in Pretoria. These interviews (cf. methodology described in Section 1.3) allowed for a detailed investigation of the various programme levels, including the specific tasks, selection and training processes of Community Health Workers (Section 5.3.2), Community Health Facilitators (Section 5.3.3), Community Health Worker Supervisors (Section 5.3.4) and others involved in the programme (Section 5.3.5). This process, on the one hand, allowed to confirm the developed programme model, but on the other hand also allowed to identify over-arching issues critical for programme success (see Chapter 6).

Thus, this chapter is not trying to reflect the formal structure and implementation of the programme as described by official publications, but to give an insight into local understandings of the situation in KZN. It is arguable that this *perceived* model represents a "reality" with greater meaning and practical relevance than a more formalised representation of the programme's intended structure and operation.

5.1.1 The eThekwini district

The majority of interviews regarding the CHW programme were conducted in the Outer West sub-district of the eThekwini district (see Figure 1.2), which is the metropolitan municipality of Durban. In 2006, eThekwini has had the third highest level of antenatal HIV prevalence (41.6%; CI: 39.5-43.6%) compared with other KZN health districts. Thus, the metropolitan area has one of the highest prevalence levels within the province and the country (Department of Health, 2007c).

In the Outer West sub-district, interviews were conducted in the Valley of 1000 Hills area, which used to be part of the KwaZulu homeland and is situated north of the highway connecting the two major towns of Durban and Pietermaritzburg. Despite its proximity to major urban centres, the Valley of 1000 Hills area is comparatively rural, and thus relatively deprived of service infrastructure. Some health services are provided by clinics, including a number established as part of the RDP clinic programme. The nearest Community Health Centre is in Pinetown, where already in 1998 42% of all the patients tested HIV-positive (Department of Health, 2001). However, for many people in the area, even existing health service facilities are still difficult to access due to a lack in transport infrastructure and the difficult terrain.



Figure 5.1: Difficult terrain in the Valley of 1000 Hills (Photo: Clark)

The Valley of 1000 Hills area is also serviced by one of the oldest South African NGOs, The Valley Trust. This, today, relatively large NGO has been active for more than fifty years and provided community services throughout the apartheid era. In order "to address inequalities and inaccessibility of health services" (The Valley Trust, 2005a) and based on its experience gained since the early 1950s, The Valley Trust set up a scheme in 1982, which trained local traditional healers and other volunteers to work as CHWs. A year later, this programme was taken on and expanded by the 'homeland' government of KwaZulu and continued actively until 1994.

The experience gained throughout the years with this relatively well-established programme and the size of the now region-wide active NGO doubtlessly contributed to the relatively central role, which the Valley Trust has been playing in the running of the KZN CHW programme until recently (The Valley Trust, 2007). Together with a second KZN-based NGO, Progressive Primary Health Care (PPHC), it was contracted to co-ordinate the provincial CHW programme shortly after the adoption of the KZN Community Health Worker policy in 1999 (The Valley Trust, 2005a). The area of its responsibility covered six health districts, including Amajuba, uThungulu and eThekwini. Therefore, the Valley Trust site was an ideal place to start the investigation into CHW coordination and management, because it gave the opportunity to hear the stories and learn from people with a long involvement in the CHW project.



Figure 5.2: Clients waiting at the Halley Stott Clinic in the Valley of 1000 Hills area in the Outer West sub-district, eThekwini (Photo: Fried)

5.1.2 The Amajuba district

However, as stated earlier, interviews in additional health districts were used to gain a broader perspective. Thus, the second area covered by the study is the Health District Amajuba situated in the north of KZN, sharing borders with the provinces of Mpumalanga and the Free State (see Figure 1.2). The central part of Amajuba lies within one of the old 'homeland' areas of KwaZulu, while the whole district has a mixture of rural, urban and township population. However, the urbanisation rate of 60% is higher than the KZN average. Nearly half of Amajuba's adult population is without a regular income – the district's official unemployment rate of 48% lies above the provincial average (41.9%). Meanwhile, the percentage of people living in poverty (56.8%) is similar to the average value for the whole of KZN. However, Amajuba has the highest antenatal clinic HIV prevalence within KZN and South Africa. In 2006, nearly every other pregnant woman tested (46.0%; CI: 41.1-50.9) was carrying the HI virus (Department of Health, 2007c). Figures like these really underline the need for investigating alternatives for local health sector response.

Inhabitants of the district receive public health services from three provincial hospitals and twenty seven fixed or mobile clinics. The local CHW programme is coordinated from the district capital, Newcastle. The interviews conducted revealed a slightly different historic background of the CHW programme in the Amajuba district compared to the Valley Trust area. Here, it was not a NGO but the ex-KwaZulu government which initiated the hospital-based CHW initiative. Today, still some oNompilo (*i.e.* CHWs; cf. Section 5.3.2.1) remain from this scheme, while there are other oNompilo employed and coordinated in accordance with the 1999 policy guidelines (CHW Programme Manager, interviewed June 2004).

5.1.3 The uThungulu District

A third area studied during the interview phase is situated in health district DC 28, called uThungulu. UThungulu is in the heartland of KwaZulu (see Figure 1.2). The majority of the nearly 900,000 predominantly isiZulu-speaking inhabitants live in rural areas, which is indicated by the very low urbanisation rate of 18.1%. Typical for such a rural and underdeveloped area, uThungulu has a very high level of unemployment - the official rate of 53.1 % is far higher than the provincial average. UThungulu's low urbanisation and employment levels, the high concentration of people living in traditional homesteads, and the low levels of water and sanitation provision are all signs of very high deprivation levels. According to Statistics SA, 63.7% of all inhabitants (67.4 of black Africans) in the district are living in poverty. Thus, uThungulu has the highest deprivation level of the three districts studied. However, compared with the other two health districts described above, uThungulu's antenatal HIV prevalence levels were five to ten percent lower, while still reaching a too high 34.6% (CI: 30.7-38.5%) in 2006 (Department of Health, 2007c).

Looking at the health service infrastructure in uThungulu, people receive health services from eight hospitals, forty four fixed and fourteen mobile clinics as well as six local authority clinics. In respect to the CHW programme, oNompilo (cf. Section 5.3.2), were already active in the area during Apartheid times, managed and supervised from the hospitals. However, the Senzakwenzeke Project, the specific programme about which information was gathered for this research, is a community-initiated programme with a focus on orphans and vulnerable children as well as home-based care. This programme was implemented in the area of Nkandla, a municipality in the heartland of KwaZulu with approximately 140,000 inhabitants. The actual area of activity is a pilot

area around Nkandla hospital, covering a population of approximately ten thousand people. In 1998, 50% of patients at Nkandla Hospital were tested HIV-positive, a value which is unlikely to have noticeably declined over the years (Department of Health, 2001). This figure also gives an indication of the scale of problems being faced by local health care workers when attempting to implement a successful response to the epidemic.

The dire local conditions became reasons for the initiation of the community-based programme, and are briefly described by the following words of an interviewee:

"As the community of Nkandla, we wondered what we are going to do. ... Nkandla is so isolated. It's the poverty, which is the problem. There is no employment, something like 80% of the people in Nkandla are not working. It is about 200km from the main industrial area, Richards Bay. So these are the problems we should set our selves, and there is the high number of HIV." (CBO representative, Nkandla, 2004)

Although this community project is not directly part of the formal provincial CHW programme, it provides a suitable addition to gain further understanding of locallybased problems and solutions. While this is not the main focus of the following discussion, it also offers some insights into the way in which local variants of healthcare delivery emerge. The project is furthermore working closely together with hospitalbased oNompilo, interacting on a regular basis on various issues concerning community activities. Thus, this site shows the potential role CHWs can play at community level and is therefore a suitable contribution to understanding local manifestations of the provincial programme.

The three described health districts (Amajuba, eThekwini, uThungulu) were selected for two primary reasons: on the one hand, links to key players in the programme could be established in all these districts (see Section 1.3); on the other hand, and at least equally important, the three selected districts offer a relatively diverse image of CHW programme implementation throughout the province. Thus, they offered the opportunity to develop a general understanding of the CHW programme structure of KZN, but also allowed to gain some insights into variations in local programme implementation. Table 5.2 below provides an overview of the current numbers of oNompilo in all KwaZulu-Natal health districts, while also giving some indication for the existing need of further training and expansion of the programme.

Health District	Posts Filled	Posts Approved	Vacancy Rate (%)	Number in post / 1.000 uninsured people
Ugu	317	317	0	0.6
uMgungundlovu	246	280	12	0.3
Uthukela	270	325	17	0.05
Umzinyathi	267	267	0	n.a.
Amajuba	198	323	38	n.a.
Zululand	579	579	0	0.72
Umkhanyakude	604	672	10	1.03
uThungulu	233	238	0.02	n.a.
iLembe	220	220	0	0.38
Sisonke	189	235	19.6	0.62
eThekwini	988	1119	11.71	0.38
KZN Province	4102 (4111)	4420 (4575)	7.2 (10.1)	n.a.

Table 5.2: KZN's CHW Statistics (Department of Health, 2006a, note: author's calculations in brackets)

5.2 Manifesting the governance structure

In order to manifest the CHW programme structure and to build a conceptual model of practice, the researchers chose an iterative and participatory approach agreed to by various stakeholders. As has been mentioned in the methodology section (Section 1.3), the part of the research presented in this section was a collaborative endeavour. Research was conducted throughout several visits to KZN in 2002, 2003 and 2004 in a combined effort by Prof. Mike Clark, Dr. Emma Treby and the thesis author. However, while some of the interim stages of the development came from fellow researchers, development of the authority implications of the thesis and the final presented model (Figure 5.5) was undertaken exclusively by the author of this thesis.

The selected research method is based on the Delphi method (cf. e.g. Helmer, 1977; Adler and Ziglio, 1996), which has originally been developed for technological forecasting. In the meantime, a multitude of applications have been developed, including "a wide range of health care applications" (Mullen, 2003, p.37). While there are numerous variations of this method, the use of an 'expert panel' is one of the key characteristics. Participants are separately questioned for their expert opinion on the selected, usually complex topic. In most cases, this is done in writing using structured or unstructured questionnaires. Their cumulative responses are summarised and then returned to the individual experts for further comment. This process is repeated either a predetermined number of times or until a predefined criteria (e.g. consensus is reached) has been fulfilled (Mullen, 2003).

This briefly described 'standard Delphi' approach has been slightly modified for the development of the conceptual CHW programme model. The main differences were the use of graphical and not only textual representations of the answer, and that the researchers were present during the development of the answer. This allowed additional questions where further clarification was needed. Further methodological details are outlined below:

Beginning with several consultations with CHW programme managers and other stakeholders, a first preliminary model of existing management structure was developed. During these first discussions, participants were asked to draw their perceptions showing the actors involved in the programme as well as their interactions – one example for this process is shown below in Figure 5.3.



Figure 5.3: First results of the consultation process (Photo: Clark)

Results of this first round of consultations were then converted into a digital graphical representation, which attempted to combine the knowledge and perceptions of various participants (Figure 5.4). The resulting organizational chart and information flow diagram were taken back to the participants and were adjusted and extended where additional information emerged.

This iterative consultation process was concluded throughout the third phase. Then, in order to achieve greater provincial coverage, stakeholders previously not involved in the development were presented with the model and asked to provide feedback. As direct comments to (and drawings on) the printed model (see Figure 5.4) showed, it was generally perceived to be an accurate presentation of the programme structure.



Figure 5.4: Results of the second consultation (Graphic: Mike Clark), with further marginal alterations suggested by interview partners during the third round of consultations

Alterations added at this stage mainly focused on a stronger representation of hierarchy and more details of programme structures at the district and provincial level. It has to be acknowledged, however, that a general "agreement" with a presented version of a structure representation by any particular individual could be a mask for a lack of knowledge rather than a genuine indication of assimilation and authorisation. Proposed modification, on the other hand, can more confidently be read as a sign of genuine engagement with the model. However, the organisation model was only used as one element within the often more than an hour long in-depth interviews conducted during this third stage. It was used to encourage an in-depth exploration of the interrelationships between various programme stakeholders, as perceived by the various interview partners and further explored in Section 5.3. The final result of this iterative process is introduced below (Figure 5.5).



Figure 5.5: Model of KZN's CHW programme governance structure

While, as mentioned earlier, this model may not represent the exact situation in all districts throughout KZN, the structure represents a consensus model as envisaged by stakeholders at all programme levels. The results of the iterative process described above furthermore established a framework that served as a guideline for the following detailed investigations into the KZN CHW programme.

5.3 The Community Health Worker programme actors

5.3.1 Introduction

Go to the People. Live with the People, Learn from the People. Plan with the People. Work with the People. Start with what they know, Build on what they have. Teach by showing, learn by doing. Not a showcase, but a pattern. Not piecemeal, but integrated. Not odds and ends, but a system. Not to conform, but to transform. Not relief, but release. JIMMY YEN (cit. in Taylor-Ide and Taylor, 2002, p.92)

This section provides an evaluation of the KZN CHW programme's current scope of activity and thus offers a basis on which to assess its potential to contribute to the province's HIV/AIDS response. In particular, the following section aims to reflect the local understanding of the CHW programme. Based on the interviews from the different areas described in Section 5.1.1, it specifies the roles of and interactions between the various programme actors at local level and highlights areas which are considered problematic by participants. Results are summarized and discussed in an effort to provided answers to the following questions:

- **%** Who are CHWs in KZN?
- X What are the tasks of CHWs, in general and in relation to the HIV/AIDS epidemic?
- **%** How are CHWs selected?
- **%** What training do they receive?
- **%** Which key players are involved in programme management?
- **%** What are the tasks and the selection and training requirements for other role players within the KZN programme?
- **X** What are the management and reporting lines?
- **X** Which issues and problems have emerged?

The programme description introduces the various CHW programme role players separately, in order to systematise the information gathered during fieldwork. Although an attempt is made to provide specific information on each actor in the relevant subchapter, the linkages, cooperation and supervision lines naturally imply that certain processes are relevant for more than one level. Hence, linkages are acknowledged by cross-referencing and by providing a discussion of cross-cutting issues in the last chapter of this thesis.

Methodologically, the following description of the different aspect's of CHW programme role players is based on the interviews, in which people have described their opinion and perception of how the programme is functioning and what various role players' tasks are within the programme (also cf. Section 1.3). This includes role players describing their own role within the programme as well as presenting what they perceive other members' involvement to be. As such, the following analysis relies on participants' descriptions of the programme components, and not, for example, on intense participant observation. Thus, the section on CHWs' tasks is based on the description of expectations and perceptions by Facilitators, other managers and CHWs themselves. These interview results were supplemented by programme internal documents and evaluation reports.

This methodological approach has some limitations, which were discussed in Section 1.3. However, the aim of the following discussion was to give a voice to the CHW programme role players, especially its managers, to understand their view on the potential role CHWs can play in expanding health care as well as in addressing HIV/AIDS.

5.3.2 Community Health Worker / uNompilo

5.3.2.1 Introduction



In 2006, approximately 4.000 CHWs were working in KwaZulu-Natal (cf. Table 5.2). In this province, CHWs are also commonly referred to with the Zulu word *oNompilo* (Plural), a term which is increasingly used throughout South Africa. In the interviews, both 'Community Health Workers' and 'oNompilo' (or Singular *uNompilo*) have been used synonymously in the English narratives by people involved with the programme. Thus, the same principle is applied in this thesis, where both terms have been used interchangeably. However, it is the English title, whose components will be subjected below to some closer analysis of their meanings in the context of the KZN programme.

Community Health Workers, as the name implies, are people working on health issues in communities. Despite 'community', 'health' and 'worker' being part of our everyday language, it is helpful to investigate their specific meanings in the programme's context in order to gain some first insights into the programme and the role of CHWs. Thus, all three terms will be deliberated below. It needs to be noted that interview participants were not specifically asked what *community*, *health* and *worker* mean to them and thus the deliberations below are not based on responses to an explicit prompting of programme role players. However, it is based on local policy documents and the usage of the terms and its implicit meanings by interview partners.

The term deemed to require the most detailed analysis, and the one which distinguishes CHWs most clearly from other people within the health service sector is 'community'. As identified by a number of interview partners in KZN, the emphasis on *community* is based on three aspects: CHWs are ideally *from* the community, selected *by* the community (cf. Section 5.3.2.3) and working *for* the community. But while *community* is at the very heart of the programme, there does not seem to exist a definition of the term in the provincial CHW policy. At the same time, the way in which

interview partners in KZN use the term reveals a presumed intuitive understanding of its meaning. This is in accordance with observations by Wayland and Crowder (2002, p.230) in the general context of Primary Health Care, who state: "Few health care providers and program administrators, however, have considered the meaning of community. Instead, they frequently impose their own definition of community and assume that it corresponds to local realities."

Although health care providers and even policy makers in KZN and elsewhere appear to see no need for further clarification of the term – even in the WHO Health for All policy it is only indirectly defined – 'community' has been intensely debated in the social sciences as well as health research literature (cf. Jewkes and Murcott, 1996 for a detailed overview). There is a general agreement that community is a term which can take on various meanings, depending on the context and the people involved in defining it. For example, already a study by Hillery (1955) found a multitude of opinions of what constitutes a community. He concluded that the 94 different definitions he analysed only had in common that a "community consists of persons in social interaction within a geographic area and having one or more additional common ties" (Hillery, 1955, p.111).

Others acknowledge that the term is commonly used even more loosely and that it does not necessarily include a spatial component. In their book on a community-driven approach to change, Taylor-Ide and Taylor (2002, p.18f) write:

"Community, as we use the term, is any group that has something in common and the potential for acting together. Usually community consist of people who live in a geographic region and interact as a cohesive social unit. But there are other communities – unions, religious groups, ethnic alliances, and the like – that can also be collectively organize to change. Most people are members of multiple communities. A defining characteristic is that a community functions best if it is small enough that people know one another, or about one another, and can organize for joint action."

In South Africa, equally, various authors have come up with similar definitions of what constitutes a community. Harber (1998, p.24) quotes the South African Council for Social Work's (1994) definition describing community as "a collection of people living within a geographical area engaged in social interaction among themselves and having psychological ties with one another and the place in which they live."

A slightly more specific definition is put forward by South African Management Institute and Human Sciences Research Council, South Africa (2005, p.56) for their evaluation of the national Community Development Worker programme. They write that for the purpose of their review, "Communities are defined as all the people considered as members of households in a specific municipal ward". They also acknowledge that communities are characterised by

- **%** "Geographical and social boundaries,
- **£** Leadership and decision-making processes (and that they)
- \$ consist(...) of different groups (based on criteria of interest, social, socioeconomic, etc.)" (South African Management Development Institute and Health Sciences Research Council, 2005, p.56)

Returning to the context of the KZN CHW programme, as mentioned above no such official definition exists. However, the day-to-day management and implementation of the programme does reveal a number of factors which appear to be part of the implicit assumptions about *community*. These include assumptions made on the spatial extent, the social cohesion and the political organisation of communities. These assumptions are important for the way in which the programme is organised and implemented.

For example, the spatial allocation of Community Health Facilitators and CHWs based on clinic and other health facility catchment areas implicitly assumes that *communities* are defined by similar spatial boundaries. Furthermore, the notion that CHW should be members of the *community* is operationalised as living in close proximity to the households the CHW is visiting. It is believed that neighbours are all part of a *community*, assumed to entail a significant level of social cohesion. Thus, ensuring CHWs are part of the *community* is intended not only to guarantee the same language and cultural background, but also to promise a feeling of trust, shared experiences and problems and thus a common interest in issues like health. Finally, it is assumed that there is a sufficient level of, or potential for, political organisation in general and around health in particular, to allow for the election of a CHW presumably trusted and supported by all or at least by the majority of the community (see Section 5.3.2.3).

As stated above, these are notions not widely questioned in the context of the KZN CHW programme. However, as shown by Wayland and Crowder (2002) in the context of Brazil and Bolivia and by Jewkes and Murcott (1998) in the UK, inconsistencies between simplified or romanticized assumptions on *community* by programme implementers and the reality of people targeted can be detrimental to programme success. Thus, there is a need to carefully consider local conditions, safeguarding against the assumption that meaningful community involvement is guaranteed through the employment of locally residing individuals. This should be kept in mind and is especially important in the South African context, where the effects of Apartheid (e.g. forced resettlements), migration, political struggles and poverty has diminished existing

levels of social cohesion in 'traditional' communities or tribal structures (cf. e.g. Russel and Schneider, 2000a).

The second term which needs some illumination in the context of the programme under consideration is *health*. While *community* is relevant for characterising the context of oNompilo's activities, *i.e.*, with whom and for whom oNompilo work, *health* indicates their main concern and content of activity. As the name implies, CHWs are involved with the health of the community they work in. Thus, while the term *health* is not or only vaguely defined in CHW policy, KZN programme actors' concept of *health* in the context of the CHW scheme can be illustrated by taking a look at their perception of what entails CHWs' scope of activities and training.

While this is done in greater detail in the following sub-chapters (cf. Sections 5.3.2.2 and 5.3.2.4), here CHWs are briefly compared to other community-based workers. For example, in contrast to home-or community-based care workers, CHWs are not solely care takers for those who have fallen ill. Inspired by the WHO definition of health and based on the PHC approach (cf. Section 4.1), health in the context of the CHW programme acknowledges the wide range of factors influencing the welfare of people. It translates into a very broad field of CHW activities relevant to the well-being of community and household members. Thus, whilst care for the elderly, disabled and bed-ridden is part of their work, it also potentially includes a wide range of householdand community-based activities concerned with disease prevention, behavioural change, nutrition and food production, environmental health, and income generation. However, it can be noted that CHWs' activities are still predominantly centred on projects related directly to the physical well-being of individuals, and are less focused on broad aspects of socio-economic community development. This for example distinguishes them slightly from the philosophy behind South Africa's Community Development Workers (CDWs), who are trained "to facilitate and enable communities to participate in a process of need identification, taking decisions regarding planning, implementing and evaluating programmes aimed to improve their lives" (dplg, 2004; guoted in South African Management Development Institute and Health Sciences Research Council, 2005, p.58). Furthermore, while CDWs are expected to cooperate closely with a wide range of government spheres and departments, CHWs' main contacts are within the social cluster (*i.e.* education, health, social development) with a dominant focus on the health sector.

In this context, the term *worker* also becomes of interest since it allows us to reflect on several aspects of the CHWs' employment status and position within the programme.

First of all, CHWs are the ones "doing the work" - delivering services on the ground. While traditionally many South African oNompilo have worked as volunteers, the majority of oNompilo currently receive a small monthly stipend. The exact amount they receive depends on the specific conditions they are employed under (cf. Table 5.1). As indicated earlier (Section 5.1), there are still slight differences in the organisation of CHWs, depending on whether they were originally employed by the ex-KwaZulu homeland government or by the new provincial government and whether the later employment commenced before or after August 2004. Some of the CHWs are supervised by Community Health Facilitators based at hospitals, others at PHC clinics or even provincial NGOs. Nonetheless, it is intended that all KZN oNompilo receive an identical contract, overcoming these differences in remuneration and management. The common framework for CHWs employment aims to have local CBOs signing contracts with their respective CHWs, while the budget needed to pay their monthly stipends would come from the Department of Health. However, as will be discussed in more detail later (Section 5.3.5.1), the transferral of (financial) responsibility to community level is a slow process, which has led to a relatively long-running interim solution utilising the capacities of two bigger provincial NGOs.

In summary, it needs to be noted that all oNompilo in KZN are expected to collaborate closely with their community-based supervisor as well as their respective Community Health Facilitator. Thus, as workers at the interface between community and the public health sector, oNompilo are in a position which is both promising and highly ambiguous.

While they are expected to be accountable to the community, their stipend, ultimately, is financed by the Department of Health. The complexity of this position between service deliverers and supposedly engaged service receivers has an impact on management structures as well as on issues related to accountability and loyalty. More light will be shed on these topics throughout the following introduction of CHWs, Community Health Facilitators and Community Health Supervisors, and others, and in the subsequent discussion of emerging issues in Chapter 6.

5.3.2.2 The role of oNompilo

This section explores the range of duties CHWs are expected to perform in their communities. It will provide an introduction to their workload, followed by a description of their tasks. Again, it needs to be emphasized that this is a description of tasks

oNompilo do perform according to the narratives of local programme actors. It is not an in-depth evaluation of the frequency, quality or effectiveness of the services provided, but rather an investigation of the potential for the role a successfully implemented programme can play, especially in HIV support. Nonetheless, where available from local reports (e.g. Kvalsvig *et al.* (2002)), some details describing the extent and success of specific programme components will be included. However, no longitudinal community survey has been conducted in the area and this was also beyond the scope of this study. Nonetheless, the following programme description will be complemented in Chapter 6.3, where a closer look is taken at programme implementation and the success in providing the described CHW services in the context of the HIV/AIDS epidemic.

ONompilo work either four or five days per week, depending on the scheme they have been originally employed under (see Section 5.1 and Table 5.1). According to the interview participants, CHWs' scope of activities ranges from household- to community-based activities and also includes regular interaction with community organisation and health services institutions. The specific mixture of tasks oNompilo perform is, among other factors, influenced by the training they receive, the resources they have access to and the expectations of the community they serve (see Sections 5.3.2.4 and 5.3.4).

As will be outlined in detail below, several of the programme's stakeholders interviewed throughout KZN emphasised CHWs' role as health promoters and as an important link of health care services to the communities, where they contribute to preventive and curative primary health care provision. A major part of CHWs' services are delivered during individual household visits. ONompilo are allocated to a specific number of households, which are ideally part of the community they live in (cf. Section 5.3.2.3). The number of households each CHW is responsible for depends on the type of settlement, *i.e.* the density of dwellings in each uNompilo's catchment area. According to the interviewed programme managers, the average number of households allocated per CHW and the number which is being used for planning purposes is one hundred. However, the actual number assigned varies substantially, as indicated by this CHW Programme manager:

"In a deep rural area, they do about eighty. It could be less, because there they travel long distances. And in an area which is like this, peri-urban, one hundred is fine. Then, in an informal settlement, where people are living in these shacks, they could do anything from one hundred and fifty to two hundred, because the houses are close to each other. (...) So it depends on the distance they have to travel. So, hundred is relatively okay. It is even more than what they can manage (CHW manager, 2004)."

Thus, the average number of households actually visited by a CHW on a regular basis varies greatly; and often is below their allocated number. In some cases, an uNompilo

is the only person delivering time-consuming home-based care for numerous individuals (cf. below), which drastically reduces their ability to cover the expected number of households. Here, the impact of the HIV/AIDS epidemic on the number of bed-ridden patients needs to be taken into consideration. For example, one CHW reported visiting only two households, but those daily (Anonymous, 2004). So the frequency of household visits is strongly influenced by the distance between households, the total number of households allocated to each worker and by the specific work requirements and acceptance in different households.

"Ja, they are accepted. Except for a few houses where they don't need them. But in general, they are well accepted. And if they are not accepted, it is good, because then there is less, they can do other households. Like if there is no need, even with the other households they are up to one hundred. If in one household they rarely need them, maybe they visit them once a month or so."

It is also influenced by the introduction of specific programmes or the emergence of urgent health problems (see below). Also relevant is the actual time available to oNompilo to conduct home visits, which is for example limited by the time spent on training and meetings related to their work (e.g. with facilitator, supervisor, clinic staff and/or Community Health Committee, see below).

As mentioned above, oNompilo's scope of work comprises both household and community-based activities. While community-based activities are mainly aimed at promoting health and preventing diseases, household-level tasks often also involve curative aspects. Community-based activities conducted by individual oNompilo vary widely and range from initiating the establishment of community or household-based gardens ("door-sized gardens") to promoting support groups for breastfeeding mothers, disabled people or HIV/AIDS affected people. Local programme actors also highlighted oNompilo's role in environmental health promotion through monitoring local conditions (sanitation, water access, and waste disposal), raising awareness on related topics, initiating local responses (e.g. toilet building and borehole projects) and notifying the responsible environmental health officer if specific environmental issues arise. Giving a detailed account of a case study from Hlabisa sub-district in Umkhanyakude (see Figure 1.2), Scrace (2006) emphasises that CHWs showed great initiative after a recent cholera outbreak by setting up water and sanitation committees within the affected communities.



Figure 5.6: CHWs initiate various projects in their communities. This project helps generating income by sewing and selling school uniforms to local schools. (Photo: The Valley Trust, 2004, p.16)

Furthermore, oNompilo are frequently involved in income-generating activities in their communities. In the various districts, a number of CHWs have either initialised or are running projects like beadwork, poultry, sewing, gardening, goat farming, candle or brick making. Other CHWs dedicate a substantial amount of time in committees dealing with water projects, toilets building or boreholes. While there appear to be no detailed investigations on the sustainability of these projects, in a 2002 study CHWs and Facilitators reported about positive feedback from the communities (Kvalsvig *et al.*, 2002).

Thus, the implementation of community-based programmes is potentially an area where oNompilo can have a strong long-term impact in their communities. By improving health through decreased levels of poverty, they can utilise their potential to become 'agents of development'. Furthermore, the successful initiation of community-based projects can increase the respect and appreciation CHWs receive from their communities (Kvalsvig *et al.*, 2002). However, wider support structures will be fundamental to ensure long-term sustainability of such programmes, especially when taking the effects of the HIV/AIDS epidemic on CHWs themselves into account. In this endeavour, CHWs may be aided by Community Development Workers – once this

programme has been implemented throughout the province (South African Management Development Institute and Health Sciences Research Council, 2005). Despite this potentially forthcoming support and local successes achieved, at the time of this research, the stronger focus of CHWs' work appeared to be their role as "extenders of health services (...) to previously neglected areas" (Walt, 1990, p.28). And though while the literature on CHW programmes often highlights CHWs' potential to act as "change agents" (*ibid.*), this notion has interestingly not been put forward directly by any of the people interviewed in KZN.

While community-based activities are one way oNompilo can contribute to health improvements, most of their work is done during household visits.

"I think for me the easiest way of defining a Community Health Worker is someone who is working within the community at the home level. We talk about home-based care, but some people think that is just turning people, and washing people and cleaning people. That's not all. Let's say it is care at home-level, be it health promotion, DOTS, or palliative care, and whatever in between. So that the idea would be to have someone working at that level who is connecting people to services." (NDoH manager, 2004)

During household visits, CHWs' tasks include general health promotion like raising awareness on the importance of hygiene and nutritious food; disease- and life-stage specific health education including sexual health; and basic curative and home-based care tasks. A Community Health Facilitator describes some of the tasks of oNompilo in the following way:

"The work of Community Health Workers involves the check of the immunisation status, primary health care tasks and in the future also the collection of data for the district health system. Community Health Workers are responsible for health promotion; they take care, inform and teach about care taking, for example for people suffering from AIDS. They also need to check community members' 'Road to Health' card. Community Health Workers basically provide an addition to the work of nurses." (CHW Facilitator, transcribed from notes taken during interview, 2002)

Health District	n	'Road to Health' Cards	District percentage
Ugu	20	15	75
uThungulu	15	15	100
Umkhanyakude	18	15	83
Zululand/Amajuba	17	12	71
Uthukela	13	12	92
eThekwini	14	12	86
uMgungundlovu	15	14	93
Total	112	95	85

Table 5.3: Households wit	n 'Road to F	Health' Cards in	KZN (Kvalsvig et	al., 2002, p.47)
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CHWs raise awareness about various health related issues ranging from vaccinations, the importance of antenatal clinic visits for pregnant women to the promotion of the

ABC message (cf. Section 2.5.1.1). An indication of CHW effectiveness is given by Table 5.3, which shows the percentage of households in various districts in KZN, who according to a small sample in 2002 had a 'Road to Health' Card in their households. These cards are important monitoring tools, which should help CHWs for example to control the growth rate and immunisation coverage of children. The unequal coverage in the districts gives an indication of potentials for improvements in CHWs work (also see Section 5.3.3.1 on supervision). CHWs give advice on breast-feeding and immunisation campaigns; teach parents the preparation of oral rehydration solutions to combat the effects of diarrhoea in children; and emphasise the need for chronically ill patients to take their medication on a regular basis. Some oNompilo have also been trained in Integrated Management of Childhood Illnesses. A clinic manager explains why they work closely together with CHW on health promotion:

"With the health promotion events, we work with them because, you know, they are more familiar with the community and with the situation, where they are living." (PHC Manager, 2004)

A CHW programme manager emphasises the scope of activities expected from oNompilo. These activities require high flexibility and, as mentioned previously, range from health education and health related community development to basic health care:

"Their job description is quite flexible. They do give health education. We encourage Community Health Worker projects like gardens. They go to the people who have got ill, people who are sick." (CHW programme manager A, 2004)

The same manager continues, highlighting the programme's potential in responding to health emergencies:

"If there is an outbreak for any condition, then we brief them as well. That is why I am saying they are very flexible. Because like for instance if there is cholera somewhere, the best people that we can think of are the Community Health Workers. And the facilitator of that area. It is very important that each facilitator is there, so that she can be the link between the Community Health Workers and us." (CHW programme manager A, 2004)

This quotation above provides a first indication for the importance of a functioning management network (cf. also remainder of Section 5.3) to enable a rapid and effective response. The success of an expanded CHW programme is strongly dependent on successful management and supervision, an issue which will be examined in more detail in later sections of this chapter.

Especially since the introduction of support and training for a separate category of home-based care workers in KZN (see below), the provision of care is not the main objective of the provincial CHW programme. However, increasingly due to the impacts of the AIDS epidemic, a significant amount of CHWs' time is spent in households with bed-ridden and terminally ill people:

"What we encourage mostly in these cases is that they go and help. But they must leach the members of the families how to care for that person. However, it comes to the extent that sometimes they do the bathing." (CHW programme manager A, 2004)

A similar understanding is being emphasised by another programme manager:

"Because the Community Health Worker is a health promotion person, she is meant to impart the knowledge and not to be serving the families, not to be serving the families in doing things. (...) She would train whoever is in the house, be it a granny, be it a father, be it a mother, to look after the people affected and infected." (CHW programme manager B, 2004)

A third, district-based manager confirms the major role CHW play in prevention and health promotion. When asked about the extent to which CHW actually provided home-based care, the role of CHWs is described in the following way:

"They are taught how to do things, for example, if someone is homebound. But they learn all the things about health and development. If, let's say, my mother is having a stroke and the community health worker is coming to my house, the Community Health Worker should be able to transfer the skills to us as a family. That is a big responsibility. So they are taught in a way that they know how to do things hands on. But their role is to enable the family or the care giver to be able to take care of his or her family member themselves. Except in very rare cases, when there is no one around, and there is nothing that can be done, (...) then they would ask the Community Health Worker for help." (CHW programme manager C, 2004)



Figure 5.7: A CHW supports a family caregiver in the provision of home-based care (Photo: The Valley Trust, 2004, p.16)

However, while different KZN programme managers from various levels and health districts agree on the main purpose of CHWs' household visits, they also concede that

in reality oNompilo often end up taking on a major role in home-based care provision. In some cases, this has an impact on providing other services. Talking about the daily routine of oNompilo, a programme manager outlines issues impacting on the number of households visited per day:

"It depends on what the situation is. If that one needs a bath and assistance in this and that and that, then they are stuck in that house, unless there are home-based carers who can take care. But if there are none, the oNompilo are supposed to train the families to be able to do that. It is not only about HIV, there is old age; there are chronic diseases like stroke, and diabetes with the amputations or blindness, everything that is chronic. They have to make sure that their medication is collected and taken. They have a lot of responsibilities." (CHW programme manager B, 2004)

As is indicated here, the need to provide care is especially high in areas without homebased care workers. In the context of the HIV/AIDS epidemic, the national government introduced a Presidential Programme for Home-Based Care Givers as part of the Expanded Public Work Programme (National DoH manager, 2004). Subsequently, in KZN the provincial DoH and several NGOs have increased the training of home-based care workers, who are local volunteers usually equipped with a basic care kit containing essentials like gloves and soap.

"At the present moment, there is this package they get from the AIDS Action Unit. There is a bag which is ready to go, there is some soap, some Vaseline, some (...) lotion. They go, they load that bag and go to those families. They help them with whatever they need, it can be anything. They teach the member of the family and also help personally to help the particular member of the family." (CHWP manager A, 2004)

However, while the AIDS Action Unit of KZN recorded more than 5000 volunteers alone who had completed the departmental training course by 2002 (KZN AIDS Action Unit, 2002), their spatial coverage and programme effectiveness still varies greatly (Russel and Schneider, 2000b; Uys and Cameron, 2003). As a consequence, CHW also often provide basic care for patients without anybody able or willing to take care. This in turn has also an impact on the frequency in which households without special home-based care needs are visited.

Another issue arising in the context of care provision is the fact that CHWs' equipment with appropriate basic care utilities varies greatly and often depends on the support they receive from their local clinics or hospitals. While a lack of essentials like gloves and first aid kits can endanger CHWs' health and safety, it also decreases their effectiveness and acceptability to households visited. The latter becomes especially relevant in those areas where home-based carers with basic care kits are active. Asked, if home-based carers and oNompilo collaborate, a CHW programme manager replies:

"They clash in fact. Because, what has been happening is that the Department of Health has been given these home-based carers bags, a care kit with gloves and stuff – whereas the Community Health Workers who are employed by the NGOs and the ones who are ex-KwaZulu are not given working material." (CHWP Manager B, 2004)

Therefore, basic support structures (see sections below) and careful co-ordination of the work of CHWs themselves, but also with other potential health care actors (e.g. home-based care providers) is critical.

As will become apparent in more detail later on, CHW are expected to plan their work independently and without any daily interaction with their Community Health Facilitator. However, they are expected to consult on a day-to-day basis with the local Community Health Supervisor, with whom they discuss their daily work schedule (cf. Section 5.3.4). Thus, estimating the frequency of household visits, one manager describes:

"It depends. They have their own plans. They will know what the problems are in each household. Which ones must be visited daily, like the people that are on TB treatment. Because they are supporting them, they must ensure that they really take the medicine. So they go every day, they see them on a day to day basis. Whereas, if someone is hypertensive, and it is just to encourage the person to take all the medication and talk about what things to eat, then that can be done at a less frequent rate." (CHW programme manager C, 2004)

This statement also highlights the role oNompilo play as DOTS supporters (cf. Section 2.5.2.1). In 2002, CHWs throughout the province had an average of two to three clients on TB treatment at any given time, with their case load varying between one and thirty DOTS clients (Kvalsvig *et al.*, 2002). An excerpt of one Community Health Facilitator's journal summarises the involvement of local oNompilo within the TB-DOTS programme during one month (see Figure 5.8). It also highlights the importance of community-based support in order to identify and potentially deal with issues like the indicated lack of food as reason for failing to finish the prescribed treatment. However, the severe clinic-internal issues indicated in the report are beyond the scope of CHWs.

Apart from the direct treatment support, CHWs are also trained in recognising certain specific disease symptoms, including TB (which is increasingly linked to the HIV/AIDS epidemic; see Section 2.2.3.2):

"It is very important. For instance, we recommend that if a Community Health Worker goes to a family and finds a person that has been coughing for more than two weeks, then they should encourage that person to take a sputum sample. (...) Sometimes they say that the person must go to the clinic to cough. If they can make their way up there – depends if the patient can come to the clinic or not. If the person does not come, then they actually take the bottles from the clinic to that particular family, for that person to cough. And then they take the sputum back to the clinic. And this is why they have access to the transport, the transport in our district which is going around transporting everything." (CHW programme manager A, 2004)

The identification of possible TB patients is just one example which emphasises the importance of oNompilo as links between communities and the local health care institutions.

KEY PERFOMANCE PREA FOLUS PROGRAMMES T.B. AND DOTS PROGRAMME NO. OF PATIENTS ON TREATMENT ; 73 NO. OF PATIENTS COMPLETES TREATMENT : 29 DEFAULTERS TRACES AND REFERRED TO CLINIC | ADMITTED TO HOSPITAL; 30

SOME OF THE RESSON OF THESE SEFAULTERS THE NGLOSI CLINIC IS NOT FUNCTIONING PROPERLY THIS MONTH, THERE WAS NO CLINIC STAFF THE PATIENTS WENT BACK HOME WITHOUT THEIR TREATMENTS. SOME OF THE PATIENTS COULDN'T FETCH THEIR TREATMENT BELGUSE OF FINANCIAL PROBLEMS TWO PATIENTS HAD RAM AWAY FROM HOSPITAL THE OTHER REASON OF THESE DEFAULTERS IS THAT THEY DON'T MAYE FOOD, SO THEY CANNOT TAKE THEIR TREATMENT PROMERLY.

Figure 5.8: Extract (1) of a CH Facilitator's monthly journal reporting back on CHW performance (Photo: Clark)

The expansion of access to HIV/AIDS-related services as intended by the Operational Plan (see Section 3.3) is another area, where the CHW programme has a similar potential. In general, a functioning network between the CHWs and their local clinic is beneficial for both sides:

"And at the same time, even another thing that Community Health Workers do is that they go to their clinic. If they get a problem in the community where they are working, then they inform the clinic. They are also going to the clinic to find out if there are new problems that are occurring in the clinic. If there are problems that they have identified in the clinic, then the person who is the link between the clinic and the community there is the Community Health Worker. They do a lot of work." (CHW programme manager A, 2004)

ONompilo's important role in extending the reach of the public health service sector into local communities is also acknowledged by clinic staff:

"The Community Health Workers are the first point of contact with our clients and with the community, because they are from that community. We are working together with them, because if they find that there are people in the community that need to be referred to the clinic, they refer them to the clinic." (PHC Manager, 2004)

In some districts, clinics provide CHW with referral forms, in others they did not exist at the time of this research. Also, the rate and correctness of the use of these forms varies markedly.

"There is a note that they write. And sometimes, most of the time they go directly to the clinic to talk to the PHC supervisor. I've got this problem. I have identified this and this problem. And we encourage that they must go to the clinic to get the problem there and go back to the community." (CHWP manager A, 2004)

"If they find there are people in the community that need to be referred to the clinic, they refer to the clinic. There is a form. But sometimes they don't use it. But there are forms that were made. We developed a form together with them which they were going to use. But sometimes we find that they don't use that form. I don't know why. It's not always the same, but sometimes they do use the form." (PHC Manager. 2004)

At the time of this research, the implementation of the Operational Plan, that also includes an ARV component, was still in its early stages. Nonetheless, CHW stakeholders were asked how they perceived the future role of CHWs in respect to HIV/AIDS and specifically in the context of the Operational Plan:

"The Community, at the present moment, the people like HIV/AIDS Unit or co-ordinators, they are getting training. And those people are going to be, when we get the treatment, they will be send back to the community. And the people who are involved and who are directly involved with communities are the Community Health Workers. They are going to have a very big role in the treatment." (CHWP manager A, 2004)

Another manager asked about CHWs' role in regards to the programme was more

cautious:

"Maybe they will, what they are going to do is, maybe, according to my observations and my obligations, is that they are going to make the full ART." (CBP manager, 2004)

Another said:

"Yes, it is very important. Like for instance I said to you, each and everything that we want to introduce to the community, we do involve the Community Health Workers, even for that one. As soon as people are trained, the Community Health Workers are going to be the people, who are going to be trained and they are going to be directly involved with that programme." (CHWP manager C, 2004)

One manager also emphasises the importance of oNompilo, but also pointed to still

existing organizational difficulties:

"And the link between the hospitals or clinics and Community Health Workers is still very wishy, washy. We are not sure where they should be linked to at the community level. Especially when it comes to things that need Community Health Worker at the clinic level, like the tracing of the TB defaulters, there is a new programme on PMTCT, which needs somebody to go and follow up a mother who has been settled on a program for PMTCT at a homestead and then feedback it to the facility: OK, she is feeding the baby properly, maintaining the instructions given when she started the program. (CHWP manager B, 2004)

Apart from, ideally, strengthening the relationship between communities and health care services, oNompilo are also supportive in establishing links to other social sector service providers. In their training (see below), oNompilo learn about disability and welfare grants and the need for birth certificates and IDs. The aim here is to enable
them to give advice on child support, foster care grants and other social grants and point potential clients to the right services. CHWs also provide assistance to the elderly during long waiting hours on pay days. Furthermore, CHWs check on the "performance" of foster mothers, control if (foster) children go on a regular basis to school and generally assist with the care for these children (Weekly CHW meeting, 2004; CBO Committee member, 2004). The role of oNompilo in linking community members to various social services has also been highlighted by managers at the national Department of Health:

"When I look at the role of the Community Health Worker, then it is in terms of connecting the community to services. So it is not just how can we reach the patient in the house, it is also to connect the community to the services, and in particular to a sort of continuous service at that level. So you would have a block or a section in a community, and they would know who the Community Health Worker is. And if they needed to know more about a child support grant, they would go to that person's home. 'My cousin from the Eastern Cape has just joined us and she has got a small child.' That kind of situation. So the idea would be to connect to services. We got wonderful services available, but very often people can not access them. The child has not been registered, there is no birth certificate, no ID book, there is nothing." "The idea is to get the Community Health Worker to know how to connect people to services. So she might be based in a clinic, but she got the knowledge and skills to connect to all the services in that community. And, for example Social Development and Health and Education are all in one cluster, so, technically speaking, there should be coordination because we should be having a crosscutting initiative." (Managers, NDoH, 2004)

As indicated above, a final important part of CHWs' routine work is the collection of household and community-level data. A more detailed discussion of issues related to data collection and management within the CHW programme can be found in Section 6.2.4.

5.3.2.3 Selection process of oNompilo

Despite the programme's already-achieved expansion in KZN, the selection of new oNompilo continues to be important for the future of the Province's programme for two reasons. Firstly, the programme is still further expanding and thus new posts are being created. While the political aim is to achieve a more or less complete CHW coverage especially in rural areas, this is a slow and ongoing process (cf. Table 5.2, p. 158). A provincial manager interviewed in 2002 stated:

"At the moment, an estimated 4.300 Community Health Workers are working in KZN, of which 2.600 were appointed through NGOs and approximately 1.000 through hospitals. One of the aims of the programme is to bring Community Health Workers to the same level in all the districts of KZN, in terms of coverage as well as in terms of their qualification." (CHWP manager, 2002)

As Table 5.2 indicates, this process had not been completed by 2006. Therefore, district-based CHW programme managers also have to make difficult decisions when allocating newly created posts:

"We don't have enough Community Health Workers. But what happened in our district, since we don't have enough Community Health Workers, we did not allocate new Community Health Workers into the townships. We only have a few there. When we started to allocated new workers, we felt the need for the Community Health Worker programme to definitely look into that. But we don't have enough for all locations. And another hope that we had is that in the townships, we had about three clinics. It's unlike our other areas where there are no clinics and they depend only on the mobile clinics. That is how we prioritized to allocate the Community Health Workers. Where there are no Community Health Workers us and no clinic, where there are only mobile points, those, we said, are the areas we allocate Community Health Workers to. (...) Not that we have completely forgotten about the townships. We are expecting to get some more Community Health Workers, and then we shall deploy them even in those locations." (CHWP manager A, 2004)

This statement also underlines the need for CHWs, who, although they are not seen as replacing facility-based services, in reality often become the first (and often only) mechanism for people to access any kind of public health services.

Secondly, there is also a noticeable fluctuation in existing posts due to high geographical and job migration as well as morbidity and mortality levels, including the effects of the HIV/AIDS epidemic.

"You know, we are having a problem. They resign, they die, things like that. At the present moment we have got roughly about hundred and seventy four. Because like for instance yesterday, I got a message that we lost one of our Community Health Workers. So it varies more or less around that. Though, we are mandated now to replace those people." (CHWP manager A, 2004)

Acknowledging the toll the HIV/AIDS epidemic is taking on the Province's human resources, the 2002 KZN Department of Health report identifies as one of the Province's many challenges the "skills shortages in both the Professional cadres as well as Community Health Workers resulting from HIV/AIDS and personnel emigrating to other countries" (Department of Health, 2002b, p.12). Both factors impact on the speed of programme expansion, on the workload of other CHWs as well as on training processes (see Section 5.3.2.4). Even more so, the way in which new oNompilo are selected is very important for the programme's success.

As outlined above, CHWs are expected to be working on a wide range of health related topics and are expected to interact with local health care services. However, the main part of the job lies – in contrast to those of facility-based health workers – in working together with communities and families to overcome some of the causes for ill-health, while also providing basic health care services at the more 'intimate' household level. Thus, it is not only important that the future CHW is being trained appropriately, but that it is also a person accepted and trusted by the people s/he will be accountable to.

Therefore, the selection procedure should ideally enable the people expected to receive services from the future uNompilo to be actively engaged in the process, while the result should yield a person capable of providing qualified and caring services.

The KZN DoH website describes the minimum set of criteria for selection of a CHW candidate, referring to appointments for newly created posts (*i.e.* with a contract): future CHWs are expected to have a schooling level minimum of Grade 10 (standard 8), have to reside in their service area and have to be selected by their local community (Bonga, 2007). With the prescribed schooling level, the ability to write and do simple maths is expected. It is worth noting, that a number of the CHWs employed in the past are illiterate; but many are nonetheless described as providing outstanding service to their community (Community Health Facilitator, 2004). Although it is identified as an important selection criteria in the home-based care literature, there is no specific requirement for future oNompilo to have "good communication and interpersonal skills, and the ability to empathize with others" (Uys and Cameron, 2003, p116). And while gender is certainly not an official selection criteria, it is interesting to note that not all, but the majority of CHWs in KZN are female.

Equally noteworthy is the fact that at least in some areas, traditional healers (sangomas) have also been selected and trained to become CHWs:

"Traditional healers are independent. But you find that they do work with the Community Health Workers. And you find that some of the Community Health Workers are also traditional healers." (PHC manager)

The relationship between the formal and traditional health care providers is of huge significance across sub-Saharan Africa, but it is not discussed in greater detail in this study. The importance of traditional healers in providing some level of health care, however, should be acknowledged. The above mentioned integrative approach, for example, has been practiced at The Valley Trust since 1983 (see Figure 5.9). It is an approach that allows traditional healers to combine their 'indigenous' knowledge with prevention and other methods taught in the context of the 'Western' medicine-influenced CHW scheme.

"Traditional healers have a link to the primary health care nurse here, although it is very informal. But we have these monthly meetings with them, we conduct workshops with them, we discuss referral procedures with them. We designed some forms for them to refer." (PHC manager)

Furthermore, traditional healers are often widely known and accepted in their communities and their engagement with the CHW programme, as oNompilo or by establishing mutual referral structures, can increase community acceptance and avoid

'turf battles' (TVT, 2005, also cf. Green *et al.*, 1995; Clarke, 1998a;1998b; Pretorius, 1999; Colvin *et al.*, 2003; Homsy *et al.*, 2004).



Figure 5.9: Traditional healers working as CHWs with TVT (Photo: Clark)

As stated, candidates for CHW training have to meet a number of requirements, one of which is the already often-mentioned notion that they have to be resident in the area. They are ideally people well known in their communities,

"so in case the uNompilo does not happen to visit a specific household, household members can also approach uNompilo and inform them about a problem like a stroke." (Community Rehabilitation Workers, 2004)

The emphasis on CHWs being members of the local community is based on the idea that this on the one hand increases their availability, but on the other hand also their accessibility, *i.e.* approachability. This includes the assumption that they speak the local language, understand the local culture and customs and are aware of and share the community's problems and potentials. At the same time, it is assumed that living in the community and being elected by the community also ensures their acceptance by community members:

"But what people always accept are people who they know. So the people who look after them are their neighbours, are their relatives, are their friends." (CBHP Manager, 2004)

Although it is assumed that spatial proximity also implies this in a cultural and 'intimate' sense, anecdotal evidence suggests that patients frequently avoid using local health care services, especially if they expect to be diagnosed with a stigmatised disease like STDs or HIV and are worried about local gossip. It is not inappropriate to assume that fear of prejudice and stigma is also influencing the work of oNompilo by leading to pressure, mistrust or unequal service provision. This also includes oNompilo themselves:

"I have AIDS. I haven't told anyone here. I don't want them to know, also not the people here. My mother sometimes asks me why I am loosing weight ... But in (a place further away), I went to this support group, I met my partner there. He is also infected. So at least we know of each other." (CHW, private conversation, 2004)

Despite being trained to educate her community on HIV/AIDS and related issues, and as such also work against the prevailing stigma, this uNompilo has not disclosed her own status within her community and is living with a 'double' burden. As such, it illustrates that the idea that people from the same community always immediately trust each other, is a naïve assumption ignoring the complexities of the topic. Nonetheless, the active involvement of communities including the recruitment of local people has proven to be an important condition for the success of numerous small-scale community health projects (cf. Cruse, 1997).

While emphasis is on 'being a member of the community', the selection process should nonetheless also ensure that minimum qualifications are fulfilled. This is indicated on KZN's Department of Health website; however, on the actual selection process of CHWs it only states that it "is guided and based on the existing policy" (Bonga, 2007). Slightly more specific, the draft National Community Health Worker Policy Framework suggests that:

"Community representatives should be involved in the recruitment and selection process of CHWs." (Department of Health, 2004e; cited in Friedman, 2005, p.179)

Similarly, the KwaZulu-Natal Community Health Worker Policy Document (Department of Health, 1999a, p.12) states that "the selection, employment and supervision of CHWs" are part of the tasks of the Community Health Committee (CH Committee).

Thus, the policy documents mentioned are not very specific about the exact procedures for community involvement, but seem to point to community representatives as the actual medium involved. However, Community Rehabilitation Workers from The Valley Trust, who had previously worked as CHWs, describe the actual selection process in the following manner: in a specific region, where there is already a CHW scheme running, areas with a shortage in CHW numbers are identified by the Community Health Facilitator or Programme Manager. If new CHW posts are approved, then a meeting of the whole community in a specific sub-area is called. At this community health meeting, the CHW is elected from a pre-chosen group of candidates, who have the minimum qualification (Community Rehabilitation Workers, 2004). A programme manager reiterates the importance of community involvement:

"We don't just say, we are going to replace, we need to involve the community. We go to the community, we explain the situation and then we tell them to elect this person. We are not the ones who are selecting that person. They are in the community." (CHWP Manager A, 2004)

In this context, it is worth noting, that while the CH Committee (also see Section 5.3.4) as elected representatives of the community are mentioned in the policies to be actively involved in the selection process, not all sub-districts in KZN actually had up-and-running CH Committees by the time major expansions were taking place (CHWP manager, 2004). Thus, other ways of community involvement had to be found, which were ensuring a consultative approach with community members. In this context, some interview partners recognised the influence traditional leaders (amakhosi) can have on the results of the selection process:

"And these people are being elected by the community and the amakhosi. This chief, this lady chief is very active; she has been doing so much for the community. So, we ask them to identify (the oNompilo), we do not tell them. We tell them what we are asking for, especially with so many people, who are capable. It is something where we all are equal, not a one-man thing." (CBP Manager, 2004)

Even though this description above gives an example of active community involvement, the non-existence of detailed recruitment guidelines also implies that there are different approaches depending on, for example, the existence of health-related community structures or the personal preferences and resources of managers tasked with programme implementation. While heterogeneous approaches to recruitment procedures allow for a flexible adjustment to specific local conditions, they also harbour the danger of political abuse. As one interview partner points out:

"A problem I see consists in the misuse of the Community Health Workers as a political tool. The appointment of Community Health Workers is sometimes misused. There is a lot of unemployment, and the position brings some money. It can be misused by political parties or leaders." (CHWP manager, 2002)

A major obstacle to broad community involvement in the recruitment process is the already-mentioned lack or limited capacity of community-elected health structures. Furthermore, this is sometimes combined with a lack of community cohesion (especially in areas with high population fluctuation) and a relatively low level of priority given to health compared to other issues like unemployment and poverty. In order to enable an early involvement of the community and create accountability, a broad community information and mobilisation process should precede any recruitment process. According to best practice, and positive experience within the original KwaZulu-homeland CHW programme, this should involve the establishment and

training of a community health committee prior to CHW selection (also cf. Kvalsvig *et al.*, 2002). Expressing the efforts involved in this process, a national manager formerly involved with the CHW programme in KZN states:

"It was such a trouble and took years and years of hard work to get those committees in place and actually to make sure that these are the ones responsible." (NDoH manager, 2004)

However, as stated above, during the early years of the major programme expansion in KZN since 1999, in many areas this had not been fully achieved due to annual targets and the related time pressures. In some ways, the strong top-down approach to CHW programme expansion has partially undermined the basic notions of community accountability and participation, which are frequently identified as fundamentally important for the success of community-based programmes. While this is not a unique problem to the KZN context – Walt (1990, p.28) for example writes that "in most national programmes, CHWs are not selected by the communities from which they come: it is the community leaders and the health professionals who ultimately choose the CHWs." – the long-term sustainability of the programme may also very much depend on the possibility to involve relevant structures more effectively (see Section 5.3.4).

After the election of the CHWs, the candidates participate in a training course, which they finish with the receipt of a certificate. More specific details about the organisation of training are discussed in the following section.

5.3.2.4 Training and conditions of employment

Apart from the selection of suitable candidates, one of the decisive factors influencing the future success of oNompilo's work is the qualification they receive during their initial and the subsequent in-service training.

In the past, each of South Africa's large number of CHW programmes provided different levels of training, which varied widely from each other. This included a multitude of specialist ancillary health workers (e.g. HIV/AIDS communicators, DOTS supporters), who received only limited training specific to their field of work. A national level manager describes this situation:

[&]quot;But the problem that I see is that these are huge numbers (of CHWs) and their training is not really coordinated. We find that some people train, where there is no quality assurance. They're trained by NGOs, there are trained by all sorts of people. That's why we are saying if we go to the KZN model, at least there is a structure and there is a bit of supervision. But in other areas, in other provinces, it is just private individuals or just new NGOs." (Civil servant, NDoH, 2004)

The mentioned training model of KwaZulu-Natal is introduced by a programme

manager based in this province:

"They are trained by the Community Health Facilitators. (...) In the future, the person who used to come from (the hospital), a district co-ordinator for the programme, is also going to be involved in their training. The district co-ordinator for the programme is going to be actively involved in their training. Community Health Workers themselves are trained by the Community Health Facilitators." (CHWP manager A, 2004, also cf. Figure 5.5)

As mentioned, the main responsibility for the initial training of CHWs in an area lies with each Community Health Facilitator, who will also be responsible for their supervision during their future employment (see Section 5.3.3). Indicating the role of NGOs in supporting the programme (see 5.3.5.1), while acknowledging the potential for some change in the details, organizational aspects of the training are explained by the same manager:

"The Community Health Workers are trained in their district. Most of the time, we are supported by the Valley Trust, because the Province allocated funds to The Valley Trust, even for training. I don't know lately, maybe the new (provincial) programme director is going to have her own strategy. But before, the money was allocated to The Valley Trust. And when we were conducting training here, we contacted The Valley Trust that we are going to have the training and asked them to please support us. They give us money for catering; they give money for a seminary, if we are going to use seminary sites." (CHWP manager A, 2004)

Describing some more training practicalities, the manager continues:

"They come to us; they are trained directly here in the district. Most of the time we used to organise the venue with (the hospital), because in our area there are Community Health Workers who are not in a position to travel every day in the morning and afternoon. There are many people who are from very far, like from (place name). We are having Community Health Workers, who come here, they just stay here for a week and then Friday they go home, Sunday they come back, until they completed the training." (CHWP manager A, 2004)

The comparatively long (up to twelve-months) training period aims to provide future oNompilo with a broad set of skills, enabling them to address a wide range of problems in their community. Below, some of the topics are shown that are covered during this training period according to the provincial programme manager:

- **%** "Being a Community Health Worker
- **%** Situational Analysis
- 8 Environmental Health Care
- **%** The District Health System
- 8 Primary Health Care Concept
- **X** Acute and Chronic Diseases and their management at home.
- ℜ T.B and DOTS
- 8 Body systems
- & HIV and AIDS including counselling and support
- 8 Health Education and Promotion

- **X** Maternal and Child Health
- 8 Integrated management of childhood illnesses
- 8 Prevention of Mother to Child Transmission (PMTCT)
- & ARVT
- 8 Disabilities
- **%** Infectious Diseases
- & Community Development" (Bonga, 2007)

Thus, training covers a wide variety of health, social and developmental topics and also aims to teach oNompilo "leadership and supervision skills and disaster management" (Kvalsvig *et al.*, 2002, p.24). The theoretical part of the course is complemented with practical training. After training completion, CHWs are examined by a board composed of Community Health Facilitators, programme managers, PHC supervisors and members of the programme-supporting NGOs. The exam consists of both theoretical and practical components (CHWP manager, 2004; also see Cruse, 1997). If CHWs pass the exam successfully, their qualification, according to Bonga (2007) is equivalent to the National Qualification Framework (NQF) Level 4 (equivalent to RSA Grade 12).

"We are busy with their graduation. We trained oNompilo for some years, and they are those that have been trained recently. So we felt that they must get sort of a graduation, just for motivating, sort of. So, in that regard we are now very busy with that. It's a lot of work." (CHWP Manager, 2004)

After graduation, CHWs receive a contract which specifies their employment conditions. As already indicated in Section 5.1, these conditions vary depending on the starting date of their employment.

"We still have got the old ones, who were employed by KwaZulu – they work four days a week. However, we are in the integration process and would have progressed, if it wasn't for the break that we had. We were planning that, the province planned that by December last year the integration process would have been completed. But unfortunately there was that gap. And then we have got these Community Health Workers who were employed from the year 2000. They are working from Monday to Friday. Those are contracted by The Valley Trust and KZN PPHC. And then for the old Community Health Workers, because their money is still being send to the hospital, like for instance hospital X. So, we are also dealing with hospital X's financial people for the old Community Health Workers, because they get their salaries through the hospitals. They are not yet contracted by The Valley Trust. However, the office is now in the process, so that they will be contracted by The Valley Trust." (CHWP manager, 2004).

This statement points to the relatively complex contract and management conditions, which emerged from the different historical background of various CHW programmes in KZN. Although today the national policy suggests a standard stipend of 1000 Rand/month for CHW, oNompilo who had been employed earlier continue to receive the higher level stipend they started with (see Table 5.1). Funding for these stipends comes from the provincial DoH budget, although there are also some additional sources from national level. For example, the Expanded Public Works Programme, launched by President Mbeki in 2003, is "aimed at the provision of work opportunities

coupled with training" (Department of Public Works, 2006). One of its focus areas is the Home Community Based Care programme, which provides future CHWs with 'learnership stipends' for their training period.

While the described training situation in KZN has been acknowledged by members of the National Department of Health as being very well established, national regulations require a more standardised approach to the education and training of ancillary and community health workers throughout the country:

"Even so there was a national breakthrough; the variation in training was so dramatic. And although there was already one for the longest time, people didn't realize that the qualification that was on the national qualifications framework could add value in terms of quality management. And that conflict is now been bought into. Everybody wants to improve the quality of the training. I am not criticising that the training was quick, all the training was quick. All the training was excellent and exceeded the requirements. But it's just to make sure that there is a spirit of care." (NDoH manager, 2004)

The rationale behind this is explained by another civil servant of the NDoH, highlighting the need to not only train future CHWs appropriately, but also provide them with qualifications that are nationally recognised, transferable and open up a career

pathway:

"But the other thing that we must realize is that we cannot brand people forever to be stuck in their community. We expect that some people will want to stay there. Especially the older persons would most probably like to stay in their community. And these qualifications would allow this. They most probably would like to operate a small business, for example in ancillary health care, where someone can provide child care. So it is excellent, because a lot of people in the community wish to open services for child care, or wish to proof their qualifications for child care. And it is perfect for an older grandmother who wants to rent her services. She doesn't want to become a nurse or physiotherapist, or whatever. Her expectations are far more modest. But we might have a young Grade 12 person and she has just completed the training, who would like to become a physiotherapist or radiographer or whatever. And that is a different challenges, because that person we also need to address. Because you cannot, through job creation initiatives, create a chain for someone and lock them down this way. You need to make sure, and that's why we try to sort out responsibilities, because it's nice to discuss Community Health Care Workers and what they do and how they do it, but it's more important to ensure that they will be able to move somewhere afterwards. And the Presidential Programme for Home-Based Care Givers, which is part of the Expanded Public Works Programme, will create a whole lot of youth that have got experience in community health. And so you would like to find ways for those that wish to continue in the health profession that they actually can do that. Because we are heading into times, where people would be entering the health profession without having the desirable qualifications." (NDoH civil servant, 2004)

And another manager continues:

"The other thing that is important, which is beside the standardization of the training and recognizing it on the National Qualifications Framework, is also the other issue of ensuring that the standard of treatment meets certain norms and standards. And that the discussions, which are underway at the moment, actually lead to a body to regulate the health care workers." (NDoH manager, 2004)

These detailed statements above put the CHW programme in a broader context of development. Given the impact of the Apartheid system on the level of education of large parts of the population, and the continuing disadvantages for many in accessing school education, the development of standardised vocational qualifications provides

an alternative route into higher level health professions while guaranteeing the necessary standards. At the time of the interviews, important national developments were taking place, which aimed to develop a more streamlined approach. They continued a process, which started in the year 2000 and had already achieved some results:

"There is a national qualification in ancillary health care, which is supposed to be a Community Health Worker qualification. It's the only formally recognized qualification in the country according to the National Qualifications Framework. Now this process was developed by the Standards Generating Body for Ancillary Health Care, and they just had their mandate extended, in which they will be able to come up with qualifications in the extend for training right up to a pre higher-education level." (NDoH manager, 2004)

The Standard Generating Body for Ancillary Health Care, which consists of numerous experts in health and especially ancillary and community health care, has in the meantime developed a complete set of unit standards-based qualifications in Ancillary as well as in Community Health Care (see also Section 4.2) (SAQA, 2000;2003;2007a). These create a pathway from National Qualifications Framework Level 1 to Level 4. This includes, for example, a National Certificate (NQF Level 3) and a Further Education and Training Certificate (NQF Level 4) in Community Health Work. The South African Qualifications Authority made details of all registered qualifications publicly available, including training details covered in the various standardised units that are part of the different qualifications (see Appendix 3 and 4) (SAQA, 2007c;2007f;2007e;2007d;2007g).

"So, that is going to change the environment of Community Health Workers tremendously, because all the Community Health Care Workers, say 60-70.000 odd Community Health Care Workers, will now be able to get their qualifications formally recognized." (NDoH manager, 2004)

While the process of standards development has been completed, save for necessary regular updates, the registration of accredited training providers is an ongoing process. The Valley Trust, with its long-standing experience in community health training, was accredited in 2006 to provide training at NQF Level 1 (The Valley Trust, 2007). Thus, the standard provision of accredited training is still in the implementation process. Furthermore, the described standardisation process also points to differences in the successful implementation of CHW programmes locally, and factors like standardisation and accreditation which are more significant for a national roll-out. Additionally, it will also be an interesting challenge to combine the advantages career path-focused training offers for the individual with the expected community focus of a community-based health service approach like the CHW programme.

Another aspect of CHW training, in KwaZulu-Natal and elsewhere, is the necessary update and refreshment of health-care knowledge and practices.

"They may go through the training in the beginning. It's about a year, the basic training. And then what happens is, then they have in-service training, depending on what there is. Like most of them, they were trained on HIV and AIDS, but the issue of drugs, some years ago, it was not there. So, now if we are going to give drugs, they must be trained on that. If there are new things that are coming in or new technologies then they should be trained in service, like in other contracts." (CHWP manager C, 2004)

CHWs receive updates on a regular basis, according to the provincial policy on an approximately monthly basis. However, meetings are also called in when there are more urgent issues like the recent Cholera epidemic. In-service training is also usually conducted by the Community Health Facilitator, and takes, for example, place during the regular supervision meetings with all CHWs of one area. One CHW programme manager describes:

"We organise another additional training. Each thing that happens, we organise training for the Community Health Workers. We give them the information and we structure it in such a way that they must cope and know what is going to happen and how to approach what issue." (CHWP manager A, 2004)

Sometimes also external experts are invited in, as one way to ensure that the quality of the content is according to the latest standard:

"There maybe fifteen in one place, but we try that the information is the same. For example, there is IMCI (Integrated Management of Childhood Illnesses). There are people who are trained for IMCI; they then train others in that. But at the end, we hope that everybody is getting the very same information." (CHWP manager A, 2004)

However, as indicated above, most of the initial and in-service training is being conducted by the Community Health Facilitator, a position which will be further examined in the following section.

5.3.3 Community Health Facilitator

5.3.3.1 The role of Community Health Facilitators



Throughout the interviews, the important role of Community Health Facilitators (*i.e.* CHFs or Facilitators) for the success of the CHW programme was highlighted. CHFs provide all community-based role players in the programme, *i.e.*, oNompilo, CH supervisor and CH committee (see Sections 5.3.2 and 5.3.4), with practical support and supervision. Together with the CH supervisor, CHFs are the critical role players in the local management of the programme. As will be described in more detail below, Facilitators' responsibilities in respect to oNompilo include training, supervision and data management. Facilitators are usually employed by the Department of Health, belong to the district health system structure and are for example based at clinics. There, CHFs are accountable to the PHC supervisor (see Figure 5.5).

"We have four Facilitators for (name of the area). for the catchment area of my clinic. Other Facilitators would report to the clinic manager directly at the next clinic." (PHC Supervisor)

As such, Facilitators are the primary contact for oNompilo when they liaise with their respective health facility. While many facilitators are based at rural clinics, there remain also Facilitators who had previously been employed within the ex-KwaZulu programme structure and are working from hospitals:

"Some of the facilitators are based at the clinic, some at the hospital. It depends if this person, the PHC supervisor, is at the clinic or at the hospital. Then you will find the facilitator here, at the hospital. You do find a few at the clinic, but more seldom, because the programme was initiated at the hospital." (CHWP manager B, 2004)

Furthermore, a few Facilitators have been employed by the coordinating NGOs in order to improve the coverage with facilitators in a number of under-serviced areas (see below). These three different employment backgrounds have had an influence on the selection criteria and partially on the reporting structures of the Facilitators (see below), but seem to have had less influence on the actual job profile. Although it has been emphasized by interview partners and especially in programme documentation that oNompilo are accountable to their communities, and should normally not be directly employed by the provincial Department of Health, Facilitators as members of the local primary health care teams have an important supervisory function for oNompilo. A CHF carries responsibility for a group of CHWs, with an intended ratio of one to thirty.

"We have got a norm. Although at the present moment it is lower, because we don't have enough units. The number is about thirty. the person must look after thirty Community Health Workers." (CHWP manager A, 2004)

However, the exact number varies, which is partly caused by the overall shortage of CHWs in this particular district and generally a slightly uneven distribution of qualified facilitators.

"It's one facilitator for a big area. And the number of the Community Health Workers, who she is working with, varies. Like for instance, Mrs B., she is looking after about 27 Community Health Workers. And then S.S., she is looking after 22 and so on." (CHWP manager A, 2004)

While this manager reports ratios between 22 and 27 CHWs per facilitator, in other districts the ratio can be sometimes nearly double that number:

"It is done by area, because each Facilitator will have about 50 sisters, and each sister is bringing his or her reports." (CHWP Manager C, 2004); (sister=uNompilo)

As these statements already indicated, Facilitators are not responsible for a fixed number of oNompilo, but rather for all oNompilo working in a specific area.

"I am working with the Community Health Facilitators. I got about 12 at the present moment in the whole district. To improve their supervision coverage, I selected them according to their area. There are areas that they work in, like for instance, there is Mrs B., she is working from (town name) to (a sub-district) and a part of (a second sub-district). I've got S.S., she is doing the (name of sub-district) area. I've got Mrs D., she is doing (name of sub-district), that is the (town name) area. And so on." (CHWP manager A, 2004)

In the meantime, KZN is aiming to continue increasing its numbers of CHWs, so the number of required CHFs and the achieved ratio is subject to regular changes. One problem in this context, which will be discussed later, has been the inability of the KZN DoH to increase CHF numbers in accordance with the additional employment of oNompilo. However, there are also other factors influencing the CHF to CHWs ratio:

"And unfortunately we lost another facilitator last week. He passed away. And we are going to see how we are going to distribute his load to other facilitators until such time that there is another facilitator. But he passed away. He was buried last week Sunday. But other team members are busy looking into that." (CHWP manager A, 2004)

This quotation illustrates that, as in any other management structure as well, established responsibilities have to be adjusted in accordance to changing circumstances (e.g. the impact of HIV/AIDS on mortality). Here, the district level, *i.e.*, the district-level CHW programme co-ordinator, has the responsibility to find suitable

solutions. The statement quoted above also highlights the vulnerability of a system, where there are no resources available for a duplication of roles.

As has already been described in detail in the previous section, CHFs carry the main responsibility to train oNompilo. This includes their initial training as well as in-service training. During the major expansion phase of the KZN programme with one thousand additional CHW per annum in the province, CHFs dedicated a significant part – approximately half of their time – training new CHWs (Kvalsvig *et al.*, 2002). This seriously impacted on the time they had available for supervision of CHWs already working in the communities. Nonetheless, even after completion of the intensive expansion process, new oNompilo will have to be trained to replace workers who died or left their job. In that situation, the current approach, which then would potentially mean one CHF training one CHW at a time, may not be the most cost- and time efficient. A pooling of these oNompilo at district level might be a more appropriate alternative.

At the time of the interviews, training-related workload was additionally increased by the lack of training material in Zulu. Each individual facilitator had translated their own materials. However, this inefficiency was in the process of being addressed (NGO manager, 2002).

Apart from the initial training, the role of a CHF includes the co-ordination of all oNompilo in a specific area, who meet as a group with the facilitator on a regular basis: "And then, these, the contract worker and the Facilitator, we said, they would meet at least once a week." (CHWP manager C, 2004)

However, in some areas, due to transport and other organizational difficulties (see below), meetings are being held less frequently, in a few areas only once a month.

Nonetheless, for CHFs, these meetings provide an opportunity to disseminate information fast, discuss occurring problems, offer support, refresh already-acquired techniques or introduce new skills. The Facilitator can also use the regular CHW meetings to introduce activities in locally-identified areas of importance.

"Like for instance, there is one Facilitator, who wants to do a kind of mini-show in her area. They are going to display their handworks or projects, whatever project they are doing." (CHWP manager A, 2004)

For all participants, the meetings serve as an opportunity to exchange experiences, discuss programme management-related and other problems and allow for presentations by experts external to the programme. For example, CHWs attending a weekly meeting with their CHF in a rural health post in eThekwini District received

additional information during in-service training from three external experts. One, from a community-based rehabilitation project, demonstrated exercises for stroke sufferers and wheelchair procedures, and explained how and where people in need could get access to one of these aids. Two researchers from the South African MRC presented results of a research project and encouraged oNompilo to promote porridge as a main staple. Improved distribution and increased use of fortified porridge should help communities to fight malnutrition, especially the lack of Vitamin A and iron in children. They also suggested that "mothers should be able to afford porridge since they can receive child support grant" (observations/notes taken during Weekly CHW meeting, Mhlabunzina First Aid Station, eThekwini, 2004). This indirectly reiterates the importance of the wide range of CHWs' tasks including their function to connect communities to social services. The wide range of topics also emphasises the need for appropriate qualification and continuous supervision.

Furthermore, it is suggested praxis that at least oNompilo, CHF and the members of the local Community Health Committee, where it exists, meet on a monthly basis. Usually, this coincides with one of the weekly meetings described above (weekly CHW meeting, 2004; see Section 5.3.4). Such meetings can serve as a way to improve cooperation and identify and discuss local needs and health problems. As has been shown in a few pilot areas, this identification process can also be supported by community surveys, which allow for a more targeted training update in the recognized areas of need (Kvalsvig et al., 2002). Examples of topics, where local conditions and thus the necessary responses (like behaviour change campaigns) may vary, are the differences in access to clean water and variations in the distribution of malaria. However, for all implemented responses by CHWs there is a need for sub-sequent supervision through CH Supervisors and Facilitators. This is equally relevant for the initiation of a specific disease-awareness or prevention campaign (cf. cholera example in Section 5.3.2.2) or the introduction of a new horizontal programme (like the rollout of ART). Here, it is useful that the Facilitator is usually a member of the local primary health care or hospital team and has, as such, a relatively close link to the district health systems and newly-emerging topics.

While training and the provision of technical support can be part of the weekly CHW meetings, the CHF's role also comprises a monitoring element, which makes visits in the community paramount.

"And at the same time, also the Community Health Facilitator is going to come at any time." (CHWP manager A, 2004)

The CHF has the responsibility to monitor the work of the oNompilo and assure the quality of services provided.

"The facilitator is the person who looks after the quality of the interventions." (CHWP manager C, 2004)

And while in situations, where the CH Supervisor is a member of the CH Committee,

CHFs and CH Supervisors should meet at least on a monthly basis during committee meetings –

"The supervisor and the health facilitator, they meet, and again it could be maybe once, once a month." (CHWP manager C, 2004)

- CHF should also visit them and the oNompilo personally in their communities as well:

"If we have enough transport, it should be at least every day or maybe once a week. Because the facilitator is supposed to go there to check if the Community Health Worker has done the work. And she is supposed to go and check, compare the work that she says she is doing with the facts. She is writing her work down daily. So on average let's say she is visiting once every week. Because of the situation of the transport difficulties at the moment." (CHWP manager A, 2004)

Though daily visits of thirty to fifty CHWs seem an unrealistic goal, according to interviewees, relatively frequent visits to oNompilo, their CH Supervisors and specific households in the community are important methods to ensure the success of the programme.

"The Community Health Facilitator will have the schedule, where is the CHW going to go. On a certain day, where is she going to, what is it that she is going to do. There is a lot of work that they are doing." (CHWP manager A, 2004)

During these community-based visits, CHFs are expected to use a standardised information tool. This checklist aims to establish if the work, agreed upon in consultation with the CH Supervisor, has actually been done and if uNompilo's conduct in visited households and the quality of their work is appropriate. After the evaluation, the CHW should get feedback from the facilitator and, if necessary, additional education or guidance should be offered. Furthermore, a summary of the supervisory visits should be reported to the appropriate line manager (see below).

In the context of the local community visits, it is worthwhile mentioning that a study conducted in 2002 revealed that forty percent of all interviewed facilitators acknowledged that at least some of their oNompilo were achieving less than was expected. Reasons mentioned varied from a "lack of literacy, high absenteeism, and inability to work independently" to "circumstances such as community resistance or a problem with the CHC" (Kvalsvig *et al.*, 2002, p.2). While some of the issues encountered may be generally linked to previous and current selection and training procedures of oNompilo, others are of a kind, which need to be individually or locally

addressed. This can only be achieved, if Facilitators are mobile and are able to monitor CHWs' work even in remote communities (see Section 6.2.3).

Sufficient access to transport is also relevant for Facilitators in remote areas when engaging in networking activities. Networking with other health and social sector-stakeholders is encouraged, since they offer opportunities to strengthen the CHW programme's role in addressing wider health-related issues in the community. A study conducted in 2002 including twenty nine CHFs from seven different KZN health districts inquired about the networking activities of Facilitators throughout the previous year. Table 5.4 below shows the number of Facilitators, who had any contact with the various stakeholders in 2001/02.

Networking Targets	Number of CHFs (n=29)
Clinics	20
District Health Team (Co-ordinator)	17
Community Health Committee	17
Local authorities	15
Environmental health officers	8
Social welfare officers	6
Medical staff	6
Local NGOs	5
Agricultural officers	4
HIV/AIDS committee	2
Inyanga (<i>Zulu</i> : herbalist)	1

Table 5.4: Community Health Facilitators' networking activities (Kvalsvig et al., 2002, p.21)

Interactions of Facilitators with health or other service providers can take place on a one-to-one basis, during clinic- and hospital committee as well as inter-sectoral meetings. Many health facilities have established governing committees; and most communities have monthly inter-sectoral meetings, which provide the opportunity for a wide range of stakeholders to address various local problems. Thus, these meetings also provide Facilitators the opportunity to raise the profile of the local CHW programme, while directly discussing problems with local representatives of social services, environmental health, water affairs, and other people and organisations working with communities on developmental and health-related topics.

5.3.3.2 Selection of Community Health Facilitators

As stated, CHFs carry a substantial responsibility in the management of the CHW scheme at local level. Hence, selection and training procedures of CHF are not only important for the individual facilitator but for the overall success of the programme. Traditionally, there has been no standard procedure for selecting an area's future Facilitator. Nonetheless, in the past many of the facilitators were already working as nurses, when they were selected to become facilitators. Thus, most of the existing CHFs already had a nursing or a similar health-related background before they received more specific training (see below).

However, since the expansion of the CHW programme, the KZN DoH has not created any additional CHF posts. This has led to shortages in programme supervision:

"There are areas, which do not have a Facilitator from the Department of Health." (CHWP manager B, 2004)

Since regular monitoring, supervision and field support, conducted by a CHF, have been identified as some of the key factors for successful performance of oNompilo, alternative mechanisms had to be found to overcome the shortages created. On the one hand, districts allocated available staff to take on CHF roles (see CHWP manager quotation below), while on the other hand the two programme co-ordinating NGOs (TVT and PPHC) decided to employ an additional thirteen CHFs in 2002 (Kvalsvig *et al.*, 2002).

"In fact, all the facilitators should be employed by the Department. We only have our own facilitators, because there was a gap." (NGO manager, 2004)

Thus, the consequently employed new CHFs did not necessarily have a background in nursing. This alternative approach seems to have created some tension and ambiguity, as one manager points out:

"But at the moment, they are trying to clarify those issues. Like this thing with the Community Health Facilitators. According to the Department of Health, a person that is supposed to become a new Community Health Facilitator would come from the clinic. And have a health background. But, you know, there are some people that put other people in the position of Community Health Facilitators and don't know." (PHC manager)

But while some of the interview partners considered it important that the candidates have a background in health, others found candidates' social and managerial skills more important. Some of the requirements considered relevant by one district manager:

"We used to allocate people. But not all people are the same. This problem needs people who are responsible and committed. So we decided last year, okay, let's advertise the position. It is not a post, it is just a position. We know that we need people who are interested. And thus, we set the criteria and the requirements. A driver's license is a requirement. Grade 10 is a requirement. Because the person is going to the training

and then will come back to train other people. So, really there is a lot of responsibility. But we advertised the position, we interviewed people and then we eventually selected." (CHWP manager A, 2004)

Different to CHWs, facilitators are not required to live in the local community.

"We look that according to the district there is unity. I told you that we just allocate the area to each and every facilitator. In other areas, they are not doing it the way we are doing things. But it's the way we feel it is going to improve the work and other issues around the programme, if we do it in this way. So, we feel there are some other items that must be clarified. But it depends, how proactive we are to do it. Like for instance, what we do here, some of the things are not happening in other places." (CHWP manager A, 2004)

Although the lack of a nursing background may require a different training with a more intensive focus on medical issues, it could be argued that one of the key elements of facilitators' work is the management of the programme at community level; this may be an area, where appropriately selected, non-medical staff with skills in management, teaching and collaboration with communities can be equally suitable if appropriately trained. However, the employment of CHFs with at least some level of nursing or similar training is positive for the programme's effectiveness, since such a background often increases their acceptance by clinic staff, with whom they are expected to work closely together (see Section 5.3.5.2).

5.3.3.3 Training of Community Health Facilitators

As the quotation by the CHW programme manager above indicates, future CHFs have to take part in an initial training course. The quality of this training is especially significant since CHFs are the main disseminators of knowledge and skills to their respective CHWs. Throughout the years, training of the majority of KZN facilitators has been taking place in one specific venue:

"Community Health Facilitators are trained at Amatikulu." (CHWP manager A, 2004)

The Amatikulu Primary Health Training Centre in KZN's iLembe District was set up in the 1970s as an initiative to provide primary health care workers, including Facilitators, better training opportunities (Scrace, 2006).

"The Community Health Facilitators, most of the time they are trained in one place. They are trained in one place. Even if there are new methods that are going to be used, because maybe at some stage the centre must be closed down, but the information is definitely sure I hope the same." (CHWP manager A, 2004)

This programme manager emphasised the importance of a central training facility to ensure the consistency and quality of the training throughout the province. The manager's statement also indicates a temporary uncertainty about the Training Centre's future around the time of the interviews. However, today, the Amatikulu Primary Health Training Centre is a provincial Department of Health institution that takes on an important support role for the CHW programme by providing an accredited CHF training course as well as in-service training for oNompilo, facilitators and other programme stakeholders. They are also contributing to programme monitoring activities of health districts (Department of Health, 2007a).

The continued existence of one central training facility for all of KwaZulu-Natal CHFs also supported the standardization of the training they receive.

They do a one-year course. They got a modular system. They go to Amatikulu four times." (CHWP manager A, 2004)

The modular approach of the training course, which can last over a period of up to two years, aims to accommodate already practicing nurses (and others) better. Details of the SA Qualifications Authority-accredited training, which participants finish with the receipt of a Certificate, can be found in Appendix 5 of this thesis.

Although CHFs are taught according to a standardised curriculum, there has been some criticism on the lack of co-ordination between oNompilo's and facilitators' training. Training of facilitators followed a different structure to that of oNompilo, which was based on a compilation of manuals from various stakeholders (cf. Kvalsvig *et al.*, 2002). This required additional adjustments to be made by facilitators when training oNompilo. While inconsistency in CHW training material seem to have been addressed in collaboration between The Valley Trust and the KZN DoH (The Valley Trust, 2005b), an increased implementation of the SAQA-registered qualifications should further improve streamlining.

Finally, while in-service training has already been mentioned in the context of CHW, it is equally relevant for CHFs. The lack of any monitoring and support had been criticised by some facilitators in 2002 (Kvalsvig *et al.*, 2002). However, the combined effects of strengthened district health administration, the guaranteed status of Amatikulu PHTC and the establishment of district-level CHW co-ordinators posts (see Section 5.3.5.3) have likely had the potential to positively influence this aspect of the programme.

5.3.4 Community Health Committee and Community Health Supervisor



As has been highlighted throughout the previous sections, one of the key aims of the Primary Health Care approach utilising CHWs is the active participation of communities in addressing local health needs. Therefore, CHW programme structures and management processes should be established in such a way that CHWs are accountable to the community they serve.

"The CHW programme gives communities the chance to take responsibilities for their own lives. The programme should be driven by the communities themselves, though the Department of Health assists them, for example with the payment of salaries." (CHWP manager, 2002)

Well-trained, motivated and equipped oNompilo are a key factor to a successful CHW programme. However, in order to fulfil some of their main functions, these cadres also have to be well-linked to both the community which they are serving, as well as to the primary health care infrastructure, whose reach they are meant to expand. The duality of the CHW programme requires that on the one hand, links are necessary which can enable an exchange of information between CHWs and the local clinics or sirnilar primary health care services. On the other hand, there is a structure which ensures regular interactions between the CHW programme and the community and its structures. Such linkages are crucial to encourage the flow of information from the communities to service providers, but also ensure active community participation as well as the continued training and quality control by the 'health experts'. The CHW programme in KZN involves two 'linkages' at community level, the Community Health Worker Supervisor (CHW Supervisor) and the Community Health Committee (CH Committee). Both will be introduced in the following sections.

On a day-to-day basis, oNompilo are expected to interact with their CHW Supervisor. However, overall accountability is to the Community Health Committee. The Community Health Committee is conceptually a local, democratically-elected body, usually as a sub-committee to the local Community Development Forum or ward authority. These governance bodies are expected to play an increasing role in

community governance since they have received a legal framework in 2000:

"A good recent development was the implementation of the Local Government Act. It gives local government and communities greater responsibilities." (CHWP manager, 2002)

Importantly, Community Health Committees are linked to the overall health governance process within their district (see also Section 3.2.2.6):

"Even if the system would not have the CHW programme at all, if this programme was not there, still the Community Health Committee would exist. They are not for Community Health Worker Supervisors, they are Health Committees. From the various communities, there is a forum. From the forum, they select (one or two) people who will sit in the district management team. Even the district management team, when they make decisions (on health issues), they must get in information from the very people themselves. So the community is presented at the district level now. It's a policy decisions. And they would come in and be the voice of the people." (CHWP manager C, 2004)

In many instances, the facilitating structures behind the establishment of a Community Health Committee might be local NGOs or the health districts (see 5.3.5). However, the actual process is supposed to take place at a different level, as described by a programme manager:

"The very community themselves. What happens is, it starts with an election. The community, they have a big community meeting and there they decide who is going to be in the health committee. It is only those with an interest in health." (CHWP manager C, 2004)

In KZN, the policy-recommended scenario for the expansion of the CHW programme begins with the establishment of a functioning CH Committee. In most cases, CH Committee members would then be trained by local NGOs and/or the Facilitator in community-health related issues and empowered to function as a community-based health programme. The Community Health Committee then would clarify their community's health situation and necessary interventions, which would predominantly be implemented via the CHWs. In the original programmes in KZN, after receiving training, the CH Committee would then select the future CHWs for their area and chose supervisors for each of the CHWs. Subsequently, the committee was expected to be responsible for the CHW programme management including CHW remuneration, while the involved NGO would support implementation and further training (CHWP manager 2002, also cf. Kvalsvig et al. (2002)).

"In KZN for instance, this persons gets elected by the community and by the committee that has been put together to form the Health Committee. It was such a trouble and took years and years of hard work to get those committees in place and actually to make sure that these are the ones responsible." (NDoH manager, 2004)

Areas of KZN with a long tradition of community-based health programmes usually have an actively-involved and functioning CH Committee. However, with the rapid expansion of the CHW programme, the process described above, which requires

considerable time-investments, has not always been followed. Thus, oNompilo have been selected prior to the existence of the local committee, which to some degree undermined the level of achieved authority and accountability of the CHWs to their committee. Nevertheless, where CH Committees have been established, they should, in a second step, continue to be supported by the local Facilitator and the implementing NGOs in understanding Primary Health Care in general, and their role in particular. Thus, an internal monthly report summarising activities linked to the KZN CHW programme for example states that in one particular sub-district

"Community Health Committees were trained covering the following topics: PHC elements; Communication skills; CHC roles; and roles and responsibilities of a CHW." (Anonymous, 2004, p.11)

As already stated earlier, CHWs are usually directly supervised by one specific CHW Supervisor. In this context, the KZN CHW Policy Document states:

"The Community Health Committees will appoint specific people to be trained for supervising CHWs in a way that empowers them, but ensures accountability and effectiveness." (Department of Health, 1999a, p.12)

This role of the Community Health Committee was confirmed during the interviews:

"Then once the Community Health Committee is there, then from the bigger community, they will sort of allocate who is going to look after how many sisters. And thus have this kind of people, who are then looking after them (the oNompilo)." (CHWP manager C, 2004) (JF: sisters – an occasionally-used term for CHWs)

In many instances, CHW Supervisors are members of the Community Health Committee (CHWP manager, 2002). However, while such a set up might be the longterm policy, it is not necessarily implemented everywhere. A group of Community Rehabilitation Workers states in this context:

"The Community Health Worker Supervisors are not necessarily members of the Community Health Committee. They are selected by the community." (Community Rehabilitation Worker, 2004)

This is reconfirmed by a programme manager:

"Not necessarily the member of the committee, because in fact the members of the committee are not always available. But any responsible and honest member of the community who can take this responsibility. (...) Okay, in other areas it depends, maybe the committee members are available. Then you can still say one of them can supervise a person. As long as the person is available every day, and they'll be honest to each other, because we still have got some problems as well." (CHWP manager A, 2004)

Thus, although the long-term aim is to ensure CHW Supervisors are members of the Community Health Committee, in many instances they are ordinary members of the community the CHW is working in. Since this is adding an additional layer of management, it is even more important to develop mechanisms allowing regular interaction between the CHF, the CH Committee and the local CHW Supervisor (e.g. participation of CHW Supervisors in monthly meetings).

The recommended CHW to CHW Supervisor ratio is one to one. Nonetheless, due to local circumstances including the settlement structure, sometimes more than one CHW reports to member(s) of one household:

"It does happen that maybe two or three oNompilo report to one family. It depends how the situation of this area is. We have got areas, where the families are sparse and there is little population, like (place name). It depends. If maybe they have things nearer to each other, it does happen." (CHWP manager A, 2004)

The sometimes difficult task of finding sufficient community-based supervisors from within the CH Committee or the wider community, indicated by members of one CH Committee in the statement below –

"The Community Health Committee is just there to help the community. It is not prepared to look after the oNompilo, but is prepared to support their job." (Notes from Weekly CHW meeting, 2004)

- can be linked to the fact that CH Committee membership as well as CHW

Supervisors engage in the community-based health initiatives on a voluntary basis.

While the 1999 KZN CHW Policy Document suggested that

"CHWS will be entitled to reimbursement to cover some of their costs and time. The level of reimbursement will be determined locally to balance the need for retaining sustained quality services against the need for accountability to the community. This payment must come from the budget for the CHW programme for that area." (Department of Health, 1999a, p.12),

this recommendation has not been implemented. This also has an effect on the amount of voluntary work which can be reasonably expected from community members, who often live in challenging conditions of poverty, including the effects of HIV/AIDS, themselves.

The main task of the CHW Supervisor consists of daily meetings with the uNompilo:

"The Community Health Workers, they work directly with the local supervisor. They are members of the community, maybe asked to look after a Community Health Worker. They are the people, where the Community Health Workers report every morning and every afternoon. In the morning, they report in the community, with the local supervisor. And (the CHW Supervisor) has got the schedule, where is (the CHW) going to go. On a certain day, where is she going to, what is it that she is going to do." (CHWP manager A, 2004)

Thus, CHW Supervisors are expected to ensure that the CHW is working on a weekdaily basis. Activities of the CHW are logged into a timesheet, which is signed by both the CHW and the supervisor. Ideally, they also decide together the tasks of the day; for example, which families should be visited and what tasks have priority. However, in many cases the actual role of the supervisor is more limited:

"The CHW is meeting with the supervisor every day. Twice. They clock in and out. It's to control. Number one, to check that they come on duty. This is a gap here, because this person can show that this person has clocked in and out, but what they do, they are not involved in the quality of the intervention, because they don't know. That is just clocking in and out. It is the facilitator, who looks after the quality of intervention. So these (supervisors) are just clocking in and out, and taking care of a person's support, if they need any support." (CHWP manager C, 2004)

An example of the kind of support voluntary-working supervisors can provide is given below:

"Especially if there are problems with the family they are visiting, with the safety when they enter, if they are chased by a dog or something similar. Then she can talk to the supervisor, because this person is a member of the community. (The supervisor) can either talk to the family, or she refers them to the bigger health committee. And then they deal with this. And it is just a kind of support." (CHWP manager C, 2004)

The supervisory functions of CHW Supervisor also entail a level of control of oNompilo's work. However, implementation of this aspect of the CHW programme does have some challenges:

"Sometimes you'll find that some people are late. You will find that a Community Health Worker is now a friend of this supervisor in the location. Now they do this, she will report, then she will go to town and do her things and will forget about the work. But if the person is strict, she will always be honest." (CHWP manager A, 2004)

While, as indicated by the quotation above, it is important that responsible community members are chosen to become CHW Supervisors, a second layer of monitoring has been established. As outlined before, monitoring of both CHWs and their collaboration with supervisors is part of the Facilitator's role in conjunction with the Community Health Committee. However, CHF are also expected to closely collaborate with CHW Supervisors, where such a link has been created:

"The (CHW Supervisor) is chosen by the community. So their task is to sign the timesheets of the Community Health Worker, and if the CHW is not up to standard then she communicates with the facilitator to say we have a problem, or if the Community Health Worker has disappeared. There is a problem. And then the Community Health Facilitator will come down, and they go from house to house to see if the Community Health Worker is doing the work. (CHWP manager B, 2004)

If problems are encountered that can not be resolved through a warning, additional training or the selection of a new CHW Supervisor, a disciplinary hearing for the CHW is conducted which can end in the termination of the CHW's contract (Anonymous, 2004). However, CHW Supervisor and CHF should not only interact if acute problems with a uNompilo's work performance occur:

"The supervisor and the health facilitator meet. And again, it could be maybe once a month." (CHWP manager C, 2004)

Close collaboration between all community-level stakeholders in the CHW programme is crucial for its sustainability. Possibilities for regular interactions are the 'institutionalised' monthly meetings, which offer an opportunity to discuss arising issues:

"They report problems. They will have a meeting, in fact the whole committee meets at least once a month, and the facilitator attends that meeting. So in that meeting, they would give whatever, they discuss the results, good or bad. And also these, the Primary Health Care Nurse and the Community Health Facilitator, including the Community Health Worker Supervisor and the Community Health Committee, would all attend. It could be once a month, because the Primary Health Care nurse, if the Committee is sitting, she must also be part of this meeting. She could report about whatever, then they

would report as well. So maybe, I don't know, it could be problems, it could be good things, so that would be the whole team that will meet once a month. (CHWP manager C, 2004)

These meetings are of fundamental importance for the success of the programme at local level, since they offer the best opportunity for all stakeholders, from community representatives to clinic staff, to engage with each other, update and discuss programme-relevant issues.

"It is about the whole decision making. Let's say they want to talk about ARVs. Maybe the people, because there are people that are professionals, they come in and talk about something. Then the community can say it does not work or it works. If you talk about the formula feeding or HIV and AIDS, they would tell you the reality. And if you really want a woman to put a child baby on a formula, then maybe don't talk to the mother, talk to the mother-in-law, and those kinds of things. (...) But whatever is decided, it's for the very people themselves. Not by some people sitting in the city." (CHWP manager C, 2004)

While these monthly meetings are used by the PHC supervisor, the NGOs and especially the CHF, to provide programme-relevant training, they also offer communities the possibility to give feedback to service-providing facilities on issues related to specific community-based health campaigns.

"So when they are planning, they are planning with information that has come from the people themselves." (CHWP manager A, 2004)

In conclusion, CHW Supervisor and CH Committee are important components of the programme. Despite numerous difficulties linked to their voluntary involvement, which should be addressed through incentives like training and recognition, they are one of the keys to an effective community-link for the CHW programme.



5.3.5 Other relevant Community Health Worker programme stakeholders

The research outputs discussed so far have shown that oNompilo, CHW Supervisors and Facilitators are the key elements within the provincial CHW programme in KwaZulu-Natal. However, there are also a number of support structures and personnel who are of fundamental importance to ensure its effective management. A few of these are posts specifically created in order to support the programme (the provincial CHW Programme Director, NGO-based CHW Programme Coordinators), whereas others are regular facility-based staff members who took on additional tasks (PHC Supervisors). In the following sub-sections, a brief introduction is given to these, in order to complement the picture with the aim of highlighting the function of each level, but also of identifying problems threatening effectiveness. However, a cautionary note is necessary here, emphasising that the information presented is based on a relatively limited number of informants and a restricted range of supporting information sources.

5.3.5.1 Implementing NGOs and local CBOs

The original CHW programme in KZN, as outlined in Section 4.2, was initiated by the non-governmental organisation, The Valley Trust. A similar programme was also established directly by the KwaZulu homeland government - but the Valley Trust, in conjunction with a second NGO (the Progressive Primary Health Care Network), continued to play a role in KZN's CHW world. Five years after the end of apartheid, TVT and PPHCN played an important role in developing the provincial CHW Policy Framework, which was recognised by the 1999 District Health Systems Committee:

"In addition consideration was given to a Policy framework for Community Health Workers by the Committee in conjunction with the proposed contract with the National Progressive Primary Health Care Network and the Valley Trust which seeks to develop and expand the employment of Community Health Workers in the Province (Provincial District Health Systems Committee, 1999, p.14)."

From that year onwards, both NGOs played a major role in supporting the establishment and continuing growth of the programme:

"The provincial CHW programme works together with two NGOs in KZN: The Valley Trust & the Progressive Primary Health Care Network. These two NGOs assist with implementing the programme and with the appointment and payment of CHWs. NGOs are involved because the Department couldn't employ CHW themselves." (CHWP manager, 2002)

While the manager providing this statement did not specify the Department of Health's incentives to avoid employing oNompilo directly, the main reason for this arrangement can be seen in the aim of the programme to encourage strong community involvement. This was seen as being impaired if oNompilo were to be employed by the health sector directly.

As the quotation above and previous discussions have highlighted, during the time of the field survey, the two NGOs were responsible for the CHW programme in all districts, including the provision and support of training, general management as well as financial administration. Central financial administration was in the hands of The

Valley Trust, who divided the annual grant received from the Department of Health along district-responsibilities (*i.e.*, TVT and PPHCN had divided responsibilities for the health districts, though TVT was responsible for all the districts that were part of this research). At the time of the fieldwork, most CHWs had direct contracts with the NGOs, although some were still employed by hospitals (the old KwaZulu-scheme).

The NGO-based arrangement already described avoided the direct employment of CHWs by the DoH. However, the long-term policy of the programme stipulated the active involvement of smaller, community-based organisations in all districts. Thus, the devolution of financial administration responsibilities to local community-based organisations (CBOs) or Community Health Committees was part of the aim of increasing local accountability and control of the programme. However, a successful devolution of financial responsibility strongly depends on the existence of viable local community-based organisations, which are sustainable units capable of such administrative responsibilities.

This emphasis on the community-driven aspect had led to an additional task for the implementing NGOs that involved the training of and stepwise transferral of responsibilities to local organisations. However, while the KZN DoH had aimed that this process should be finished by the end of 2004, progress was relatively slow. However, in a couple of areas, devolution of responsibilities from the provincial NGOs (TVT and KZN PPHC) to local CBOs has taken place or was in development. These CBOs were namely:

- & Siyabona [Ugu North],
- & Maymore [Amatatiela Municipality] (both have taken on financial administration responsibilities)
- \$ as well as Sibambisene District Partnership, Khanyiselani [Greater Kokstad Municipality]
- & and Zibambeleni [Umvoti and Ntunjambili] (both were in negotiations, as off June 2004) (Anonymous, 2004)

According to an intermediate analysis, the poor response by existing local organisations could partially be attributed to the lack of long-term contracts and insufficient resources provided for the CHW programme implementers (Anonymous, 2004). However, by early 2007 the KZN Department of Health had tendered for implementing CBOs for the various districts and transferred responsibilities from the original NGOs to smaller CBOs (The Valley Trust, 2007). This offers the chance for

closer contact between communities and the administrative units, but its sustainability and effectiveness will only been shown in the future.

5.3.5.2 Primary Health Care Supervisor (clinic or hospital level)

The Primary Health Care Supervisor is based at a health facility and is responsible for the implementation of the PHC package. At clinic level, it is often the head nurse of the facility. In the context of the CHW programme, they collaborate most closely with the Facilitator. CHFs are also based at health facility level, where they work closely together with the nursing staff or may even be a member of staff themselves. Thus, they are ideally placed to enable communication and exchange of information from the community to the clinic level and vice versa. However, given the workload of nurses at facility-level and the tasks related to CHW supervision and training for CHFs, the monthly meetings with all local stakeholders are important to ensure communication even at facility level.

"Then these, the Facilitator and the PHC nurse, they should be meeting again at least once a week, but I'm not sure. It should, we already said this should happen, but people cannot be forced. But in reality they should be meeting once a week." (CHWP manager C, 2004)

Nonetheless, CHFs' direct line accountability lies with the PHC Supervisor, whose responsibilities involve the transfer of data (including CHW programme data) to the district level.

"All the primary health care nurses in the district, they will then report to the coordinator." (CHWP manager C, 2004)

Furthermore, in close collaboration with the CHFs, the PHC Supervisor can identify specific community-mobilisation or prevention programmes that should be implemented after the necessary training of CHWs. Here, PHC Supervisors are also actively involved in in-service training. In some instances, clinic-based supervisors also took on additional responsibilities, for example by developing referral forms most appropriate for local needs.

However, while there were numerous positive examples described by interview partners, there were also instances where attitudes towards the CHW programme were not always supportive. However, the examples experienced were targeted less against the role of CHWs than against specific management details in respect to the running of the programme (e.g. CHFs' training background, see above). Nonetheless, further training of clinic and hospital staff in the Primary Health Care concept would contribute further to establishing effective networks between community and facility level.

5.3.5.3 District-level Community Health Worker coordinator

As has been described earlier, South Africa's health care reform aimed to establish a district-based Primary Health Care system. This meant that local programme implementation should be driven from the district level, as is the case with the CHW programme. However, the devolution of responsibilities to functioning health districts was the last step in the transformation process. This meant in the case of the CHW programme that the transfer of responsibilities to the district level happened relatively recently. Thus, a manager stated in 2004:

"The co-ordinator, they must be placed in the district. The relationship, at least, they will be overseeing each district. So at least the person would. It's a very new thing; we did not have this kind of a person. Just for a couple of month, five or so. I'm not sure. But by right, they should have their job description and be appointed. But I think at the present moment, I'm not sure, if they are dedicated or not."

While details of their job description may adjust still, the main task of CHW Coordinator is the management of the programme for the whole district. This involves the selection and appointment of Facilitators, support and supervision of Facilitators as well as spatial allocation of new CHW posts. In this context, they are also responsible for data collection and feedback from and to all Facilitators, and for the transfer of data, via the District Health Information Officer and District Manager, to the provincial level:

"The information, once it gets to the district, is then taken to the province. From all the various districts. Before it goes, this (CHW) co-ordinator would report to the district manager, because this person (CHW co-ordinator) reports to that one, the District Manager. She would write a report and take it to this person. This person may decide that he or she will send the same information to the province. But at the end of the day it's the manager who must ensure that the report is correct."

They may also be involved in specific training courses and additional supervision of CHWs. Challenges mentioned by interview partners were mainly related to the overall shortage of CHW posts, the impacts of high levels of mortality on staff turnover and the difficulties in providing sufficient transport for programme supervision. Furthermore, difficulties occurred due to the lack of feedback at the provincial level, which had been – at the time of the interviews – caused by the long vacancy of the Programme Director post.

5.3.5.4 Community Health Worker programme director

At the KZN Department of Health, provincial coordination is the responsibility of one specifically-appointed CHW Programme Director, who reports to the District Health System management structures at departmental level. Part of the director's task is the overall coordination of the programme implementation and expansion, which is intended to continue to achieve a more equitable allocation of CHWs. However, the Department is also the major role player in shaping CHW policy and future details of its implementation. This is, for example, relevant in the context of the expansion of the Comprehensive Plan, where decisions need(ed) to be made about the integration of oNompilo into this programme. Furthermore, funding for the CHW programme is paid from the provincial budget; thus financial allocations for example to implementing CBOs are made at this level.

The importance of the post of the provincial Programme Director in shaping the provincial programme and its progress was especially felt by CHW programme managers throughout the province when this post was vacant for a considerable period of time (more than six months). It delayed the appointment of district level coordinators and hindered overall programme progress and coordination:

"No, it is a provincial issue, this one. Because they are the people who are supposed to develop the structure and say that, now, we are advertising the post for this at this level, or whatever." (CHWP manager, 2004)

"And if there is that gap from provincial level, everybody is affected. Even the programme is affected itself." (CHWP manager, 2004)

"Though we are in the integration process if it wasn't the break that we had, we were maybe, we were planning that, the province planned that by December last year the integration process to be completed. But unfortunately there was that gap." (CHWP manager, 2004)

Again, this highlighted the importance of a well-established support and co-ordination mechanism from the district level, which with the appointment of a new Director (who continues to work in this function) should currently be stronger ensured.

6 The Community Health Worker programme in KwaZulu-Natal – an evaluation

6.1 Introduction

The previous chapter has introduced various role players within the CHW programme based on interviewees' articulation of organizational structures and processes. By describing in detail the selection processes and training as well as the day-to-day activities of oNompilo within the wider CHW programme management structures, operational and strategic themes have emerged, while some strengths and weaknesses of the programme could be identified. This chapter thus uses the opportunity to address some of these overarching strategic and operational themes explicitly (Section 6.2). First, the question is addressed whether KZN's oNompilo are indeed expanding the actual reach of health services (see Section 6.2.1). Then, three specific topics will be discussed that emerged from the interviews as being important to the overall programme and programme success, specifically the duality of CHWs' accountability, the role of transport, and information management related issues (Sections 6.2.2, 6.2.3 and 6.2.4). Finally, Section 6.3 uses the results from Chapter 5 and Section 6.2 to conduct a stepwise evaluation of the programme's potential to respond to the epidemic based on the conceptual model developed in Chapter 2 of this thesis.

6.2 Emerging strategic and operational management issues

6.2.1 Stigma and Community Health Workers' role in expanding access to care

As has been outlined in Section 4.2, the increasing pressures of the HIV/AIDS epidemic on the health care sector were one of the reasons behind the increasing national government support for an expansion of CHW programmes throughout South Africa. One of the main aims of this roll-out is the expansion of comprehensive health care services, especially to previously disadvantaged communities. The Primary Health Care concept, which sees health as part of a developmental agenda and thus fits well with the responses necessary in the context of HIV/AIDS, is also one of the political guiding principles behind this development (see Chapter 4). When examining the impact CHWs can have on improving access to health care, it is useful to examine the

different components influencing access. Thus, it is appropriate to ask if oNompilo have an impact on levels of awareness (e.g. that specific services exist), acceptability (in terms of trust and willingness), availability (e.g. their actual existence, but also in terms of time and distance) and affordability (in terms of income and time) of health care services.

Based on the description of oNompilo's role in KZN in Section 5.3, it can be argued that oNompilo are able to influence levels of awareness (e.g. of the existence of VCT services) and acceptability through their own health promotion activities and by improving referrals and other links to facility-based health care services. According to the results of the field study, one of the important aspects of CHWs' work is the promotion of health in general, which also includes the transferral of knowledge about existing facility-based health care services. This can consist of a general suggestion to utilise health facilities, or might be, as for example in the context of antenatal clinics, the provision of more specific information, e.g. on PMTCT services (see Figure 6.1 and Section 6.3, p.231). Thus, oNompilo are, with their continuing presence in the community and, ideally, regular visits to their allocated households, in a position to provide information about the existence of specific services and thus raise levels of awareness. If their active engagement at community level indeed leads to increases in health care seeking behaviour at the facility level is difficult to prove; it is also not always clear to what extent a generally overburdened health sector has any interest in an increase in client numbers. Nonetheless, managers indicated that there is a definite interest to raise awareness about specific, e.g. preventive, services and that oNompilo are well-placed to support this.

It should be pointed out that oNompilo's overall effectiveness in raising levels of awareness is partly person-dependent, but is even more so influenced by local expressions of training, support and supervision structures as well as the specific selection process and their acceptance within the community they serve. Here, variations encountered were shaped by the historical development of the CHW programme in the district or sub-district, the existing managerial support at both district and facility level and the specifics of the co-operation between the PHC Supervisor at facility level, the CHW Facilitator, the CH Committee, the CH Supervisor and the CHW. Community involvement, for example in the selection process, varied depending on the level of awareness and interest in community empowerment at the management level implementing the programme (see also Section 6.2.2). The second aspect when evaluating CHWs' impact on the improvement of access is acceptability of public health services. Acceptability is influenced by a multitude of factors, including their availability and affordability (see below), but also their perceived cultural appropriateness and quality of services, non-discriminatory treatment of clients, and the level of trust in health care staff's confidentiality. This notion of confidentiality and its impact on acceptability of services is equally important for a community's trust in a CHW's discretion, a point specifically relevant considering the stigma attached to specific illnesses, including HIV/AIDS. Social stigma can be defined as the act of identifying individuals as abnormal by fulfilling negative stereotypes that engender prejudiced attitudes. These negative attitudes are expressed in discriminatory behaviour, which can include social exclusion, verbal insults and even physical attacks (Heatherton *et al.*, 2000; Falk, 2001). Overall, effective response implementation to HIV/AIDS has become more challenging due to the widespread stigma attached to the syndrome, a fact certainly noticed in South Africa (Department of Health, 2006c, also see Section 2.3.2).

The existence of social stigma can influence services provision by CHWs, especially when they are providing services to families affected or perceived to be affected by HIV/AIDS. In the context of the CHW programme, it can have several impacts. Firstly, the existence of social stigma can influence people's health care seeking behaviour. The fear of becoming known as HIV-positive leads patients to seek support elsewhere, avoiding for example the local clinic (see Section 2.3.2). This is an area, where the normally advantageous fact of CHWs as part of their communities can have a reverse effect, since CHWs might be seen as more likely to be involved in local gossip than outsiders. The decision of clients to seek health care outside their local area, depending on the reputation of specific clinics, is a common phenomenon identified during this study, which actually has impacts for information and other management issues within the CHW programme (see Section 6.2.4 below).

Secondly, social stigma may impact on the quality and scope of services provided by oNompilo. ONompilo may harbour some specific prejudices themselves, which may influence their treatment of and attitude towards, for example, HIV+ people and thus affect the overall quality of their work. Local awareness of such behaviour will in turn impact upon the health advice and health care seeking behaviour of the clients of a particular CHW. Moreover, it may also accumulatively impact upon the overall reputation and success of the programme. Again, this is a specific area whose risk should either be minimised (during the selection process) or be addressed during training and regular supervision. Additionally, existing fears of infection may be
addressed by providing oNompilo with gloves and other home-based care utensils on a regular basis. Even without personal prejudice, CHWs are likely to be confronted with stigma during their work. For example, concentrating specific attention to particular households may single these families out, potentially increasing resentment towards them (e.g. perceived as receiving privileged treatment, if food parcels are only distributed to families with HIV cases, where others are equally lacking nutrition), and thus worsen the effects of social stigma for the members of these households. Equally, the success of the promotion of condoms by oNompilo is also influenced by the existing stigma attached to them (see Section 2.5.1). Furthermore, it is especially challenging or even culturally unacceptable to raise topics of safe sexual behaviour or STDs in gender- or age-discordant relations. Given that the majority of oNompilo in KZN are female, this likely results in a lack of outreach on these topics to men, further, for example, isolating HIV-positive men.

Thirdly, oNompilo themselves might be affected by stigma since they may be seen as associated with activities or being in contact with people with whom 'one should not engage'. Or, oNompilo may be HIV-positive themselves and attempt to avoid the feared effects of the stigma associated with HIV by trying to conceal their status. Such pressure is likely to have a negative psychological impact and thus may also affect CHWs' work. Equally, it may influence their own health seeking behaviour, thus potentially leading to additional losses in working hours (longer travels to distant clinics) or even to an increased morbidity (total avoidance of health care services).

However, the above statements are relatively tentative, since during the interviews with role players, including CHWs, stigma, as an issue affecting their own work or the programme, was not identified as critical. Overall, issues directly linked to stigma during the fieldwork were raised only twice, once by a CHW herself (see Section 5.3.2.3), and once in the context of providing specific services to orphans and vulnerable children (see below). This lack of importance given during the interviews can potentially be ascribed to the chosen methodology and the selection of interview partners; it may, however, also indicate that it is not perceived as a widespread problem or one affecting CHWs' day-to-day work in the ways described above.

Nonetheless, it is an issue that has been identified in the regionally-relevant HIV/AIDS literature as important (e.g. Department of Health, 2006c), and in the context of this fieldwork as existent, although likely with context-related spatial and temporal variations. Encouragingly, it appears also to be a situation that can be challenged by community-based activities and the active engagement of local leaders, as the

quotation below, referring to a special community-initiative supporting orphans and

vulnerable children, indicates:

"But what we wanted first was to mobilize the community, make them aware of the problem. Identify the problem. Look for the needs. (...) Fine, it was not easy. When we started, there was this stigma. You couldn't even, we couldn't even talk about HIV. It was a nightmare when we started. But fortunately, it came to our mind that the Department of Health was training the people. And then amakozi and isinduma locally were trained by the Department of Health. After that training, I think it was an eye opener, it became better. (...) The oNompilo were already trained by then by the Department of Health. So we decided that amakozi, the traditional leaders, should identify them for us. (...) It was not easy, because first we had to explain what the term vulnerable is, and an orphan. First, when we started, it was so critical, you know, because people couldn't identify. (...) Because the main thing was HIV/AIDS, but you know, they couldn't take it, they know there where things behind but not HIV. But as time goes on, they, you know there was that change. Although it's not so much." (CBP manager, 2004)

This emphasises that CHWs can become part of an initiative working against HIV/AIDS-related stigma; however, their own situation as members of the local community, its social and cultural structures and process have to be taken into account. Thus, training modules should be developed specifically recognising this particular situation. Equally, in some circumstances it should be considered if mechanisms for transferral of clients to services outside a specific community would be suitable to increase the level of utilisation of specific services, including VCT.

Returning to the topic of the CHW programme's role in expanding acceptability of public health services, it has been suggested by some interview partners and local grey literature (see Section 5.3.2), that acceptability can for example be increased by closer collaboration with traditional healers and by involving them in reciprocal referral schemes. This, however, has as yet only been achieved in some parts of KwaZulu-Natal. Additionally, the perception of the quality of CHWs' work is affecting their own levels of acceptance within the community. Here, again, the selection process and levels of training and supervision are important influences on the success of CHWs as the 'outer reach' of health facilities. Also important are the existence and use of referral forms and procedures, access to transportation and a working relationship with nurses and other local health personnel (see below). Thus, it can be argued that CHWs can play their part in increasing acceptability of services, including overcoming some of the problems linked to stigma. However, their own acceptability is shaped by their perceived overall effectiveness, which is strongly influenced by the way in which the local CHW programme is implemented.

In the context of increased *availability* and *affordability* of health services, CHWs' influence appears more obvious; however, here their role is primarily linked to those community-based services, which oNompilo provide directly. CHWs increase themselves the availability and affordability of health care by providing some of those

services in their communities, which otherwise would (especially in remote areas) not be available or affordable (e.g. due to transport costs). Furthermore, their services are provided free-of-charge and, in emergencies, due to their local residence, on an occasionally 24-hour basis.

CHWs' direct contributions to health care provision have been discussed in detail in Section 5.3.2.2, and will be evaluated in the context of HIV/AIDS in Section 6.3 below. Overall, these contributions are restricted by the level of (in-service) training they receive and by the equipment (e.g. basic medication, gloves, and soap) available to them. As CHW programme stakeholders in KZN highlighted, the work utensils oNompilo are equipped with do not only directly influence the service they can provide (safely), their symbolic value (*i.e.* not to come empty-handed) also has a direct impact on their acceptability to communities.

Equally, their ability to address a broad range of issues (and not only specialist topics) has been identified as contributing to the levels of trust oNompilo receive. But while their training is necessarily broad, it is naturally not as well-founded as that of health care professionals. Both the need for regular supplies of 'consumables' and good referral mechanisms highlight the need to establish well-functioning networks between the community-based oNompilo and the health care facilities. These networks can, for example, be strengthened by regular meetings and supervision (importance of transport access) and an improvement in data collection and usage. In conclusion, although there are a number of aspects within the CHW programme that need to be addressed (see also Sections 6.2.2 to 6.2.4), CHWs appear to offer a valuable contribution to expanding access to health care, especially in rural areas of KZN.

6.2.2 Community Health Workers and dual accountability

Acknowledging the overall potential of the CHW programme in addressing health care access and issues influencing health in general does not imply to ignore the many-fold obstacles standing in the way of a community-driven, but government-facilitated programme. Although some of the issues have been addressed in the description of KZN'S CHW programme above (Section 5.3), a short elaboration of the main discussion will be presented here in order to offer some insight into the effectiveness of the CHW programme in translating its potential in the context of the transforming health care sector.

It can be argued that one of the major challenges of the programme is the necessary balancing act between the two main tasks it aims to address: the extension of facilitybased health service provision to rural, disadvantaged communities at the same time as expanding a public health approach which seeks to empower communities in addressing wider issues impacting on the health of local people. This programme seeks to merge two systems which are clearly distinguished in the way they are structured and operated. While health facilities are usually based on strong hierarchical structures, communities often lack such levels of organisation. However, in order to achieve the aim of the CHW programme, both systems must communicate and interact successfully.

The approach taken in KZN ('the KZN model') has in some localities been proven to offer a complex, but achievable solution to this challenge by having, on the one hand, a clinic- or hospital-based Facilitator, whose tasks involve training and quality control as well as representing the direct link to local health facilities; and on the other hand community-based supervisors and committees who provide direct ties with the communities, are responsible for defining the specific scope of activities of 'their' oNompilo, and to whom oNompilo are officially accountable. The difficulties linked to the 'dual accountability' of oNompilo are meant to be overcome by regular meetings of all parties involved, which provide a platform that encourages the exchange of ideas and flow of information. The utilisation of regional NGOs or more locally-engaged community based organisations is identified as the mechanism to avoid the direct flow of finances from the public health sector to oNompilo, which is assumed to diminish the perception of their direct accountability to community structures.

Though the above summarised structures are promising to enable a successfullyoperating programme, numerous factors have compromised the above scenario and continue to do so. One of the main topics affecting the implementation of the CHW programme is linked to the fact that the major roll-out of the programme came at a time when South Africa's transformation process was not fully completed and important structures expected to facilitate the CHW programme's implementation and on-going management were not at all or not fully established. These included administrative structures at all levels of the District Health System, but specifically at the district level, where no programme coordinators existed when the major expansion of the programme begun.

Additionally, the envisaged important role by community organisations could only be fulfilled in those parts of the province, where fully-established community health committees or local community-based organisations capable of administrating the financial flows of the programme already existed. While some of the coordinating, training and supervision functions were taken on by the two regional NGOs acting as facilitating agencies, the rapid expansion of the programme expected by government targets often undermined the influence communities and democratically-elected community structures had on the programme. This was especially true where local implementation (CHW selection, training and deployment) took place before CH Committees or similar structures were established and/or their training was completed. Furthermore, it must also be acknowledged that the presumed interest in health issues may not always have the highest priority on a community agenda, while time and energy spent by individuals might be limited. Additionally, this can sometimes be compounded by individuals' disinterest in long-term community-level initiatives, triggered by feelings of powerlessness, continued internalised stigma and personal problems (e.g. unemployment, illness, poverty).

Overall, the CHW programme is often not perceived as community-owned, but as strongly top-down and KZN DoH-implemented. It can be argued that at the time of the research the KZN CHW programme did not often achieve its full potential in community-empowerment. Furthermore, the lack of active community involvement also has an influence on the specific tasks oNompilo conduct, on the success of CHWinitiated community-based projects and occasionally on the acceptability of CHWs themselves. Nonetheless, while specific programme implementation practices at the time of the interview were not always contributing to the success of CHWs' communitybased and even household-focused activities, CHW programme managers and oNompilo reported numerous cases where oNompilo were actively engaged in a range of activities that contributed, for example, to (small-scale) income-generation. However, all of the above are tentative assumptions made on the basis of the conducted research interviews and local documentations, but not on a detailed community-based survey and evaluation. Additionally, a number of developments have taken place that have the potential to strengthen future community involvement and address some of the issues linked to CHWs' dual accountability: the appointment of district-level coordinators, the advancements made in training Community Health Committees and the transfer of programme-facilitating responsibilities to smaller, district-focused NGOs. Thus, there are on-going developments shaping CHW programme effectiveness in the area of community development.

6.2.3 Access to transportation

On a more practical level, the availability of affordable and feasible modes of transport has been highlighted as a relevant issue for programme coordination and implementation. This is significant for the work of all the CHW programme role players, especially those active in rural areas. For example, in very sparsely populated areas of KZN, distances between individual homesteads are too large and thus require CHWs having access to some form of transport for household visits. The limited, publicly-available transport (mainly minibus taxies) does not always frequent the routes oNompilo require, and furthermore, given the lack of a refund system, add a strain on their limited financial resources. Thus, the number of households visited as well as the frequency of such visits often decreases with growing distances between homesteads. While this is taken to some extent into consideration by allocating household numbers according to the degree of urbanity (see 5.3.2.2), oNompilo have identified the lack of suitable transport and the amount of walking required for household visits as challenging.

Equally, the effectiveness of specific referral procedures relies on functioning linkages between the communities and facilities. As has been described above (cf. Section 5.3.2.2), the collection of samples (e.g. for a TB test) and thus the identification and treatment of specific illnesses can be vastly improved if regular collection services are established. However, the role player within the CHW programme, whose transport needs have regularly been identified as being the most important for the programme's success, are CH Facilitators, whose spatial range of activity is the largest. This especially applies to their supervisory activities, which include quality control of CHWs' work in the communities as well as meetings with local Community Health Committees and CHW supervisor.

According to some programme managers, in many of the very rural districts of KwaZulu-Natal, one of the limiting factors to appropriate supervision through Facilitators has been the lack of access to transport, *i.e.*, cars. The relevance of this problem, especially for rural areas, has also been recognised at the national level:

"There are provinces that are extremely rural, they're looking at the Community Health Care Worker working in deep rural areas together with out-reach health services. So, the mobile clinic that's going out will have a Community Health Care Worker attached to it, who can provide other services while the nurse is busy in that area. And also, support that community. So that is another sort of redefining it. Because usually, when you see a Community Health Care Worker, we see a township or informal settlement of some sort that is nicely geographically defined, from here to there. And the other conflict is: how do we use these people to support deep rural communities, where you might have three or four farming communities in close proximity to each other, or where there is really few and far between? How do you support them then? How do they work then together with the primary health care nurses that are riding around? So that's the other question." (DoH manager, 2004)

Over the years, attempts have been made to reduce the access problem through flexible agreements with hospitals and clinics. In KZN, many, though not all, Facilitators have access to transport from the hospital or PHC services:

"The district health office was helping us a lot to draw a plan, how we're going to work, how we are going to share the cars. Because with this programme, cars are very important. It is very important that we have got the cars for supervision. So unfortunately, we didn't have enough cars. We had to make a request to the District Office, to the transport officer to give us some cars. And fortunately he gave us one. And here, from (place name) Primary Health Care Mobile, I could also give them two cars. So we are sharing and plus one from (a different hospital). So that means for the programme that we got four. Two from here, one from the district and one from (the other hospital). I really encourage the sharing. They must share the cars, so that they can supervise properly. So, what I also did here, we have got our plan. I encourage them to draw their itinerary for every month, even if they share the transport, but they should still use their itineraries so that the supervision is balanced." (CHWP manager A, 2004)

While this problem has been successfully addressed in some areas, in others the limited availability of vehicles or the complicated coordination process with other service providers still limits the effectiveness of Facilitators. This effectiveness, in turn, can have a significant impact on the success of the programme. This, on the one hand, includes a lack of quality control where there are no or only very limited opportunities for Facilitators to pay visits to oNompilo in their own community environment. Furthermore, oNompilo left on their own sometimes feel unsupported and discouraged, especially if there is also a lack of regular meetings with Facilitators and other programme members. Here, suggested ideas, including the refund of travel expenses or some form of travel allowance, may offer a solution if the necessary (political) support is forthcoming. Also, indicated by the quote above, mutual coordination can improve the efficiency in the use of available transport. In the long-term planning, a spatial optimisation of oNompilo, their allocated households, health facilities and Facilitators should be incorporated. This may include the increase of oNompilo and Facilitators in some very sparsely-populated areas of KZN, but predominantly relies on careful planning and, where possible (see below), alignment of catchment areas.

6.2.4 Data management

A functioning reporting system has been identified as a vital element for programme success, since data collected within the CHW programme is considered important both for programme management and evaluation as well as for use in the wider health and social sector community. For example, CHW reports on the increasing occurrence of specific health problems in their community can help focus and direct the necessary

responses (see Section 5.3.2.2). Collected data can also enable programme managers at community (*i.e.* the facilitator), district and provincial level to monitor and evaluate programme impact and progress throughout various stages.

Thus, a significant part of CHWs work involves the ongoing recording of householdand client-specific data:

"Everyday, when they visit a home, in each home, they write a report about each task, whatever they have done. They keep a record for themselves, their own report, and they leave another record in the household. So if you go into a household and ask for that card, they give it to you and you can see what has been done for this household." (CHWP manager, 2004)

While this manager points to the motivation for record-keeping to support programmerelated supervision and micro-management purposes, a manager from a different district expands:

"Let me explain what we are trying to do these days. In the clinic, they record their activities. Like for instance, if they treat a person for TB, they record this. But now, we want to do something similar. If we do it this way, I think it will improve the situation. Now I am saying that they must have a book like this one [shows a black notebook], where they write down the health education they have done and the problems they encounter. They already used to do some record keeping. But now it must be strengthened, because we want to take this information to our district information officer. Because normally it ended up at the clinic level: it used to be the communication between the clinic, the facilitator of the area and uNompilo. But now, for instance, we do encourage them to use it as a book, so that we can take that information to our district information officer. She or he will get the summary from the clinics." (CHWP manager, 2004)

The data collected by CHWs can be household- as well as client-specific data and summarise the tasks performed at each household. This includes information on the household (e.g. number of family members, age, and illnesses) and dwelling structures (e.g. access to water, existence of toilets) as well as on the specific tasks performed during each visits. As indicated above, a copy of this record should always remain in each household (referred to as Family Health book). Additionally, CHWs' monthly reports also summarise the community-based programmes (see above) they have been engaged in.

At the time of the interviews, Facilitators were summarising all 'their' CHWs' monthly reports and submitted them either to the responsible PHC supervisor, or if employed by one of the NGOs, to a specific programme manager there. One extract of a Facilitator's monthly report has been presented in Figure 5.8, another is shown in the photograph (Figure 6.1) below. These reports can reveal locally specific or more generally-relevant issues and, if summarised versions are discussed with CHWs, can also be used as a tool to structure feedback and supervision.

2 ADULTS HAD NORMAL DIARRHOGAL INFECTIONS AND THEN WERE TREATED AT HOUSEHOLDS LEVEL. THE PEOPLE WITH DIFFERENT SKIN DISERSES WERE ENCOURAGED TO VISIT LOCAL CLINIC. FOR TREATMENT.

VUMBER OF PEOPLE LIVING WITH HIV/AIDS WERE NOT BOTTINGE 5 BEDRIDDEN PATTENTS WERE IDENTIFIED, THEY ARE ALL FEMALES.

CAMPRIGNS

THE ENCOURAGING PEOPLE TO ATTEND VOLUNTARY CHLLS ARF SURING MOBILE CLINIC. THERE ARE TESTING LAUNSELLING AND NO COUNSELLORS AND GET THE CLIENTS and e DULASIONS 15 TEGNAGERS E 5 ADULTS TESTED DISAPPOINTED. WERE PREVENTION OF SEXUAL CHWS FOCUSED ON ALI. KNANYLISLIA SIGNS & SYMPTOMS INFECTIONS AND 175 TRANSMITTED FACILITATED IN CHURCHES COMMUNITY THE AWARENESSES WERE HOUSEHOLDS LEVELS MEETINGS AND ¥ #07

FRAINING OF COMMUNITY HEALTH COMMITTEE.

Figure 6.1: Extract (2) of a CH Facilitator's monthly journal reporting back on CHW performance (Photo: Clark)

However, one CHW programme manager noted that the quality of Facilitators' reports varied considerably and that there were too frequent delays in reporting. It was suggested that all levels within the CHW programme need further training to improve consistency and effectiveness of reporting mechanisms.

Also, when asked about the existence of a structured reporting form for all Facilitators, one programme manager replied:

"No, not yet. But what is happening, we have one, because we do have our own facilitators that we employ as The Valley Trust and PPHC. So we do have a guideline – at least when we receive the CHFs' reports – this is how we want to report. But for the one that are employed by the DoH, I don't know." (CHWP manager C, 2004)

The lack of standardised data is one of the reasons, why any programme evaluation looking at the effectiveness of CHWs' community-based interventions has currently to remain relatively cautious.

Thus, at the time of the interviews, some level of data collection and record-keeping was taking place, but, as indicated by the quotation above, there existed no

standardised structure for its collection, transmission and use throughout the different districts yet. District programme managers still developed their own, district-specific response – however, along relatively similar lines. Interview participants also pointed out that the quality of information recorded varied greatly, criticising the occasional, too detailed account and evaluation of people's life histories, or the lack of any record of household visits neither in the households nor with the CHW (cf. also Anonymous, 2004). Thus, the quality as well as the kind of data was not always appropriate for programme-specific management nor, as some interviewees stated, was it useful for a transmission to the District Health Information System (DHIS) (see below). However, some of these issues were anticipated to decrease with further training and a more structured approach to record-keeping and reporting:

"The notebook will be structured. It will have sections for the health talks, for various types of information, for different problems. This issue has been sorted out, that person was treated for TB and so on. So maybe, as time goes on, we or maybe even the information officer can develop a structured system or form, something like this. But at the present moment, we are using the Family Health book." (CHWP manager A, 2004)

The ultimate aim is seen as an integration of data collected by CHWs into the DHIS, utilising the support of district-based Health Information Officers.

"No, the district information officer takes all the information to the province and on to the national. But at the present moment, for the Community Health Workers it's not yet well structured. They know that they do form the Community Health Workers how they do it, and they even know that if we've got this outbreak, these are the people who are working and who we are using. But it's not well structured. But that information will go up. But even if they report the facilitators, right, she will take that information up to the province, eventually. To our district manager up to the province." (CHWP manager A, 2004)

However, data collection and integration into the DHIS are further complicated by the free choice clients have in selecting a clinic they visit. Thus, there are instances where patients do not use the health facility the oNompilo of their area is linked to, complicating referral as well as follow-up procedures. This mis-match of catchment areas has an additional impact on the complexity of information flows, and has an impact on data collection for CHW programme management. In particular, the specific characteristics of household-level and facility-level data are one of the reasons for the delay in integration of CHW-collected data into the District Health Information System. At the time of the field work, the recent appointment of district-level Health Information Officers was seen as providing a chance for improved data collection, information flows and information-based management, but no solution had been suggested to address the spatial problem described above. Improving information flows (up and down the system) is also of highest relevance in the context of CHWs' involvement in HIV/AIDS response, most importantly but not only in respect to treatment support and patient follow-up.

6.3 oNompilo in the Context of the HIV/AIDS Pandemic - a Perspective

When attempting to evaluate the extent to and the way in which CHWs can contribute to the HIV/AIDS epidemic, it is necessary to recall some of the key aspects of the epidemic as outlined in Chapter 2 and illustrated by the conceptual model below (developed in Chapter 2).







The HIV/AIDS epidemic is based on a complex process with multiple interlinking aspects influencing the spread of the epidemic, its impact and our response. As has been outlined earlier in the thesis, driving factors of the epidemic can be found at the individual as well as the macro- and micro- structural levels of society. Macro- and micro-structural level drivers such as governance, culture, religion - as well as levels of mobility, violence, women's rights and access to health care - are all relevant, since they directly or indirectly influence bio-medical and behavioural factors on the individual level. Of course, this is not to argue that all of the latter only depend on the former; for

example, genetic variations and personality traits vary independent of mentioned micro- and macro-factors. And while drivers of the epidemic can be found across the described levels, this is equally applicable for the impact of the epidemic, which can be found at the individual, household and community level – but, due to its scale, also in society at large (micro- and macro-scale impacts). Hence, any comprehensive response aiming to minimise further spread as well as mitigate the impact of the epidemic thas to address all these different levels.

Returning to the starting question of this research now, "What contribution can the CHW programme make to the HIV/AIDS response?", in the following section an attempt is made to deconstruct this complex problem into its layers and to evaluate CHWs' contributions at various levels of response separately, before summarising an answer to the overall question at the end of this discussion.

But before addressing CHWs' role in all the three identified aspects of response (Prevention; Treatment/Care; Impact mitigation), it is worthwhile highlighting again that while CHWs might contribute to addressing the epidemic, at the same time they feel its impact on an individual and programme-level. Based on the review of the CHW policy development in KZN and South Africa (Section 4.2), it can be argued that while the epidemic was not the only factor behind the programme's re-established importance in national health policy, the dual impact of the disease on health care worker numbers (reducing) and health care demand (increasing) has certainly been a significant driver. Apart from providing an incentive for CHW programme expansion, the epidemic also impacts directly on the programme itself. ONompilo do not live in a vacuum or safehaven, they often live in the communities most severely affected by the epidemic. CHWs' own exposure to the illness is equally influenced by the described factors driving the epidemic, their lives equally changed by its impact. As the interviews conducted in KwaZulu-Natal highlighted, oNompilo themselves are infected with HIV or are affected by it: they have children, partners and other (extended) family members who fall ill and require care, impacting on their own emotional and physical strengths as well as the available time and resources. Thus, the CHW programme also has to deal with the impact of HIV/AIDS on a management level, for example when addressing high morbidity and mortality rates. High staff turnover increases training needs for CHWs (and others), which - as the programme discussion in Chapter 5 showed - has an impact on supervision provided by CHFs. Inappropriate supervision, again, can influence the quality of CHWs' work and therefore also the response of CHWs to the HIV/AIDS epidemic (see also Section 6.2.2).

However, leaving these aspects aside, at this stage it is necessary to actually evaluate the response contributions possible within the scope of oNompilo's activities. While there are three primary areas that will be addressed based on the interview-informed programme examination in Chapter 5, the following section will begin with an analysis of CHWs' impact on efforts to prevent a further spread of the epidemic. Later on, this evaluation will be followed by an analysis of the programme's role in the area of treatment and care as well as its potential to mitigate some of the epidemic's impacts. As has been emphasised previously, it was beyond the scope of this research to investigate current levels of effectiveness of specific interventions; rather, the following discussion provides an insight into the areas of response which oNompilo can potentially address, while identifying existing and potential obstacles.

As stated, *prevention* efforts in general should address all aspects driving the epidemic, *i.e.*, not only the bio-medical and behavioural aspects, but also the major influencing factors behind these individual-level ones. Especially given the fact that there is currently no bio-medical solution available (*i.e.* no vaccine), the first section of this discussion of CHWs' role in HIV/AIDS prevention will thus start with perhaps less-expected considerations, and will ask what role CHWs can play when addressing such issues as poverty, gender-inequity, violence and also access to health care.

The first driving factors to consider as influences on the HIV/AIDS epidemic (see Figure 6.2) are the social and structural macro factors including wealth, culture and religion as well as general economic and governance structures. It can be argued that throughout history, locally-initiated processes of change have occasionally been influential in shaping social and structural macro-factors of society. However, judging from the organizational dynamics experienced during the field period in KZN, the provincially-implemented CHW programme does not display any characteristics of a movement aiming for wider societal change. Activities of CHWs and other programme members are not attempting to influence processes outside the individual, local and potentially provincial level context. But while socio-economic and cultural drivers of the epidemic such as poverty and gender-inequity are deeply rooted in global and national structures, they also have local expressions which can potentially be addressed at the community level.

Thus, at the micro-structural level, one noteworthy example is the fact that the existence of the programme itself can contribute to the empowerment of local communities and specifically women (who make-up the majority of oNompilo). It is relevant in this context that communities are encouraged to become actively engaged with their own local situation and address or challenge problems by, for example,

accessing and utilising specific funding sources available for community garden or toilet-building projects or by alerting government officials to local needs. Furthermore, community members actively involved with the programme, *i.e.*, oNompilo and Facilitators, to a lesser degree also CH Committee members and CHW supervisors, receive training in a wide range of skills. For CHWs, their work allows them to receive small stipends, which in areas of high unemployment can be a significant contribution to family income and thus support more than just the individual oNompilo. Also, all levels of training provided during programme implementation increase the employability of participants even outside the programme's context. Overall, the existence of the programme has the potential, through greater community involvement, community-based projects and increases in skills levels, to directly contribute to educational and income levels of the local population. Additionally, positive developments at the community level could, theoretically, contribute to overcoming high levels of hopelessness, thus impacting on specific (sexual and other) behaviours influencing health (including HIV infections).

When analysing CHWs' role in improving micro-structural conditions influencing vulnerability to HIV infection, it is also worthwhile considering the extent to which CHWs' activities can contribute to gender equity. The direct impact of CHWs on this complex topic is hard to measure, but some of their activities are indirectly linked to empowering women by supporting greater economic independence. There were no reports on oNompilo initiating direct discussion of women's rights and status; however, they are for example taught how to identify and subsequently report and support domestic abuse cases. This is an area which directly links to their possible influence on reducing levels of violence and, perhaps, relates in some cases to the ability of women to make choices in terms of sexual practice. In respect to CHWs' work, it is an issue similar to gender equity to the extent that they can attempt to raise awareness and address issues both at a community level in collaboration with other community representatives. They can also identify individual problems, and connect victims of violence and abuse to the relevant service (e.g. social services, police, and health services). However, based on the interviews, it is probably appropriate to judge that it is beyond the scope of individual oNompilo to target the root causes of, for example, endemic violence. Still, an in-depth, community-based study of CHWs' performance could potentially provide a more comprehensive answer.

Overall, CHWs' activities can influence, although marginally, several social and structural micro-factors that have an effect on levels of risk behaviour and associated HIV infection. However, the area where they are most suitably-placed is addressing the

access to health care – or better its lack, which is seen as another, perhaps more intuitive, aspect identified as a micro-structural driver of the epidemic. Their role in engaging with individuals as Primary Health Care deliverer has been addressed in Section 6.2; their role in the specific context of HIV/AIDS will be discussed in more detail below.

This discussion of access to health care as a micro-structural factor brings us directly to CHWs' role in prevention efforts targeting the individual level. As has been stated earlier, the above-considered macro- and micro-level drivers of the epidemic are significant, because they directly impact on individual-level factors, which influence personal susceptibility and vulnerability to HIV. However, the following part of this discussion on prevention will consider the way in which CHWs can strengthen efforts at the individual level. Here, bio-medical and behavioural factors are addressed separately, although there are overlapping areas and this distinction within CHWs' work routine is not clear-cut.

The first area to consider is the influence CHWs can have on the level of specific biomedical factors increasing the risk of infection. Accepting that certain biological factors are independent (gender of individuals, distribution of sub-categories of virus), there are still areas which CHWs are in a position to address. Feasible areas for CHWs' contributions are the recommended increase in levels of (hygienically-conducted) circumcision in men and the decrease of STD levels in both genders (see Section 2.5.1.1).

Regarding male circumcision, from the interviews and grey-literature analysis conducted it was not apparent to what extent CHWs receive specific training on the topic. However, circumcision is a highly culturally-influenced topic, and while it can be discussed on an individual level, this is likely to be mentioned mainly in the context of potential HIV risk-reduction strategies. It is noteworthy that sexually-transmitted diseases are a sensitive and stigmatised topic and that also the gender of both the CHW and the client will likely influence whether the topic will be raised during household visits (see also Section 6.2.1).

Most suitable for a bio-medical health sector intervention is the identification, treatment and control of sexually-transmitted diseases, which have an influence on the transmission rates of HIV (see Section 2.3.2). In this context, interestingly, the role of CHWs can be seen as divided into a prevention as well as a treatment/care component similar to the aspects of HIV/AIDS response (which is often also sexually-transmitted). CHWs' training covers STD prevention and treatment in the context of their HIV/AIDS module and they are trained to address sexual health issues during their home visits. The training should enable them to identify potential cases, when typical symptoms are described by clients during household visits. Then, CHWs can refer clients to the health facility in order to receive treatment. At the time of the field investigations, CHWs themselves were not involved in the syndromic management of STDs (see Section 2.5.1.1). Their role in this context is to raise awareness of specific disease symptoms, explain related dangers and the existence of treatment. This is a typical example where they can contribute to health prevention and treatment access, but also one where it is important that the selected CHW has the trust of community members and the necessary health sector support.

A part of CHWs' activities in the field of HIV prevention which is closely linked to both bio-medical and behavioural aspects is their role in increasing communities' access to facility-based HIV/AIDS-specific services. Due to the expansion of services provided under the Comprehensive Plan, this is also an area, where activities in prevention and treatment/care increasingly overlap. ONompilo raise awareness of both VCT and PMTCT and encourage clients to utilise these services. According to the South African Department of Health, all (fixed) health care facilities are now providing VCT services, which have been identified as an important method to strengthen the prevention message as well as open an access point for HIV/AIDS treatment services. However, VCT capacities are not always fully used, pointing to an area where CHWs work in raising awareness and providing encouragement is important, yet where this potential is not fully utilised. Again, this also links to more general problems like difficulties in accessing facilities, the prevailing stigma and potentially a lack of awareness or acceptability of the now increasingly available antiretroviral treatment (see Section 6.2.1 and below).

According to interview partners, in the context of PMTCT (see Section 2.5.1.2), oNompilo are providing valuable services by raising awareness of the importance of antenatal care, by referring them to clinics, and by providing support and advice for young mothers. When CHWs refer pregnant women to PHC-facilities, this links them also to HIV/AIDS-related services like VCT as well as PMTCT programmes, where they exist. If pregnant women are tested as HIV-positive, CHWs are expected to advise suitable feeding options for the baby as well as suggestions on nutrition and healthy living in general (see below). Self-reported statements by CHWs have identified this as an area which they are well-placed to address. Again, while oNompilo's importance as the community contact in this context was stressed, there were also difficulties mentioned in establishing strong linkages. One challenge, for example, is the above (Section 6.2.4) described mis-match between CHWs' reporting lines to one specific clinic and the free choice clients have in selecting their clinic. This has, for example, an influence on the effectiveness of specific programmes (like PMTCT and ART) that require reliable, patient-specific information flows from the facility level to the responsible oNompilo.

In the context of HIV/AIDS prevention efforts by CHWs, a more common task that they are associated with is the area of behaviour change. Here, their role is to transfer knowledge on safe sexual behaviour in general, and on HIV/AIDS-related programmes like VCT in particular. Some oNompilo are also distributing condoms, although this could not be identified as a standard practice. While there are possibilities to evaluate statistically the number of pregnant women transferred by CHWs or the number of households they counselled on STDs and HIV/AIDS (but no data were available during the research), it is difficult to identify the specific impact CHWs have on sexual health practice. South Africa is running successful information campaigns, and levels of HIV/AIDS knowledge are high. However, this knowledge, not surprisingly, is not always translated into changed behaviour patterns. Here it is suggested that CHWs' familiarity with local and family circumstances have the potential to provide more specific and appropriate advice.

Summarising the above remarks on oNompilo's role in HIV/AIDS prevention, it can be said that oNompilo play an important role in complementing prevention campaigns and the existing health sector efforts in addressing some of the individual level drivers. In the broader context of addressing socio-economic and other micro-conditions that facilitate high rates of HIV incidence, a clear potential for important contributions can be identified. However, to fulfil this potential, an even wider functioning support network including Facilitators, health care facilities, the community-level structures but also other social sector services is of fundamental importance.

The second broad response area to consider is CHWs' role in addressing HIV/AIDS specific *treatment and care* needs. The advancement of the epidemic and a growing percentage of the population reaching the AIDS stage of HIV infection are increasingly overwhelming facility-based health services. However, while the continuing expansion of the comprehensive treatment and care package affects the workload of health care staff, it also provides an area for mild optimism. In this context, the discussed role of oNompilo in raising awareness of and linking clients to available services like VCT,

PMTCT, DOTS and increasingly also ART is an important way of improving access to such services.

However, CHWs also have the potential to be actively involved in treatment; not through the prescription of medicine but by supporting patients taking medicine on a daily basis. The TB-DOTS programme is an area linked to HIV/AIDS where CHWs' valuable contributions have already been proven; now there is also a potential role for CHWs to become treatment supporters for patients on antiretroviral treatment. After South Africa's decision to include antiretroviral therapy into the package of services provided to PLHA, massive training efforts became necessary and have taken place throughout the country. Many CHWs have also received updates in this area. CHWs' specific training covers details on various stages of HIV-infection, symptoms of common opportunistic infections (e.g. TB), basic treatment strategies, nutritional advice and detailed instructions on home-based care provision (see Appendix A3, p.248 and A4, p.261). This again highlights the importance of in-service training, which should also ensure that highly-technical knowledge is taught at a detailed enough but appropriate level for CHWs' needs.

An additional area of CHWs' activities is linked to the specific dietary needs of HIV patients in general and those on ART in particular. ONompilo are trained in providing nutritional advice, but are also integral to the nutritional supplement programme run in the context of the Comprehensive Plan. Again, this is an area which relies on functioning networks including one responsible for the distribution of equipment and goods like food parcels (see Section 6.2.4). This, and also previous cautionary remarks, are not aimed to question the overall capacity of the CHW programme to deliver services, but to identify areas of potential difficulties in achieving effective results. However, most of these issues are not fundamental, but can be addressed by appropriate measures taken by management. Nonetheless, especially in the context of the Comprehensive Plan, some interview partners stressed the importance of not overburdening oNompilo, since that might be detrimental to the quality of services delivered. Here again, it is important to involve the Community Health Committee and other community-structures in order to identify the kind of services most needed.

Nonetheless, there is a further area which constitutes a significant part of CHWs' HIV/AIDS-related work at household level – the support as well as the provision of home-based care. As highlighted by the interviews, their main task in this respect should be the transfer of knowledge and skills in care provision to the family-caretaker.

However, in many households no (capable) person is available (or willing) to provide regular care, which increases the workload for CHWs. This is particularly relevant in areas without specifically-trained home-based care workers.

Many interview partners did not identify CHWs' part in providing treatment and care for people living with HIV/AIDS as most important to their role, but strongly emphasised their function as prevention workers. However, most conceded that in many households visited by oNompilo, the 'hands-on' provision of services is increasingly important and contributes to increase acceptance levels of CHWs. The provision of all oNompilo with a basic care kit, which is fundamental to ensure their own safety, was not yet provincial policy at the time of the field investigation, but had only been addressed in an unsystematic way, especially by local clinics. Again, successful involvement of CHWs in HIV/AIDS-related care and treatment requires close cooperation with local health facilities, especially in respect to the provision of complex antiretroviral treatment schemes.

The last part of this discussion focuses on the question to what extent oNompilo can play a role in HIV/AIDS *impact mitigation*. The epidemics' impacts are manifold, as has been described in Section 2.4 of this thesis. Here, however, only those aspects will be discussed where CHW can have a tangible role to play.

In particular, this includes their role in identifying and supporting orphans and vulnerable children (OVC) in their communities and their capacity to link them and other eligible people to social grants and other services. Both of those fields have overlapping areas, and strongly draw on CHWs potential to support communities in accessing services. Their importance here lies strongly in their training, which provides them with knowledge on existing schemes and eligibility criteria, and in many instances even in their capacity to read and write and thus provide assistance with necessary forms. Most social grants are relevant in the context of HIV/AIDS since they are often the only regular income affected families receive (see Section 2.4.3.2.2). This includes in particular the Disability Grant (AIDS patients are eligible), and the Child Support or Foster Care Grants (for families with children or additional responsibilities for orphans). Additionally, all community-based projects aimed at improving income levels, community support, nutritional levels or environmental conditions in the communities have potential to improve community members' capacity to cope with the individual as well as household level impact of HIV/AIDS.

Finally, considering the epidemics' overwhelming effects on health care services, the employment of CHWs in addition to other health facility personnel can already be seen as an attempt to deal with this impact. However, successful management of thousands of additional ancillary health care staff also requires additional human resources at higher-qualified levels for supervision and training. In situations where no additional Facilitator posts were created, this actually increased the strain on existing Human Resources. Furthermore, the CHW programme also creates additional costs for the provincial Department of Health, although many of the financial resources came directly from the national level (Expanded Public Work Programme). Thus, the continuing expansion of the CHW programme can only be deemed appropriate if it can actually deliver on some of its aims, namely if CHWs can contribute to address the high patient case load or if they can provide important, otherwise non-existent services.

Summarising the above, it can be emphasised that the most important areas identified in which oNompilo contribute to HIV/AIDS response are the following:

- **X** To increase knowledge of prevention, treatment and care and translate it into a personal context at household level.
- X To increase access to health services, especially treatment for STDs, VCT and PMTCT service, and, where applicable, ART
- X To engage communities in developmental projects with income-generation and lifestyle implications
- **X** To provide direct home-based care in cases where this is not being provided by family or other carers.

It could be argued that most of the areas mentioned above are also being individually addressed by other actors. However, the aim of the CHW programme is to provide this broad range of services on a comprehensive level, in an accessible fashion from within the community and with a level of coverage especially in rural areas unequal to other services. This supports the argument that oNompilo are more than just an additional layer of health sector workers and that, indeed, they have an important role to play in HIV/AIDS response.

But, in order to achieve their full potential in strengthening the Province's HIV/AIDS response, numerous challenges have to be overcome. Some of these have been described in this discussion, others earlier on in Section 5.3. Assuming that the high-level political and financial support of the programme continues, major factors which have been identified in this research as impacting negatively on programme effectiveness are summarised below:

On a community-level

- Rapid programme expansion leading to a lack of active community involvement (especially where training and support are lacking or were started late).
- & Lack of incentives for CHW Supervisors to participate in time-consuming supervision, often undermining its effectiveness.
- **X** Continuing stigma attached to HIV/AIDS.

On Facilitator/ health care facility level

- **X** Lack of sufficient CHFs creating too low a CHF-CHW ratio that is hindering effective training and supervision.
- & Lack of transport, which hampers the supervision CHWs receive as well as CHWs' ability to support significant numbers of households.
- & Occasionally negative attitudes of health care staff towards the CHW programme and disinterest in the intended high-level of community involvement.

On Programme Management in general

- & Unclear reporting lines (and two-way communication in general), especially at above-facility level.
- **X** Under-developed communication and supply networks.
- Sub-optimal information management including insufficient feedback at most levels of the programme.
- Financial and administrative insecurity for the facilitating NGOs due to numerous consecutive short-term contracts, not only negatively impacting on NGOs but also CHWs themselves.

However, there have also been a number of developments which have the potential to address some of the problematic areas mentioned above. One of the most important aspects is the fact that the District Health System has further evolved, with clearer responsibilities and a high percentage of posts filled. For example, health districts all now have a dedicated District Health Information Officer, whose tasks involve the processing of data at district level (including CHW programme data) and distributing results not only to the district and provincial level, but also to the relevant service providers (e.g. local health facilities, CHW Facilitators). Equally, the long managerial vacancy at provincial level has been overcome, with the same person responsible for management of the provincial CHW programme for a considerable amount of time. Last but not least, the existing insecurity in respect to the financial administration and facilitation of the programme seems to have been overcome by devolving responsibilities to smaller CBOs.

7 Summary and Conclusions

7.1 Introduction

This thesis set out to explore the role Community Health Workers (CHWs) can play in responding to the dramatic impact of the global HIV/AIDS epidemic, which is severely affecting many parts of sub-Saharan Africa. At the end of 2007, two thirds of the 33 million HIV-positive people globally were living in this area, with impacts felt from the personal, to the community and macro-environmental level. In the health sector, the increasing levels of morbidity and mortality express themselves especially dramatically, since on the one hand, demand for health care is increasing, while on the other hand, the sector's capacity to provide services is actually diminishing. In addition to the epidemic's effects on morbidity, mortality and overall absenteeism rates of human resources in the health care sector, the increasing levels of burn-out and job dissatisfaction (in combination with a global health worker shortage) also increase the levels of migration and job mobility. This leaves the public health care sectors in many countries struggling to fulfil their role in health service provision, but also necessitates the development of innovative responses. Here, CHW programmes may provide an alternative way to strengthen human resources in health services. Moreover, given their organizational structures and additional developmental focus, they could actually provide an alternative and perhaps more promising approach to respond to HIV/AIDS.

Indeed, one of the key reasons, for this thesis's focus on CHW programmes and their potential suitability to deal with the epidemic is their strong connection with the Primary Health Care (PHC) approach, which has been an important concept on the international health arena since the late 1970s. Interestingly, the detailed analysis conducted in this thesis of recommended key areas of response to HIV/AIDS, including the recognition of the important connections (via drivers and impacts) to developmental issues outside the health arena and thus the need for a multi-sectoral response, has shown that many of these recommendations had to a large degree already been incorporated into the PHC concept. This concept explicitly recognizes the link between people's health and structural conditions and the need to deal with broader developmental issues including malnutrition, poverty and environmental degradation. Furthermore, the PHC approach emphasizes concepts of equity, inter-sectoral collaboration, and community participation, all of which are relevant in the context of the epidemic. Historically, CHWs have been identified as the main implementer of PHC, combining health prevention with community development.

However, in spite of the recognition of CHW programmes in the context of PHC, their potential to be an effective resource in health service in the context of HIV/AIDS has, until now, not been systematically investigated. Specifically, this thesis has attempted to answer three related questions:

1) To what extent are CHW programmes an effective response to the HIV/AIDS epidemic?

2) In which ways do CHWs contribute to this response?

3) What circumstances facilitate or hinder their effectiveness?

In this thesis, a case study approach was chosen to attempt an answer to these questions. A detailed, field-based analysis of the KwaZulu-Natal CHW programme in South Africa was conducted to evaluate if oNompilo (Zulu for CHWs) are in a position to contribute to HIV/AIDS response in South Africa, the country with the highest number of people currently living infected with the virus. KwaZulu-Natal was specifically suitable for this investigation, since on the one hand it is the province experiencing the most severe epidemic in the country, and on the other hand is also the province with the longest experience with CHW programmes. Additionally, specific management models have been developed, which may make the KZN programme particularly suitable to respond to the challenges of HIV/AIDS. Furthermore, the KZN CHW programme's relative success seems to have influenced the decision for a national roll-out of the programme, which has intensified since 2003. Thus, this thesis strongly focused on the analysis of programme-specific implementation and management processes.

7.2 Main Findings

This thesis has shown, in a detailed description and evaluation (Chapters 5 and 6), that, in the context of the HIV/AIDS epidemic, oNompilo in KZN are indeed addressing many of the response recommendations developed over the last two decades. Programme contributions identified by a variety of the stakeholders interviewed cover all three areas of response including prevention (e.g. increase locally-relevant knowledge; economic community empowerment; referral to STD clinics and VCT), treatment and care (e.g. transferral of care skills to members of affected households; home-based care; DOTS support; referral to clinics) and impact mitigation (e.g. support for OVCs; engage communities in developmental projects with income-generation and

lifestyle implications like communal gardens or PLHA support groups). Here, it needs to be emphasised that the research showed that CHWs can mainly address these issues at the individual, household and community level and only indirectly at the macro environmental level (see Section 2.5 and Section 6.3). The strengths of the CHW programme lie in its capacity to provide a broad range of PHC-related services on a comprehensive level, in an accessible fashion from within the community and with a level of coverage especially in rural areas unequal to other services.

Although CHWs can indeed be an effective resource in the overall response to HIV/AIDS, this thesis has shown that there are several factors which can influence their effectiveness. Some of these are linked to programme implementation and refer for example to questions of accountability, power and hierarchy and the specific process used for expanding the KZN CHW programme. Other conditions are directly linked to the epidemic itself. As stated previously, while CHWs are seen as part of the solution, they themselves, and thus the programme, are also affected by the epidemic's impacts and by some of the factors driving its spread. Important issues in this context are the stigma linked to the epidemic, the effects of poverty as well as the increases in morbidity and mortality.

The role of stigma for the programme's HIV/AIDS response has been elaborated on in some detail in Section 6.2.1, but can be summarised as impacting on how CHWs and their work are perceived and how they conduct or should conduct some of their activities. For example, stigma is one of the reasons that can turn the insider status of local CHWs into a disadvantage, since a (perceived) lack of confidentiality may decrease their effectiveness in outreach. Regular visits or 'preferential' treatment by CHWs can become problematic since they can single-out households or family members and thus increase the danger of becoming targets. Here, it is important to address issues of stigma during training and supervision of CHWs to increase their own awareness and provide them with helpful knowledge and skills in dealing with stigma-related issues. Additionally, it is important to strengthen and expand existing (or even CHW- instigated) initiatives to tackle stigma.

Like HIV/AIDS itself, poverty is another issue affecting the CHW programme's scope of work and its effectiveness. On the one hand, poverty is closely linked to HIV/AIDS and other causes of ill-health and is as such high on the list of problems to target within a comprehensive approach. Thus, the establishment of income-generating projects is an important way of responding to both the existing high levels of poverty and the impacts of HIV/AIDS. On the other hand, people affected by poverty may harbour feelings of

hopelessness, show a disinterest in conditions outside of the nuclear family and, thus, are less inclined to partake in community-based initiatives. Poverty furthermore limits CHWs' and community resources, which can influence project success. Here, the policy first adopted in KZN (and now nationally) to abandon the tradition of CHWs as volunteers and instead provide them with a (limited) monthly stipend provides some assistance (while also creating some other conflicts, see below). However, programmes offering financial assistance to kick-start projects at community level are potentially of far greater importance.

Finally, HIV/AIDS-related illness and other impacts affect CHWs themselves, their families and their own social networks in many ways. Considering that many of the CHWs are women, their traditional role as family carers and even their own increased risk of infection (women are more susceptible to HIV than men) can decrease the time and physical energy available for their role as CHW and thus their effectiveness. The most direct impact on the programme level is the relatively high drop-out rate of CHWs, which at least partially have been reported as related to HIV/AIDS. Here, impact mitigation is complex (as elsewhere), but should for example include the development of an open culture within the programme (encouraging CHWs themselves to get tested, and treated), offer flexible work and training schemes and incorporate the impacts of increased drop-out rates and mortality in the programme's human resource planning.

While the above paragraphs have elaborated on the impact of the HIV/AIDS epidemic on programme success, it is also important to take a look at relevant factors directly linked to programme implementation.

Based on the KZN case study, one of the main conditions which this thesis has identified as fundamentally important for the effectiveness of a CHW programme is the success in establishing an environment conducive to mutual support and co-operation between communities and the health sector facilities. This ensures that CHWs can fulfil their role and can indeed contribute to a coordinated expansion of health services and to an increased community involvement in health and community development. In order to achieve such an environment, the KZN-specific model has developed a mechanism encouraging strong linkages between health care facilities and communities by utilising clinic- or hospital-based CHW Facilitators on the one hand, and CHW Supervisors as community representatives on the other. The Facilitator is officially responsible for the management and co-ordination of a group of CHWs, the initial and in-service training as well as advice and quality control; the CHW Supervisor directs and supports the day-to-day work and as a member of the CH Committee

provides an official route for community involvement. This dual reporting structure aims to ensure communication and co-operation between the community via the CHW to the facility, and *vice versa*. It has proven to be a powerful set-up in several areas of KZN, especially where strong community structures had been established. However, the current lack of financial (or other forms of) incentives for volunteering CHW Supervisors to participate in time-consuming supervision can undermine the sustainability of this arrangement. Furthermore, the dual accountability of CHWs (see Section 6.2.2) requires that unclear reporting structures, potential conflicts of interest and other power struggles are being attended to if they occur. Regular monthly meetings between all local actors (the CHW Facilitator, CHWs, CHW Supervisors and other CH Committee members) potentially offer a suitable forum to address these issues. Nonetheless, by creating CHW programme-specific positions responsible within both the health facilities and at the community level, the model developed in KZN seems to have developed a solution worthwhile considering in CHW programmes elsewhere.

In general, local success of CHW programme implementation is influenced by the specific conditions in each community, by the related facility (clinic or hospital), by factors at the cross-section and outside these entities (e.g. the governmental framework including district and provincial management and policies, financial and other resources). Some of the community-level factors hampering programme success are caused by the difficulties of initiating and/or sustaining community involvement. The recent top-down driven and relative rapid expansion of the programme (in KZN and nationally) puts its focus on the increasing training and employment of additional CHWs, too often without giving sufficient consideration to the community-specific aspects of programme roll-out. At the local level, this led in some cases to an insufficient allocation or availability of time and resources to develop community support and interest, to establish or engage existing community structures and to train CH Committee members in basic principles of PHC and the KZN CHW Programme. A lack of active community engagement impacts on the selection process of oNompilo, their acceptance in the community and ultimately undermines the community-related aspects fundamental to the programme. Thus, future roll-out success should not only be measured by the increasing quantity of CHWs, but perhaps also by a programme's role in establishing and sustaining community support and active engagement. Thus, ensured community involvement and the establishment of functioning Community Health Committees should be a precondition before initiating the local expansion of the programme (*i.e.* the selection and employment of new CHWs).

An active involvement of community members usually necessitates a sense of community, which – due to the impacts of Apartheid on settlement structures, the impacts of the HIV/AIDS epidemic or other reasons – may not always exist (see above and also Section 5.3.1). Here, initial scoping studies investigating the existence and ensuring the support of local community-based organisations, traditional and other community leaders, church groups, *etc.* could potentially help establish a community support network within a limited timeframe and restricted resources. However, it should also be noted that the income-earning opportunities and the prestige attached to a CHW position can make too strong an engagement of individual community leaders in the selection process potentially problematic. Predominance of certain sectors of the community may exclude and marginalise others. Raising CHW Facilitators' awareness of these issues during their training can increase the likelihood that these can be addressed.

As stated above, the success of CHW programmes is equally influenced by the existence of sufficient support and resources at the health facility level. Here, a sufficient ratio of CH Facilitators to CHW needs to be ensured to enable effective training and supervision. However, in KZN, the rapid programme expansion has additionally led to a diversion of existing CH Facilitators' time to the training of new CHWs, resulting in irregular visits and supervision of established CHWs. Supervision and in-service training can also be hampered by insufficient access to transport – a fact that also impacts on the regularity of meetings between all local programme actors and on CHWs' ability to support significant numbers of households. Solutions here have been suggested in Section 6.2.3, but include an increased focus on spatial aspects when allocating CHWs to households. Overall, regular interaction between all programme actors is paramount in order to avoid feelings of isolation, sustain community involvement and to fulfil the programme's potential.

Another, more general aspect relevant at facility level is the extent to which professional health care staff are able to recognise and utilise the strengths of a community-based programme. Occasionally, negative attitudes of health professionals towards the CHW programme and a disinterest in the intended high-level of community involvement exist. These can be partly explained by the long tradition of a strong hierarchical culture in the health system, the occasional perception of CHWs as a challenge to health professionals' own status and a concern over an additional strain on existing resources. While the local implementation of CHWs indeed also draws on local resources (especially time investments), a successful programme can certainly justify these. However, in some cases programme success requires attitudinal changes, which can be supported by training in concepts of PHC for facility staff and by identifying advantages of CHW programmes for the work of personal at clinic and hospital level. This can be more easily achieved if existing problems at general programme management level are addressed.

One of the key issues identified at the general programme management level is the establishment of functioning systems of information and resource flows by strengthening existing communication and supply networks. In many instances, this requires structural adjustments (e.g. the appointment of district and facility health information officers) and a clarification of reporting lines. An identification of data needs at various levels within the public health sector, with the possibility for flexible adjustments at local level, and combined with the establishment of functioning quality control and feedback mechanisms can improve the relevance and quality of data collected by CHWs. A similar area where strengthened networks are paramount is the flow of resources (including basic care equipment for CHWs, stipends from CBO/NGOs to CHWs, samples collected by CHWs to the clinic). Here, again the development and implementation of suitable procedures and the provision of sufficient resources (again, including transport) is necessary. In the specific context of the epidemic, information and resources flows will become even more important if CHWs involvement in the provision of comprehensive care is expanded, potentially even to the involvement in ARV treatment. Here, any interruption of communication and supply can have devastating effects for enrolled patients (and the likelihood of virus resistances).

All the described demands on resources and the required involvement from various structures point to the fact that a provincial CHW programme can only be successful in the long run, if a high level of political support is maintained (and is translated into secure financial and other resource flows as well as into appropriate institutional arrangements, including the appointment of a provincial CHW programme manager at a sufficiently powerful level within the departmental hierarchy). On a more general level, the existing obstacles to programme success, including the impacts of HIV/AIDS, are easier overcome if key figures can be identified (like district managers, specific charismatic leaders) who are spearheading the programme and promoting it at the various levels of implementation.

7.3 Recommendations for future research

Even though this study has highlighted a number of relevant points in the context of CHW programmes in the time of HIV/AIDS, there are various aspects still open for further investigation. Future research could focus on a contemporary comparison of different implementation models worldwide or specifically throughout South Africa, contrasting for example how other provinces are implementing and adapting the national CHW programme framework (which is strongly based on the KZN model) to their own situation and local needs, thus identifying generically promising aspects of the framework and those which need local adaptation. The study presented here could form the basis for such a comparison, especially when considered in conjunction with related studies, such as the investigation by Schneider *et al.* (2008) that analyses the sustainability of the Free State's CHW programme, in which clinic-based CHWs contribute to comprehensive HIV/AIDS services in the province.

The research presented in this thesis used informants from all levels of the health care system. However, given their numbers, a study with a stronger focus on CHWs themselves may be promising. Basing the research predominantly on the unique experiences of CHWs, this may lead to some interesting additional insights, as a further case study conducted in KZN and focusing on CHWs and ARVs has indicated (Suri et al., 2007). This recently published research utilised interview- and questionnaire-based methodologies; however, additional, more in-depth analyses, e.g. local ethnographic studies, could reveal CHWs' day-to-day experiences within the community setting and community-based processes (including interactions between CHWs and CH Supervisors and CH Committee) and would promise further lessons from the local level relevant for expanding PHC. Here, a further investigation of the degree to which CHW programmes are capable of utilising existing local strengths, e.g. already existing community-based organisations, has potential and could be combined with a detailed analysis of how these more informal organisations can be incorporated into the formalised health sector response and perhaps be linked with CHW programmes. Such a complementary study, potentially with stronger participatory elements, could potentially uncover new aspects of programme implementation which remained undiscovered in this study.

7.4 Final Word

Concluding this thesis, it can be summarised that while numerous obstacles to an effective and efficient CHW programme in KZN remain, the programme has already proved to be an important piece in the jigsaw of response to the HIV/AIDS epidemic. And although the results from this investigation were derived from a single regional case study, it is believed that they are sufficiently generic to be informative for CHW programmes and other community-based initiatives elsewhere, in South Africa and beyond. In the context of a pandemic that has induced widespread international as well as local despair and hopelessness, the CHW programme – for all its flaws – offers a practical and personal hand of support and an institutional beacon of hope based on practice rather than promises.

Appendices

A1 Interviews conducted and meetings attended in South Africa

ORGANISATION	POSITION DETAILS	DATE OF MEETING
		MEETING
Afrox Occupational Healthcare	HIV/AIDS and ART Consultant	24.10.2002
Amajuba Health District, Newcastle	Senior Managers (2), CHWs (6)	22.11.2002 18.06.2004
DoH KZN	Senior Managers (11, 3 interviewed twice)	14 interviews between 15.11.2002 & 17.06.2004
DoSD KZN	Senior Managers (2)	09.10.2002
EduAction	Consultants (2)	03.10.2002 17.10.2002 24.10.2002
Health System Trust	Researcher (1)	14.02.2002
MRC	Researchers (2)	12.02.2002
National DoH, Pretoria	Cluster Managers (2), Team members (2)	23.06.2004
Senzakwenzeke Project, Nkandla, Uthungulu	Member of Organising Committee	18.06.2004
The Valley Trust	Various managerial positions and supervisors (9, including two twice), Community Rehabilitation Workers (7)	06.11.2002 16.06.2004
KZN Collaborative Group meeting	Collaborative Group representatives (8) of NGO's in KZN	18.11.2002
Weekly CHW meeting, Mhlabunzina First Aid Station	Various participants (30+: 24 CHWs, 6 CHC members, and others)	14.06.2004
Consultations in Seattle	Researchers at Washington State University and at WHO Collaborating Centre for AIDS & STD (8)	August 2003

A2 HIV and AIDS indicators for South Africa in mid-2006*

Reference: DoH (2007b, p.26)

Births	
Uninfected births (over calendary ear)	1 057 000
HIV+ biths (ov er calendary ear)	38 000
Infected through breastfeeding	26 000
People living with HIV/AIDS	
Total HIV infected	5 372 000
Adults (20-64)	4 880 000
Adult men (20-64)	2 179 000
Adult women (20-64)	2 702 000
Adults (15-49)	4 756 000
Adult men (15-49)	1 946 000
Adult women (15-49)	2 810 000
Youth (15-24)	1 012 000
Male youth (15-24)	181 000
Female youth (15-24)	831 000
Children (0-14)	294 000
New infections	527 000
Prevalence	
Total HIV infected	11.2%
Adults (20-64)	19.2%
Adult men (20-64)	17.8%
Adult women (20-64)	20.4%
Adults (15-49)	18.3%
Adult men (15-49)	15.4%
Adult women (15-49)	21.2%
Youth (15-24)	10.4%
Male vouth (15-24)	3.7%
Female youth (15-24)	16.9%
Children (0-14)	1.9%
Incidence	14 The Martine
Total population	1.3%
Adults (20-64)	1,7%
Adult men (20-64)	1.9%
Adult women (20-64)	1.5%
At or before birth (of births)	3.5%
Breastfeeding (no. infected through breastfeeding in year/uninfected births in that year)	2.4%
Number adults (14+) infected by stage	
Stage 1	1 451 000
Stage 2	1 084 000
Stage 3	1 813 000
Stage 4 (not on treatment)	511 000
Receiving antiretroviral treatment	200 000
Discontinued antiretroviral treatment	18 900
Number children (<14) infected by stage	
Pre-AIDS	240 000
Stage 4 (not on treatment)	27 000
Receiving antiretroviral treatment	25 300
Discontinued antiretroviral treatment	1 500
AIDS sick	1. S. S. 18
New AIDS sick during 2006	479 000
Total AIDS sick mid-year	599 000

^{*}Note: Numbers rounded to nearest thousand to avoid spurious accuracy. Source: Dorrington, Bradshaw, Johnson and Daniel (2006)

A3 Registered qualifications in Community Health Work

References: (SAQA, 2007c;2007f)



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SOUTH AFRICAN QUALIFICATIONS AUTHORITY REGISTERED QUALIFICATION:

National Certificate: Community Health Work

SAQA QUAL ID	QUALIFICATION TITLE			
49128	National Certificate: Community Health Work			
ORIGINATOR		REGISTERING PROVIDER		
SGB Ancillary Health Care				
QUALITY ASSURIN	IG ETQA		and the state of t	
HW SETA-Health and	Welfare Sector Education	and Training Authority		
QUALIFICATION TYPE	FIELD	SUBFIELD		
National Certificate	Field 09 - Health Sciences and Social Services	Promotive Health and Developmental Services		
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS	
Undefined	120	Level 3	Regular-Unit Stds Based	
REGISTRATION STATUS	SAQA DECISION NUMBER	REGISTRATION START DATE	REGISTRATION END DATE	
Reregistered	SAQA 0160/05	2007-09-18	2010-09-18	
LAST DATE FOR ENROLMENT		LAST DATE FOR ACHIEVEMENT		
2011-09-18		2014-09-18		

PURPOSE AND RATIONALE OF THE QUALIFICATION

A learner who has achieved this qualification will integrate a range of awareness and competencies to practice the roles of health promoter, health provider and health networker within a community development context.

Learners who complete this qualification will have a better self and social awareness and will possess a range of thinking and problem solving skills. In addition, they will possess the competence required to perform community health functions in a complex developing world context. They will have the skills required for employment by a range of health, social and other sector employers, will be in possession of a recognised qualification and may be eligible for certain credit recognition in various higher education qualifications.

Qualified learners in this field will provide a service that will assist communities to better manage their own health and wellness. They will have the skills to work as a team member and as a provider of support services within a multidisciplinary health care team.

Recipients of this qualification are able to:

- Communicate in a variety of ways
- Use mathematics in real life situations

- · Use a personal computer in the workplace
- Apply life skills to real situations
- · Provide support to parents, children and the elderly
- Provide support to community members

In addition, recipients may elect to specialise in the following field:

Provide support to people with disabilities (PWDs)

Practitioners will generally carry out their role within the context of:

- The client`s home
- A community care centre
- The broader community

Rationale for the qualification:

The South African Government is committed to combining the national human resource development strategy with the rapid upgrading of service delivery to all of the nation's communities.

Integral to this strategy are initiatives to strengthen communities` abilities to empower themselves to participate in the political, economic, social and development spheres of South African life. Two key components in this empowerment are communities` abilities to integrate with and access state services, and their abilities to further the health and wellness of community members.

There is no doubt from the international experience of Community Health Workers (CHW) that they play a vital role in improving basic health status of communities. In South Africa, the important supportive role of CHWs in the provision of health care services has been extensively documented. This contribution is further exemplified in those parts of the country where there is a shortage of professional health workers to provide the necessary health care services based on identified needs.

The Department of Health is leading the implementation of a multi-professional team-based approach to health care delivery, where each member of the team has a defined role to ensure that there is no duplication and overlapping of functions. This process will also ensure that no single member of the team dominates but that different members of the team will lead at different times depending on the services to be rendered.

LEARNING ASSUMED TO BE IN PLACE AND RECOGNITION OF PRIOR LEARNING

This qualification forms part of a progressive route in ancillary health care and learners starting to learn towards this qualification are assumed to be able to provide home based care, and will require the following competencies:

- Communication at NQF level 2
- Mathematical Literacy at NQF level 2
- Ability to undertake independent learning

Recognition of prior learning:

This qualification can be achieved wholly or in part through recognition of prior learning in terms of the defined exit level outcomes and/or individual unit standards.

Evidence can be presented in various ways, including international and/or previous local qualifications, products, reports, testimonials mentioning functions performed, work records, portfolios, videos of practice and performance records.

All such evidence will be judged in accordance with the general principles of assessment described above and the requirements for integrated assessment.

RECOGNISE PREVIOUS LEARNING?

Y

QUALIFICATION RULES

Fundamental: Communication Candidates are required to achieve all 20 credits for Communications from the available credits.

Mathematical Literacy

Candidates are required to demonstrate achievement of the 16 credits for Mathematics unit standards within the context of healthcare provision.

Note: Mathematical Literacy is defined as the ability to apply basic mathematics within a variety of real life contexts.

Computer practice

Candidates are required to achieve all 10 credits for Communications from the available credits.

Core

Candidates must achieve all 52 CORE credits listed in Exit Level Outcomes

Elective:

Candidates must achieve at least 22 credits of their choice from any of the available elective credits in Exit Level Outcomes. In order to achieve an Exit Level Outcome, candidates must achieve all of the credits for that ELO.

EXIT LEVEL OUTCOMES

Outcome criteria for integrative assessment of generic competence includes:

- 1. Communicate in a variety of ways
- 2. Use mathematics in real life situations
- 3. Use a personal computer in the workplace
- 4. Apply life skills to real situations
- 5. Provide support to parents, children and the elderly
- 6. Provide support to community members
- 7. Provide support to disabled people

Critical cross-field outcomes:

This gualification addresses the following critical cross-field outcomes, as detailed in the unit standards:

a) Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.Relates to the following exit level outcomes: [ELO 2; ELO 4; ELO 5; ELO 6; ELO7]

b) Working effectively with others as a member of a team, group, organisation or community.Relates to the following exit level outcomes: [ELO 5; ELO 6; ELO 7]

c) Organising and managing oneself and one's activities responsibly and effectively. Relates to the following exit level outcomes: [ELO 4; ELO 5; ELO 6; ELO 7]

d) Collecting, analysing, organising and critically evaluating information. Relates to the following exit level outcomes: [ELO 3; ELO 4]

e) Communicating effectively using visual, mathematical and/or language skills in the modes of oral/written persuasion.Relates to the following exit level outcomes: [ELO 1; ELO 5; ELO 6; ELO 7]

f) Using science and technology effectively and critically, showing responsibility towards the environment and health of others. Relates to the following exit level outcomes: [ELO 3; ELO 7]

g) Demonstrating and understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation. Relates to the following exit level outcomes:

[ELO 4; ELO 5; ELO 6; ELO 7]

Learning programmes directed towards this qualification will also contribute to the full personal development of each learner and the social and economic development of society at large, by making individuals aware of the importance of:

- 1) Reflecting on and exploring a variety of strategies to learn more effectively.
- 2) Participating as responsible citizens in the life of local, national and global communities.
- 3) Being culturally and aesthetically sensitive across a range of social contexts.

4) Exploring education and career opportunities; and developing entrepreneurial opportunities.

ASSOCIATED ASSESSMENT CRITERIA

For award of the whole qualification, candidates must achieve the required number of credits as specified in the rules of combination indicated above, as well as the criteria specified for integrated assessment.

Should candidates exit the qualification without completing the whole qualification, recognition may be given for each Exit Level Outcome achieved. For award of a particular Exit Level Outcome, candidates must achieve:

• All the Core and Elective unit standards associated with the particular Exit Level Outcome as per the specifications contained within each unit standard, and

• The criteria specified for integrated assessment below.

Assessment criteria for integrative assessment of generic competence includes:

1.

• Oral communication is maintained and adapted as required to promote effective interaction in a work context.

• Information is accessed from standing instructions, visual information and a range of other workplace texts and responses where required are appropriate to the context.

• Written communication is clear and unambiguous and at an appropriate level for designated target audiences.

2.

- Mathematical functions are used correctly to solve routine workplace problems and tasks.
- Physical quantities are calculated and measured.
- · Community statistics are calculated and reported.

3.

- · Word processing documents are produced
- Spreadsheets are produced

4.

- Traumatic events are dealt with
- Individual and group problem solving techniques are applied to solve real problems
- Leadership ability is demonstrated

5.

- Parents are educated in childcare
- Abused children are identified and supported
- Children with disabilities are identified and referred
- · Elderly people are supported and cared for

6.

- Primary health care is provided to communities
- · Health promotion is conducted in the community
- The roles and responsibilities of a community committee are identified and explained
- Contributions to community development are identified

7.

- People with a physical disability are supported
- · People with an intellectual disability are supported

Assessment principles:

Assessment should be in accordance with the following general and specific principles: • The initial assessment activities should focus on gathering evidence in terms of the main outcomes expressed in the titles of the unit standards to ensure assessment is integrated rather
than fragmented. Where assessment at title level is unmanageable, then the assessment can focus on each specific outcome, or groups of specific outcomes. Take special note of the need for integrated assessment.

• Evidence must be gathered across the entire range specified in each unit standard, as applicable. Assessment activities should be as close to the real performance as possible, and where simulations or role-plays are used, there should be supporting evidence to prove that the candidate is able to perform in the real situation.

• All assessments should be conducted in accordance with the following universally accepted principles of assessment:

1. Use appropriate, fair and manageable methods that are integrated into real work-related or learning situations;

2. Judge evidence on the basis of its validity, currency, authenticity and sufficiency; and

3. Ensure assessment processes are systematic, open and consistent.

Integrated assessment:

Assessment is not a single event but rather a structured process of gathering evidence and making judgements of the learners` performance in relation to the qualification. A range of formative and summative methods can be used in assessing learners, this may include:

- Written and oral tests/examinations
- Case studies and assignments
- Role play and simulation sessions
- Written reports/work plans
- Peer group review
- Feedback from clients

Assessment should be carried out at regular intervals as well as at the end of the periods of study and should be offered in an integrated way. It is envisaged that learners will work at more than one unit standard at a time.

Assessment will take place according to the detailed specifications indicated in the unit standards associated with each exit level outcome (see "associated unit standards" above).

Over and above the achievement of the specified unit standards, evidence of integration will be required as per the following broad criteria, all within the context of workplace activities.

Assessors should note that the evidence of integration (as below) could well be presented by candidates when being assessed against the unit standards - thus there should not necessarily be separate assessments for each unit standard and then further assessment for integration. Well designed assessments should make it possible to gain evidence against each unit standard while at the same time gain evidence of integration.

Candidates must demonstrate the ability to engage in the operations selected in an integrative way, dealing with divergent and "random" demands related to these work operations, effectively. Evidence is required that the candidate is able to achieve the purpose of the qualification as a whole at the time of the award of the qualification. Integration of skills will be demonstrated through the achievement of the core operational standards.

INTERNATIONAL COMPARABILITY

This qualification is unique to South Africa and is appropriate for the unique requirements in this country as well as neighboring (SADC) and other third-world countries.

ARTICULATION OPTIONS

This qualification has been designed and structured so that qualifying learners can move from one context to another. It builds on the National Certificate in Fundamental Ancillary Health Care (Level 2) and acts as a springboard from which learners may progress to other qualifications at level 4 or 5 in related health, development and social care fields.

MODERATION OPTIONS

1. Providers offering learning towards achievement of any of the unit standards that make up this qualification must be accredited through the relevant ETQA.

2. Internal moderation of assessment must take place at the point of assessment with external moderation or verification being provided by the relevant ETQA.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

Assessors registered with relevant ETQA must carry out the assessment of candidates for any of the unit standards that make up this qualification. The following criteria are specified for assessors of this qualification:

Be a professional person

• Be suitably qualified at a minimum of NQF level 5

• Be experienced in the fields of primary health care and community development

• Have appropriate experience and understanding of assessment theory, processes and practices.

• Have good interpersonal skills and ability to balance the conflicting requirements of the interests of the learner, the provider and the employer.

NOTES

N/A

UNIT STANDARDS:

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Core	114950	Apply ways of leading in different situations		3
Core	<u>12352</u>	Demonstrate knowledge of the roles and responsibilities of a community committee		4
Core	114952	Apply problem-solving techniques to make a decision or solve a problem in a real life context	Level 3	2
Core	114942	Describe how to manage reactions arising from a traumatic event	Level 3	2
Core	<u>117503</u>	Identify children with disabilities in the community	Level 3	8
Core	<u>117493</u>	Provide information about HIV and AIDS and treatment options in community care and support situations	Level 3	6
Core	117498	Demonstrate knowledge of the provision and implementation of primary health care within the community	Level 4	10
Core	<u>117504</u>	Identify and support the abused child	Level 4	6
Core	117506	Implement Health Promotion in the community	Level 4	8
Core	<u>14920</u>	Participate in groups and/or teams to recommend solutions to problems	Level 4	3
Fundamental	<u>8968</u>	Accommodate audience and context needs in oral communication	Level 3	5
Fundamental	<u>9010</u>	Demonstrate an understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations	Level 3	2
Fundamental	<u>9013</u>	Describe, apply, analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 3	4
Fundamental	8969	Interpret and use information from texts	Level 3	5
Fundamental	<u>9012</u>	Investigate life and work related problems using data and probabilities	Level 3	5
Fundamental	<u>7567</u>	Produce and use spreadsheets for business	Level 3	5
Fundamental	7570	Produce word processing documents for business	Level 3	5
Fundamental	<u>8973</u>	Use language and communication in occupational learning programmes		5
Fundamental	<u>7456</u>	Use mathematics to investigate and monitor the financial aspects of personal, business and	Level 3	5

		national issues		
Fundamental	<u>8970</u>	Write texts for a range of communicative contexts	Level 3	5
Elective	<u>114937</u>	Explain and apply ways of contributing towards community development	Level 3	5
Elective	<u>117016</u>	Institute preventive measures to reduce the potential impact of disasters	Level 3	14
Elective	<u>117507</u>	Develop and implement a client ARV treatment plan	Level 4	6
Elective	117505	Educate and support parents in childcare	Level 4	12
Elective	117502	Facilitate the optimal functioning of the client with intellectual disability	Level 4	18
Elective	<u>117501</u>	Promote optimal care and support of a person with a physical disability	Level 4	21
Elective	<u>117496</u>	Provide care and support to an elderly person	Level 4	10

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION: NONE

SOUTH AFRICAN QUALIFICATIONS AUTHORITY REGISTERED QUALIFICATION:

Further Education and Training Certificate: Community Health Work

SAQA QUAL ID	QUALIFICATION TITLE			
49131	Further Education and Training Certificate: Community Health Work			
ORIGINATOR		REGISTERING PROVIDER		
SGB Ancillary Health C	are			
QUALITY ASSURING	ETQA			
HW SETA-Health and V	Velfare Sector Education a	and Training Authority		
QUALIFICATION TYPE	FIELD	SUBFIELD		
Further Ed and Training Cert	Field 09 - Health Sciences and Social Services	Promotive Health and Developmental Services		
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS	
Undefined	156	Level 4	Regular-Unit Stds Based	
REGISTRATION STATUS	SAQA DECISION NUMBER	REGISTRATION START DATE	REGISTRATION END DATE	
Reregistered	SAQA 0160/05	2007-09-18	2010-09-18	
LAST DATE FOR ENROLMENT		LAST DATE FOR ACHIEVEMENT		
2011-09-18		2014-09-18		

PURPOSE AND RATIONALE OF THE QUALIFICATION

A learner who has achieved this qualification will integrate a range of awareness and competencies to practice the roles of health promoter, health provider and health networker within a community development context.

Learners who complete this qualification will have a better self and social awareness and will possess a range of thinking and problem solving skills. In addition, they will possess the competence required to perform community health functions in a complex developing world context. They will have the skills required for employment by a range of government and social sector employers, will be in possession of a further education and training certificate and will be eligible for certain credit recognition in various higher education health qualifications.

Qualified learners in this field will provide a service that will assist communities to better manage their own health and wellness. They will have the skills to work as a team member and as a provider of support services within a multidisciplinary health care team.

- Recipients of this qualification are able to:
- Communicate in a variety of ways
- · Use mathematics in real life situations
- Facilitate community health activities
- Provide community health care

In addition, recipients will be able perform some of the following according to their choice of electives:

- Provide mental health care
- Educate and support parents in childcare
- Provide care to an elderly person.
- Develop and implement a client ARV treatment plan
- Identify and support the abused child

Practitioners will generally carry out their role within the context of:

- The client's home
- · A community care centre
- The broader community

Rationale:

The South African Government is committed to combining the national human resource development strategy with the rapid upgrading of service delivery to all of the nation's communities.

An integral part of this strategy is initiatives to strengthen communities` abilities to empower themselves to participate in the political, economic, social and development spheres of South African life. Two key components in this empowerment are communities` abilities to integrate with and access state services, and their ability to further the health and wellness of community members.

There is no doubt from the international experience of Community Health Workers (CHW) that they play a role in improving basic health status of communities. In South Africa, the important supportive role of CHWs in the provision of health care services has been extensively documented. This contribution is further exemplified in those parts of the country where there is a shortage of professional health workers to provide the necessary health care services based on identified needs.

The Department of Health is leading the implementation of a multi-professional team-based approach to health care delivery, where each member of the team has a defined role to ensure that there is no duplication and overlapping of functions. This process will also ensure that no single member of the team dominates but that different members of the team will lead at different times depending on the services to be rendered.

LEARNING ASSUMED TO BE IN PLACE AND RECOGNITION OF PRIOR LEARNING

This qualification forms part of a progressive route in ancillary health care and learners starting to learn towards this qualification are assumed to be able to provide home based care, and will require the following competencies:

- Communication at NQF level 3
- Mathematical Literacy at NQF level 3
- Ability to undertake independent learning

Recognition of prior learning:

This qualification can be achieved wholly or in part through recognition of prior learning in terms of the defined exit level outcomes and/or individual unit standards.

Evidence can be presented in various ways, including international and/or previous local qualifications, products, reports, testimonials mentioning functions performed, work records, portfolios, videos of practice and performance records.

All such evidence will be judged in accordance with the general principles of assessment described above and the requirements for integrated assessment.

RECOGNISE PREVIOUS LEARNING?

Y

QUALIFICATION RULES

Fundamental

Communication

Candidates are required to achieve all 46 credits for Communications from the available credits. Mathematical Literacy - Candidates are required to demonstrate achievement of the 16 credits for Mathematics unit standards within the context of healthcare provision.

Note: Mathematical Literacy is defined as the ability to apply basic mathematics within a variety of real life contexts. The applications may vary in complexity from NQF 1 - 4, even though the level of mathematics may be at level 1. Because the complexity of applications within

healthcare provision range from NQF 1 to NQF 4, achievement of the mathematics standards, within the context of healthcare provision, is considered to be equivalent to NQF 4.

Core

Candidates must achieve all 72 CORE credits listed in Exit Level Outcomes

Elective

Candidates must achieve at least 21 credits of their choice from any of the available ELECTIVE credits, whether in Exit Level Outcomes or as stand alone unit standards. In order to achieve an Exit Level Outcome, candidates must achieve all of the credits for that ELO.

EXIT LEVEL OUTCOMES

Criteria for integrative assessment of generic competence includes:

1. Communicate in a variety of ways

- 2. Use mathematics in real life and education, training and development situations
- 3. Facilitate community health activities
- 4. Provide community health care
- 5. Provide mental health care

Critical cross-field outcomes:

This qualification addresses the following critical cross-field outcomes, as detailed in the unit standards

a) Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made. Relates to the following exit level outcomes: [ELO 2; ELO 3; ELO 4; ELO 5]

b) Working effectively with others as a member of a team, group, organisation or community. Relates to the following exit level outcomes: [ELO 3, ELO 4, ELO 5]

c) Organising and managing oneself and one's activities responsibly and effectively. Relates to the following exit level outcomes: [ELO 3, ELO 4, ELO 5]

d) Collecting, analysing, organising and critically evaluating information. Relates to the following exit level outcomes: [ELO 3, ELO 4, ELO 5]

e) Communicating effectively using visual, mathematical and/or language skills in the modes of oral/written persuasion. [ELO 1, ELO 2, ELO 3, ELO 4, ELO 5]

[ELO 1, ELO 2, ELO 3, ELO 4, ELO 5]

 f) Using science and technology effectively and critically, showing responsibility towards the environment and health of others. Relates to the following exit level outcomes:
[ELO 4, ELO 5]

g) Demonstrating and understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation. Relates to the following exit level outcomes:

[ELO 3, ELO 4, ELO 5]

Learning programmes directed towards this qualification will also contribute to the full personal development of each learner and the social and economic development of society at large, by making individuals aware of the importance of:

- 1) Reflecting on and exploring a variety of strategies to learn more effectively.
- 2) Participating as responsible citizens in the life of local, national and global communities.
- 3) Being culturally and aesthetically sensitive across a range of social contexts.
- 4) Exploring education and career opportunities; and developing entrepreneurial opportunities.

ASSOCIATED ASSESSMENT CRITERIA

For award of the whole qualification, candidates must achieve the required number of credits as specified in the rules of combination above as well as the criteria specified for integrated assessment below.

Should candidates exit the qualification without completing the whole qualification, recognition may be given for each Exit Level Outcome achieved. For award of a particular Exit Level Outcome, candidates must achieve:

• All the Core and Elective unit standards associated with the particular Exit Level Outcome as per the specifications contained within each unit standard, and

• The criteria specified for integrated assessment below.

Integrated assessment:

Assessment will take place according to the detailed specifications indicated in the unit standards associated with each exit level outcome (see "associated unit standards" above).

Over and above the achievement of the specified unit standards, evidence of integration will be required as per the following broad criteria, all within the context of workplace activities.

Assessors should note that the evidence of integration (as below) could well be presented by candidates when being assessed against the unit standards - thus there should not necessarily be separate assessments for each unit standard and then further assessment for integration. Well designed assessments should make it possible to gain evidence against each unit standard while at the same time gain evidence of integration.

Candidates must demonstrate the ability to engage in the operations selected in an integrative way, dealing with divergent and "random" demands related to these work operations, effectively. Evidence is required that the candidate is able to achieve the purpose of the qualification as a whole at the time of the award of the qualification. Integration of skills will be demonstrated through the achievement of the core operational standards.

Criteria for integrative assessment of generic competence includes:

1.

• Oral communication is maintained and adapted as required to promote effective interaction in a work context.

• Information is accessed from standing instructions, visual information and a range of other workplace texts and responses where required are appropriate to the context.

• Written communication is clear and unambiguous and at an appropriate level for designated target audiences

2.

• Mathematical functions are used correctly to solve routine workplace problems and tasks.

3.

- Community health needs are identified through a needs assessment
- Community campaigns and workshops are planned and conducted with due regard to societal values and ethics
- The community is educated on STIs, including HIV/AIDS

4.

- Nutritional programmes are drawn up in relation to the specific community
- · Care is provided to patients in accordance with specific needs

5.

- Risks for mental patients are identified and reduced
- The family is supported in providing assistance to mental patients

Assessment principles:

Assessment should be in accordance with the following general and specific principles:

• The initial assessment activities should focus on gathering evidence in terms of the main outcomes expressed in the titles of the unit standards to ensure assessment is integrated rather than fragmented. Where assessment at title level is unmanageable, then the assessment can

focus on each specific outcome, or groups of specific outcomes. Take special note of the need for integrated assessment.

• Evidence must be gathered across the entire range specified in each unit standard, as applicable. Assessment activities should be as close to the real performance as possible, and where simulations or role-plays are used, there should be supporting evidence to prove that the candidate is able to perform in the real situation.

• All assessments should be conducted in accordance with the following universally accepted principles of assessment:

> Use appropriate, fair and manageable methods that are integrated into real work-related or learning situations;

> Judge evidence on the basis of its validity, currency, authenticity and sufficiency; and

> Ensure assessment processes are systematic, open and consistent.

INTERNATIONAL COMPARABILITY

This qualification is unique to South Africa and is appropriate for the unique requirements in this country as well as neighbouring (SADC) and other third-world countries.

ARTICULATION OPTIONS

This qualification has been designed and structured so that qualifying learners can move from one context to another. It builds on the National Certificate in Community Health Work (Level 3) and acts as a springboard from which learners may progress to other qualifications at level 5 in related health, development and social care fields.

MODERATION OPTIONS

1. Providers offering learning towards achievement of any of the unit standards that make up this qualification must be accredited through the relevant ETQA.

2. Internal moderation of assessment must take place at the point of assessment with external moderation provided by the relevant ETQA, according to the moderation guidelines and the agreed ETQA procedures.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

Registration of assessors:

Assessors registered with the relevant ETQA must carry out the assessment of candidates for any of the unit standards that make up this qualification. The following criteria are specified for assessors of this qualification:

- Be a professional person
- Be suitably qualified at a minimum of NQF level 5
- Be experienced in the fields of primary health care and community development
- Have appropriate experience and understanding of assessment theory, processes and practices.

• Have good interpersonal skills and ability to balance the conflicting requirements of the interests of the learner, the provider and the employer.

NOTES

N/A

UNIT STANDARDS:

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Core	110053	Conduct a basic community needs assessment	Level 4	12
Core	<u>110056</u>	Conduct advocacy campaigns and workshops in development practice	Level 4	12
Core	<u>8612</u>	Demonstrate an understanding of societal values and ethics	Level 4	4
Core	<u>117498</u>	Demonstrate knowledge of the provision and implementation of primary health care within the community	Level 4	10
Core	<u>114491</u>	Educate and work closely with the community	Level 4	10

	-			
		with regard to sexually transmitted infections (STIs) including Human Immune Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS)		
Core	<u>12353</u>	Facilitate participatory community development processes		12
Core	<u>117490</u>	Plan and promote nutritional programmes to improve community health	Level 4	12
Fundamental	<u>8968</u>	Accommodate audience and context needs in oral communication	Level 3	5
Fundamental	<u>116987</u>	Apply active listening skills in the care and support environment	Level 3	6
Fundamental	<u>8969</u>	Interpret and use information from texts	Level 3	5
Fundamental	<u>8973</u>	Use language and communication in occupational learning programmes	Level 3	5
Fundamental	<u>8970</u>	Write texts for a range of communicative contexts	Level 3	5
Fundamental	<u>9015</u>	Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems	Level 4	6
Fundamental	<u>8974</u>	Engage in sustained oral communication and evaluate spoken texts	Level 4	5
Fundamental	<u>8975</u>	Read analyse and respond to a variety of texts	Level 4	5
Fundamental	<u>9016</u>	Represent analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 4	4
Fundamental	<u>8979</u>	Use language and communication in occupational learning programmes	Level 4	5
Fundamental	<u>7468</u>	Use mathematics to investigate and monitor the financial aspects of personal, business, national and international issues	Level 4	6
Fundamental	<u>8976</u>	Write for a wide range of contexts	Level 4	5
Elective	<u>117016</u>	Institute preventive measures to reduce the potential impact of disasters	Level 3	14
Elective	<u>117484</u>	Apply palliative care principles when assisting and supporting the child and family to manage life threatening disease	Level 4	12
Elective	117507	Develop and implement a client ARV treatment plan	Level 4	6
Elective	117505	Educate and support parents in childcare	Level 4	12
Elective	117486	Facilitate the optimal functioning of the client with a psychiatric disorder	Level 4	16
Elective	<u>114483</u>	Identify and apply strategies to deal with risk behaviour to promote psychological health and wellness	Level 4	6
Elective	117504	Identify and support the abused child	Level 4	6
Elective	10231	Plan a learning event	Level 4	8
Elective	117488	Plan and implement home based care	Level 4	6
Elective	<u>10136</u>	Plan, organise and support project meetings and workshops	Level 4	4
Elective	<u>117501</u>	Promote optimal care and support of a person with a physical disability	Level 4	21
Elective	117496	Provide care and support to an elderly person	Level 4	10

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION:

NONE

A4 Registered unit standard (example)

Reference: (SAQA, 2007g)

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

REGISTERED UNIT STANDARD:

Demonstrate knowledge of the provision and implementation of primary health care within the community

SAQA US ID	UNIT STANDARD TITLE			
117498	Demonstrate knowledge of the provision and implementation of primary health care within the community			
ORIGINATOR		REGISTERING PROVIDER		
SGB Ancillary Health	Care			
FIELD		SUBFIELD		
Field 09 - Health Sciences and Social Services		Promotive Health and Developmental Services		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS	
Undefined	Regular	Level 4	10	
REGISTRATION STATUS	REGISTRATION START DATE	REGISTRATION END DATE	SAQA DECISION NUMBER	
Reregistered	2007-09-18	2010-09-18	SAQA 0160/05	
LAST DATE FOR ENROLMENT		LAST DATE FOR ACHIEVEMENT		
2011-09-18		2014-09-18		

PURPOSE OF THE UNIT STANDARD

This unit standard will enable a community health worker to facilitate and assist in the provision of Primary Health Care (PHC) based on the Primary Health Care Approach within the community.

People credited with this unit standard are able to:

- Demonstrate an understanding of the Health Care System in South Africa
- Demonstrate an understanding of the Primary Health Care approach
- Implement measures to prevent and control prevailing health problems

LEARNING ASSUMED TO BE IN PLACE AND RECOGNITION OF PRIOR LEARNING

The credit calculation for this unit standard is based on the assumption that learners are already competent in terms of being able to assess the interrelationship between the individual, the family and the community in terms of Primary Health Care Issues.

UNIT STANDARD RANGE

Primary Health Care includes but is not limited to:

- Education about prevailing health problems and methods of preventing and controlling them
- Promotion of food supply and proper nutrition
- An adequate supply of safe water and basic sanitation
- Maternal and child health care, family planning including basic understanding of treatment
- for HIV infection available in the community
- Immunization against major infectious diseases
- Prevention and control of locally endemic diseases
- Appropriate treatment of common diseases and injuries
- Access to essential drugs
- Mental health

The Primary Health Care approach includes:

Universal accessibility and coverage in relation to need

- Appropriate technology
- Cost effectiveness
- · Community and individual participation and self reliance
- · Inter-sectoral action for health and development

UNIT STANDARD OUTCOME HEADER

N/A

Specific Outcomes and Assessment Criteria:

SPECIFIC OUTCOME 1

Demonstrate an understanding of the Health Care System in South Africa.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

The Health Care System is described in terms of National and Provincial Health Legislation.

ASSESSMENT CRITERION 2

The structures and functions of provincial, district and local health care are explained in terms of current legislation.

ASSESSMENT CRITERION 3

Access to health care is explained in terms of establishments, facilities and services.

SPECIFIC OUTCOME 2

Demonstrate an understanding of the Primary Health Care approach.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

The concept of Primary Health Care approach is explained in terms of its principles as they apply to the community.

ASSESSMENT CRITERION 2

The differences between Primary Health Care as a level of care and the Primary Health Care approach as the basis for all health care are explained.

ASSESSMENT CRITERION 3

Structures for community involvement in health are explained in terms of their role and function.

ASSESSMENT CRITERION RANGE

Hospital boards, provincial consultative bodies, district health council, community health centres/clinic committees.

ASSESSMENT CRITERION 4

The importance of inter-sectoral collaboration is explained in terms of improved health and the development of the community.

SPECIFIC OUTCOME 3

Implement measures to prevent and control prevailing health problems.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

Prevailing health problems in the community are identified through the involvement of the existing community health structures.

ASSESSMENT CRITERION 2

Factors that contribute to prevailing health problems are identified and explained in terms of the community and environment.

ASSESSMENT CRITERION 3

Preventive measures to control health problems in the community are implemented and promoted in collaboration with the relevant sectors.

UNIT STANDARD ACCREDITATION AND MODERATION OPTIONS

• Anyone assessing the learner against this unit standard must be registered as an assessor with the relevant ETQA.

• Any institution offering learning that will enable achievement of this unit standard must be registered with the HWSETA.

• The moderation of this standard will also be conducted by the HWSETA.

UNIT STANDARD ESSENTIAL EMBEDDED KNOWLEDGE

Learners should be able to understand and explain:

Attributes, descriptions, characteristics and properties

- · Communication skills needed to communicate effectively with the community
- Attitudes needed to communicate effectively with the community

Sensory cues:

- To identify needs and problems
- Events, causes and effects, implications of:
- Common diseases and priorities including danger signs

Categories:

- Non communicable diseases
- Communicable diseases

Procedures and techniques:

Health care procedures

Regulations, Legislation, agreements, policies, standards:

Local protocols

Theory, rules, principles, laws:

Cause and effect

Relationships, system:

- · Between individuals, families and community
- · Referrals and networking
- Structure of district health team

UNIT STANDARD DEVELOPMENTAL OUTCOME

Use mathematics to analyse, describe, and represent realistic situations and to solve problems relevant in the community.

UNIT STANDARD LINKAGES

N/A

Critical Cross-field Outcomes (CCFO):

UNIT STANDARD CCFO IDENTIFYING

Identify and solve problems using critical and creative thinking.

UNIT STANDARD CCFO COLLECTING

Collect, analyse, organise, and critically evaluate information.

UNIT STANDARD CCFO COMMUNICATING

Communicate effectively with all relevant stake holders.

UNIT STANDARD CCFO DEMONSTRATING

Demonstrate an understanding of the world as a set of related systems: in respect of South African Health Care System and Primary Health Care approach.

UNIT STANDARD ASSESSOR CRITERIA

Assessors should keep the following general principles in mind when designing and conducting assessment against this unit standard:

• Focus the assessment activities on gathering evidence in terms of the main outcome expressed in the title to ensure assessment is integrated rather than fragmented. Remember we want to declare the person competent in terms of the title. Where assessment at title level is unmanageable, then focus assessment around each specific outcome, or groups of specific outcomes.

• Make sure evidence is gathered across the entire range, wherever it applies. Assessment activities should be as close to the real performance as possible, and where simulations or roleplays are used, there should be supporting evidence to show the candidate is able to perform in the real situations.

• Do not focus the assessment activities on each assessment criterion. Rather make sure the assessment activities focus on outcomes and are sufficient to enable evidence to be gathered around all the assessment criteria.

• The assessment criteria provide the specifications against which assessment judgement should be made. In most cases, knowledge can be inferred from the quality of the performances, but in other cases, knowledge and understanding will have to be tested through questioning techniques. Where this is required, there will be assessment criteria to specify the standard required.

• The task of the assessor is to gather sufficient evidence, of the prescribed type and quality, as specified in this unit standard, that the candidate can achieve the outcomes again and again and again. This means assessors will have to judge how many repeat performances are required before they believe the performance is reproducible.

• All assessment should be conducted in line with the following well documented principles of assessment: appropriateness, fairness, manageability, integration into work or learning, validity, direct, authentic, sufficient, systematic, open and consistent.

UNIT STANDARD NOTES

Supplementary Requirements

Total hours required by the learner to achieve the required outcomes:

Activity- Hours Classroom Learning- 40 On-the-job Learning- 20 Self Directed Learning- 20 Coaching Required- 20 Total- 100 Credits Achieved: 10

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	<u>49128</u>	National Certificate: Community Health Work	Level 3	Reregistered	2010-09- 18
Core	<u>49131</u>	Further Education and Training Certificate: Community Health Work	Level 4	Reregistered	2010-09- 18
Elective	<u>49836</u>	Further Education and Training Certificate: Gender Practice	Level 4	Registered	2009-02-: 09

QUALIFICATIONS UTILISING THIS UNIT STANDARD:

A5 Certificate for CHF training at Amatikulu PHC Training Centre

Reference: (SAQA, 2007b)



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SOUTH AFRICAN QUALIFICATIONS AUTHORITY REGISTERED QUALIFICATION:

Certificate: Community Health Facilitator Training

SAQA QUAL ID	QUALIFICATION TITLE			
22065	Certificate: Community Health Facilitator Training			
ORIGINATOR		REGISTERING PROVIDER		
		Amatikulu Primary Health Training Centre		
QUALITY ASSURI	IG ETQA			
-	·			
QUALIFICATION TYPE	FIELD	SUBFIELD		
National Certificate	Field 09 - Health Sciences and Social Services	Promotive Health and Developmental Services		
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS	
Undefined	120	Level 5	Regular-Provider- ELOAC	
REGISTRATION STATUS	SAQA DECISION NUMBER	REGISTRATION START DATE	REGISTRATION END DATE	
Reregistered	SAQA 2663/05	2006-07-01	2009-06-30	
LAST DATE FOR ENROLMENT		LAST DATE FOR ACHIEVEMENT		
2010-06-30		2013-06-30		

PURPOSE AND RATIONALE OF THE QUALIFICATION

Candidates who enrol for this qualification are trained to be trainers of Community Health Committees and workers. The purpose of the qualification is to prepare the learner to implement a Community Health Workers Programme in the various districts, by establishing a Community Health Committee and facilitating the election and training of Community Health Committees and Community Health workers.

LEARNING ASSUMED TO BE IN PLACE AND RECOGNITION OF PRIOR LEARNING

The learning programme assumes that the following learning has taken place:

- Relevant and sufficient training in Primary Health Care at NQF level 4.
- Verbal communication skills at NQF level 4
- Written communication skills at NQF level 4

• Learners with at least three years experience in Community Health will be admitted to this qualification if they can prove that they have the capacity to achieve the outcomes of this qualification

RECOGNISE PREVIOUS LEARNING?

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EXIT LEVEL OUTCOMES

Learners will be able to demonstrate the following competencies:

1. Good communication skills which include listening skills and modes of non-verbal communication (body language)

2. Ability to plan and conduct workshops

3. Ability to design, prepare and use a variety of different mediums to communicate effectively, including summaries, reports and posters

4. Identify the various factors affecting community health, e.g. customs, beliefs, group dynamics, available resources

- 5. Design a survey questionnaire
- 6. Collect relevant data by means of the questionnaire
- 7. Plan, conduct, analyse and report on a community survey related to health
- 8. Identify resource gaps based on the community survey
- 9. Understand and be able to use an adult education approach when teaching
- 10. Plan and conduct a successful group discussion
- 11. Identify, plan and use a variety of teaching methods
- 12. Conduct a successful election of Community Health Committee
- 13. Conduct a successful election of a Community Health worker

14. Construct an appropriate job description and task analysis of a Community Health Committee and a Community Heath worker, based on specific localised needs of community

15. Train a Community Health Committee in accordance with the job description and basic community needs

16. Train a Community Health worker in accordance with the job description

17. Orientate local tribal authorities about the Community Health Workers Programme, in accordance with job descriptions of Community Health Committee and workers

18. Develop strategies for supporting Community Health workers

- 19. Assist with fundraising efforts of Local Authorities
- 20. Prepare employment documents accurately (E.G.ZB 62)

21. Understand and implement Conditions of Service for Community Health worker

22. Ability to impart knowledge and skills related to basic community needs such as first aid, nutrition and personal and environmental hygiene

ASSOCIATED ASSESSMENT CRITERIA

Learners will demonstrate that they have the above competencies by:

1. Simulating a role play situation in which they demonstrate the competencies of listening effectively and interpreting non-verbal communication

2. Conducting a successful Community Survey to inform the development of a Community Health Programme using a questionnaire and taking into account the various factors that affect Community Health

3. Demonstrating the ability to communicate effectively in writing by presenting an interrelated summary, report and poster

4. Demonstrating the ability to teach effectively by designing a successful lesson plan and implementing it using a variety of teaching methods and resources in a simulated situation

5. Constructing a job description for a Community Health Committee and a Community Health worker based on information in a case study

6. Demonstrating the ability to prepare employment documentation accurately (by completing a relevant document)

7. Demonstrating the ability to implement basic employment conditions by question and answer and through a simulated role play

8. Demonstrating the ability t undertake training for community needs by demonstrating first aid skills

9. Preparing and presenting a workshop on nutrition, demonstrating the necessary organisational skills

10. Preparing a workshop on basic personal and environmental hygiene

INTEGRATED ASSESSMENT

- · Assessment activities must assess a variety of skills simultaneously
- Assessment will also give the learners the opportunity to apply knowledge and attitudes to particular skills and competencies
- Integrated assessment will assess a number of the critical cross field outcomes and the specific outcomes simultaneously

• Three complex assessment tasks at the end of the first three modules will provide the opportunity for learners to demonstrate their ability to apply the relevant knowledge they have acquired in a complex assessment task requiring a number of the skills which have been developed in the learning programme

· Learners will be assessed by means of a presentation of the work in the assessment activities

• Learners will demonstrate their acquired competencies at the end of the fourth and final module by means of a formal written and oral assessments

• Learners must also demonstrate the capacity to make judgements about the quality of their own work.

ARTICULATION OPTIONS

On completion of this qualification, learners should be able to progress to a diploma in Primary Health Training, offered at another institution (NQF level 5)

MODERATION OPTIONS

Internal moderation

Consultation with fellow trainers and resident Doctor

External moderation

Review of practice by a member of the Community based Education Unit of the Medical School at the University of Pretoria. Review by ETQA

CRITERIA FOR THE REGISTRATION OF ASSESSORS

- Must be accredited by ETQA
- Must have NQF level 6 qualification
- · Must have previous experience in training of Community Health workers

NOTES

As per the SAQA decision to re-register all provider-based qualifications on the National Qualifications Framework that meet the criteria for re-registration, this qualification has been re-registered from 1 July 2006.

UNIT STANDARDS:

This qualification is not based on Unit Standards.

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION: NONE

All qualifications and unit standards registered on the National Qualifications Framework are public property. Thus the only payment that can be made for them is for service and reproduction. It is illegal to sell this material for profit. If the material is reproduced or quoted, the South African Qualifications Authority (SAQA) should be acknowledged as the source.

A6 Direct interview quotations used in the thesis

- (a) original transcriptions and (b,c,d) related paraphrased quotations
- 1.
- a. "There was a lot of interest then, but then the Department, (...) the ANC government actually worked (...) on transformation of the Health Services. That's why the interest waned a bit. Because in 1994, there already became due these major changes that happened in the country. So there was the, all the things on transformation. That's why the interest waned a bit on the Community Health Workers."
- b. "There was a lot of interest in the beginning, but then the Department, under the ANC government, actually worked on the transformation of the Health Services. That is why the interest waned a bit. Because in 1994, the major changes that happened in the country already started to have an effect. So there were all the things related to the transformation. That is why the interest on Community Health Workers waned a bit." (Manager, NDoH 2004)
- "The CHW programme existed already in the early 80s in old KwaZulu and was set up to deal with primary health issues. After 1994 the programme was put to a hold, but it was restarted in 1999. Now, in the middle of the HIV/AIDS epidemic, it seems to be a very critical tool." (Notes from interview with CHW programme manager D, 2002)
- 3.
- a. "(W)ith the advent of the new development, HIV/AIDS and all the darkening(???), the interest is coming up again. Because it will not be possible for, to get enough health professionals. So it's important to the resources that we have, the national development. But the government has never been keen to employ them as civil servants."
- With the advent of the new development, HIV/AIDS and so on, the interest (in Community Health Workers) is coming up again. Because it will not be possible to get enough health professionals, they are important additional resources for the national development. But the government has never been keen to employ them as civil servants." (Civil servant, NDoH 2004)
- 4.
- a. "A lot of this is based on the KZN model. Although some provinces have expressed that the KZN model is a very sophisticated model suited to their environment. Which won't work in all provinces ..." However, the model "is already adopted." "It was adopted. That's why we are now developing ..." "The principals."
- b. "A lot of this is based on the KZN model. Although some provinces have expressed that the KZN model is a very sophisticated model suited to their own environment and that it won't work in all provinces. However, the model is already adopted. It was adopted. That's why we are now developing the principles." (Manager, NDoH, 2004)

- 5.
- a. "So, there is a whole, there is a whole underlying change coming up, which will force the whole Community Health Care Worker issue (...) to get formalized, to get a structure that is just not in one province. Although the KZN one is extremely powerful and aehm but it will have to come up with a model that we can take national ..."
- b. "So, there is a whole underlying change coming up, which will force the whole Community Health Care Worker issue to get formalized and to get a structure that is not just in one province. Although the KZN structure is extremely powerful, we will have to come up with a model that we can take national." (Civil servant, NDoH, 2004)
- 6.
- a. "Do you know, according to our background here, in (place name), we were divided into Ex-KwaZulu, there where people from ex-KwaZulu government, there were people from ex-NPA. So, ex-KwaZulu they had this programme for some time, for some years. (...) There are, because we have got two types now of Community Health Workers."
- b. "Do you know, according to our background here we were divided into Ex-KwaZulu – there were people from ex-KwaZulu government and there were people from ex-NPA. So, ex-KwaZulu, they had this programme for some time, for some years. So now, we have got two types of Community Health Workers." (CHWP manager A, 2004).
- 7.
- a. "So, there hasn't been a shift. (...) We have still two systems of Community Health Worker. The ones that are paid by the hospital, and the ones that are paid by the contractors, who have a contract with NGOs."
- b. "There hasn't been a shift. We have still two systems of Community Health Worker: the ones who are paid by the hospital and the ones who are paid by the contractors – those who have a contract with the NGOs." (CHWP manager B, 2004)
- 8.
- a. "So what happened, we set down, we said as the community of Nkandla, what are we going to do. Thanks to the hospital, they have official record (***?). But in the community, Nkandla is so isolated. It's the poverty, it's the problem. There is no employment, something like 80% of the people in Nkandla are not working. It's about 200km from the main industrial area, Richards Bay. So these are the problems we should set our selves, and there is the high number of HIV."
- b. "As the community of Nkandla, we wondered what we are going to do. ... Nkandla is so isolated. It's the poverty, which is the problem. There is no employment, something like 80% of the people in Nkandla are not working. It is about 200km from the main industrial area, Richards Bay. So these are the problems we should set our selves, and there is the high number of HIV." (CBO representative, Nkandla, 2004)

- 9.
- a. "For this area, it's correct. But it varies. Like mmh, see I don't have all this here, but in a deep rural area I'm sure they do about 80 or so. It could be less, 'cause there they travel long distances. And in an area which is like this, this is peri-urban, hundred is fine. Then you get into an informal settlement, I don't know how much you have travelled around, where people are living in these shacks. So they could do anything from 150 to 200, 'cause the houses are close to each other. Or if they work in hostels, like in a hostel, I understand, there is a contract worker, he looks after a block, not even a block, a floor. In each floor, they are in dormi, they use in dormitories. And each person becomes a household. So it's only there where it is different." Q:"So it depends really on the workload of the CHW?" A: "And the distance they have to travel. So hundred is relatively OK. It's even more than what they can manage."
- b. "In a deep rural area, they do about eighty. It could be less, because there they travel long distances. And in an area which is like this, peri-urban, one hundred is fine. Then, in an informal settlement, where people are living in these shacks, they could do anything from one hundred and fifty to two hundred, because the houses are close to each other. (...) So it depends on the distance they have to travel. So, hundred is relatively okay. It is even more than what they can manage (CHW manager, 2004)."
- 10.
- a. A: Ja, some have, except for a few houses where they don't need them. But in general, they are well accepted. And if they are not accepted, it is good, because then there is less, they can do other households. Like if there is no need, even, even with the households there are up to one hundred, in another, in one household they rarely need them, maybe visit them once a month or so.
- b. "Ja, they are accepted. Except for a few houses where they don't need them. But in general, they are well accepted. And if they are not accepted, it is good, because then there is less, they can do other households. Like if there is no need, even with the other households they are up to one hundred. If in one household they rarely need them, maybe they visit them once a month or so." (CHWP manager C, 2004)
- 11.
- a. "Ah, aehm I think for me the easiest way of defining a Community Health Worker is someone who is working within the community, at a home level. That would (??). We talk about home-based care, but some people think that is just turning people, and washing people and cleaning people. That's not all. Let's say it's care at home-level, be it health promotion, DOTS, or palliative care, whatever in between. So that the idea would be someone working at that level who is connecting people to services."
- b. "I think for me the easiest way of defining a Community Health Worker is someone who is working within the community at the home level. We talk about home-based care, but some people think that is just turning people, and washing people and cleaning people. That's not all. Let's say it is care at home-level, be it health promotion, DOTS, or palliative care, and whatever in

between. So that the idea would be to have someone working at that level who is connecting people to services." (NDoH manager, 2004)

- 12. "The work of Community Health Workers involves the check of the immunisation status, primary health care tasks and in the future also the collection of data for the district health system. Community Health Workers are responsible for health promotion; they take care, inform and teach about care taking, for example for people suffering from AIDS. They also need to check community members' 'Road to Health' card. Community Health Workers basically provide an addition to the work of nurses." (Notes from interview with CHW Facilitator, 2002)
- 13.
- a. "And also, you know with the health promotion event. We, we, we work with them because you know they are more familiar with the community. With this, where they are living."
- b. "With the health promotion events, we work with them because, you know, they are more familiar with the community and with the situation, where they are living." (PHC Manager, 2004)
- 14.
- a. "Do you know, their job description is more flexible. They do give health education. We encourage the Community Health Worker projects like gardens. The people who have got, people who are sick, they go there."
- b. "Their job description is quite flexible. They do give health education. We encourage Community Health Worker projects like gardens. They go to the people who have got ill, people who are sick." (CHW programme manager A, 2004)
- 15.
- a. "If there is an outbreak for any condition, then we brief them as well. That's why I am saying they're very flexible. Because like for instance if there is cholera somewhere, the best people that we think of are the Community Health Workers. And the facilitator of that area. That is very important that each facilitator is there, so that she would be the link of the Community Health Workers and us."
- b. "If there is an outbreak for any condition, then we brief them as well. That is why I am saying they are very flexible. Because like for instance if there is cholera somewhere, the best people that we can think of are the Community Health Workers and the facilitator of that area. It is very important that each facilitator is there, so that she can be the link between the Community Health Workers and us." (CHW programme manager A, 2004)
- 16.
- a. "What we encourage most there, is that they go and help. But they must teach the members of the families how to care for that person. However, it comes to the extent that sometimes they do the bathing."
- "What we encourage mostly in these cases is that they go and help. But they must teach the members of the families how to care for that person. However, it comes to the extent that sometimes they do the bathing." (CHW programme manager A, 2004)

- 17.
- a. "Because the Community Health Worker is a health promotion person, she is meant to impart the knowledge and not to be serving the families, not to be serving the families in doing things. (...) She would train whoever is in the house, be it a granny, be it a father, be it a mother, to look after the people affected and infected."
- b. "Because the Community Health Worker is a health promotion person, she is meant to impart the knowledge and not to be serving the families, not to be serving the families in doing things. (...) She would train whoever is in the house, be it a granny, be it a father, be it a mother, to look after the people affected and infected." (CHW programme manager B, 2004)
- 18.
- a. "They don't ... they are taught how to do things, like today you know, some people are homebound or whatever. But they learn, again, it's a whole, the things about health and development. If, let's say, my mother is having a stroke and the community health worker is coming to my house, she should be able to transfer the skills to us as a family. So that is a big responsibility. So they are taught, they know how to do things hands on. But their role is, that if we have the family or the care giver, to be able to take care of his or her family member. Except in very rare cases where there is no one, where there isn't my mums (***?) or all of us are not there. And there is nothing that can be done, you can't hire a person, and then they would ask these."
- b. "They are taught how to do things, for example, if someone is homebound. But they learn all the things about health and development. If, let's say, my mother is having a stroke and the community health worker is coming to my house, the Community Health Worker should be able to transfer the skills to us as a family. That is a big responsibility. So they are taught in a way that they know how to do things hands on. But their role is to enable the family or the care giver to be able to take care of his or her family member themselves. Except in very rare cases, when there is no one around, and there is nothing that can be done, (...) then they would ask the Community Health Worker for help." (CHW programme manager C, 2004)
- 19.
- a. "Depending on what is the situation. If that one needs a bath and assistance in this and that and that, then they are stuck in that house, unless there are home-based carers. In which case they can take care. But if there are none, they are supposed to train and to pay the families to be able to do that. It's not only about HIV, there is old age, there is chronic diseases like stroke, ... (??) and diabetic with the amputations or blindness, everything that is chronic ... They have to make sure that their medication is collected and taken. It's a lot of responsibilities."
- b. "It depends on what the situation is. If that one needs a bath and assistance in this and that and that, then they are stuck in that house, unless there are home-based carers who can take care. But if there are none, the oNompilo are supposed to train the families to be able to do that. It is not only about HIV, there is old age; there are chronic diseases like stroke, and diabetes with the

amputations or blindness, everything that is chronic. They have to make sure that their medication is collected and taken. They have a lot of responsibilities." (CHW programme manager B, 2004)

- 20.
- a. "Do you know, at the present moment, there is this package they get from the AIDS Action Unit. There is a bag which is ready to go, there is some soap, some vaseline, some colour(?) lotion. They go, they load that bag and go to those families. They help them with whatever, everything can be, teach the member of the family and help themselves to help the particular member of the family."
- b. "At the present moment, there is this package they get from the AIDS Action Unit. There is a bag which is ready to go, there is some soap, some Vaseline, some (...) lotion. They go, they load that bag and go to those families. They help them with whatever they need, it can be anything. They teach the member of the family and also help personally to help the particular member of the family." (CHWP manager A, 2004)
- 21.
- a. "Aemh, they clash in fact. Because, what has been happening is that the Department of Health has been given these Homebased Carers bags, a care kit. With gloves and stuff. Whereas the ones that are employed by the NGOs and the ones that are ex-KwaZulu are not given working material."
- b. "They clash in fact. Because, what has been happening is that the Department of Health has been given these home-based carers bags, a care kit with gloves and stuff – whereas the Community Health Workers who are employed by the NGOs and the ones who are ex-KwaZulu are not given working material." (CHWP Manager B, 2004)
- 22.
- a. "Ja, it depends. They have their own plans. They will know what, like they know in each household, like what are the problems. Which ones must, like TBs that are on treatment, cause they are supporting them, they must ensure that they really. So they go every day, they see them on a day to day basis. Whereas, if I am hypertensive, and it's like becoming, just to encourage me to take all my medication and you know, talk about what things to eat, you know, doing that. So that can be done at a less frequent rate."
- b. "It depends. They have their own plans. They will know what the problems are in each household. Which ones must be visited daily, like the people that are on TB treatment. Because they are supporting them, they must ensure that they really take the medicine. So they go every day, they see them on a day to day basis. Whereas, if someone is hypertensive, and it is just to encourage the person to take all the medication and talk about what things to eat, then that can be done at a less frequent rate." (CHW programme manager C, 2004)
- 23.
- a. A: "Yes. It's very important. Like for instance, we used to say, the person, if maybe we go to the family, you find the person that,

the person has been coughing for more than two weeks, take some ...(?) for instance and encourage that person to take some sputum(?). They do that. And then, when they take the sputum, they don't (?), they take the sputum or they actually help the person to take the sputum, they take that back to the clinic. That is why the transport, that is why they get the transport, to transport these things." Q: "So that they can actually transport the ..." A: "The, the bottles, they do." Q: "So they do have actually a role even in the diagnosis?" A: "They do. Sometimes they say, the person must go to the clinic to cough. If they make the way up, depends if the patient can come to the clinic or not. If the person doesn't come, they actually take the bottles from the clinic to that particular family, for that person to cough. And then they take the sputum back to the clinic. And then they, this transport in our district that is going around transporting everything."

- b. "It is very important. For instance, we recommend that if a Community Health Worker goes to a family and finds a person that has been coughing for more than two weeks, then they should encourage that person to take a sputum sample. (...) Sometimes they say that the person must go to the clinic to cough. If they can make their way up there – depends if the patient can come to the clinic or not. If the person does not come, then they actually take the bottles from the clinic to that particular family, for that person to cough. And then they take the sputum back to the clinic. And this is why they have access to the transport, the transport in our district which is going around transporting everything." (CHW programme manager A, 2004)
- 24.
- a. "And at the same time even what another thing that they do is that they do go to their clinic. If they get a problem in the community where they are working, they take those problems to the clinic. They also going to the clinic to find out if there are new problems that they got in the clinic as well. There are problems that they have identified, and then the person is from the clinic to the community, the person who is the link there is the Community Health Worker. They do a lot of work."
- b. "And at the same time, even another thing that Community Health Workers do is that they go to their clinic. If they get a problem in the community where they are working, then they inform the clinic. They are also going to the clinic to find out if there are new problems that are occurring in the clinic. If there are problems that they have identified in the clinic, then the person who is the link between the clinic and the community there is the Community Health Worker. They do a lot of work." (CHW programme manager A, 2004)
- 25.
- a. "As you know, the Community Health Workers are the first point of contact with the, with our clients. With the community. Because they are from the community. And, so we are working together with them because if they find there are people in the community that need aeh to be referred to the clinic, they refer to the clinic."
- b. "The Community Health Workers are the first point of contact with our clients and with the community, because they are from

that community. We are working together with them, because if they find that there are people in the community that need to be referred to the clinic, they refer them to the clinic." (PHC Manager, 2004)

- 26.
- a. "There is a note that they write. And sometimes, most of the time they go directly to the clinic to talk to the supervisor. I've got this problem. I have identified this and this problem. And we encourage that they must go to the clinic to get (?) to the problem there and go back to the community."
- b. "There is a note that they write. And sometimes, most of the time they go directly to the clinic to talk to the PHC supervisor. I've got this problem. I have identified this and this problem. And we encourage that they must go to the clinic to get the problem there and go back to the community." (CHWP manager A, 2004)
- 27.
- a. "If they find there are people in the community that need aeh to be referred to the clinic, they refer to the clinic. There is a form. But sometimes they don't use it. But there are the forms that was made. We developed a form together with them that they were going to use. But sometimes we find that you know that they don't use that form. I don't know why. But it's not always the same, but sometimes they do use the form."
- b. "If they find there are people in the community that need to be referred to the clinic, they refer to the clinic. There is a form. But sometimes they don't use it. But there are forms that were made. We developed a form together with them which they were going to use. But sometimes we find that they don't use that form. I don't know why. It's not always the same, but sometimes they do use the form." (PHC Manager, 2004)
- 28.
- a. "The, the Community, at the present moment, the people like HIV/AIDS Unit or co-ordinators, they are getting training. And those people are going to be, when we get the treatment, they will be send back to the community. And the people who are involved and who are directly involved with aeh communities are the Community Health Workers. They are going to be a very big role in the treatment."
- b. "The Community, at the present moment, the people like HIV/AIDS Unit or co-ordinators, they are getting training. And those people are going to be, when we get the treatment, they will be send back to the community. And the people who are involved and who are directly involved with communities are the Community Health Workers. They are going to have a very big role in the treatment." (CHWP manager A, 2004)
- 29.
- a. "Maybe they will, what are they they are going to do is, maybe I'm according to my observations and my obligations, is that they are going to make the full ART."
- b. "Maybe they will, what they are going to do is, maybe, according to my observations and my obligations, is that they are going to make the full ART." (CBP manager, 2004)

- a. "Yes, it is very important. Like for instance I said to you, each and everything that we want to introduce to the community, we do involve the Community Health Workers, even for that one. As soon as people are trained, the Community Health Workers are going to be the people, who are going to be trained and they are going to be directly involved with that programme."
- b. "Yes, it is very important. Like for instance I said to you, each and everything that we want to introduce to the community, we do involve the Community Health Workers, even for that one. As soon as people are trained, the Community Health Workers are going to be the people, who are going to be trained and they are going to be directly involved with that programme." (CHWP manager C, 2004)
- 31.
- a. "And the link between the hospitals or clinics and Community Health Workers is still still very wishy, washy. We are not sure where they should be linked to at the community level. Especially when it comes to, there are things that need Community Health Worker at the clinic level, like the tracing of the TB defaulters, there is a new programme on PMTCT, which needs somebody to go and follow up a mother who has been settled on a program for PMTCT at a homestead and then feedback it to the ... OK, she is feeding the baby properly, maintaining the instructions given when she started the program."
- b. ^aAnd the link between the hospitals or clinics and Community Health Workers is still very wishy, washy. We are not sure where they should be linked to at the community level. Especially when it comes to things that need Community Health Worker at the clinic level, like the tracing of the TB defaulters, there is a new programme on PMTCT, which needs somebody to go and follow up a mother who has been settled on a program for PMTCT at a homestead and then feedback it to the facility: OK, she is feeding the baby properly, maintaining the instructions given when she started the program. (CHWP manager B, 2004)
- **3**2.
- a. "Aehm, a lot of people, in terms when I look at the Community Health Worker and the role of the Community Health Worker, and looking at it in terms of connecting the community to services. So it's not just how can be both the patient in the house (??) to do it, it's also to connect the community to the services, and in particular to sort of offer a continuous service at that level. So you would have a block or a section in a community, would know who the Community Health Care Worker is, would know if they needed to know more about a child support grant, they would go to that person's home. 'My cousin from the Eastern Cape has just joined us and she has got a small child.' That kind of thing. So the idea would be reconnect to, we got wonderful services available, but very often people can't connect to. The child hasn't been registered, there is no birth certificate, there is no ID book, there is no ..." "The idea is to get that Community Health Care Worker to know how to connect services. So she might be based in a clinic, but she got the knowledge and skills to connect to all the services in that community. And, and as you know, for example Social

Development and Health and Education is all in one cluster so the technically speaking there should be coordination because we should be having a crosscutting initiative."

- b. "When I look at the role of the Community Health Worker, then it is in terms of connecting the community to services. So it is not just how can we reach the patient in the house, it is also to connect the community to the services, and in particular to a sort of continuous service at that level. So you would have a block or a section in a community, and they would know who the Community Health Worker is. And if they needed to know more about a child support grant, they would go to that person's home. 'My cousin from the Eastern Cape has just joined us and she has got a small child.' That kind of situation. So the idea would be to connect to services. We got wonderful services available, but very often people can not access them. The child has not been registered, there is no birth certificate, no ID book, there is nothing." "The idea is to get the Community Health Worker to know how to connect people to services. So she might be based in a clinic, but she got the knowledge and skills to connect to all the services in that community. And, for example Social Development and Health and Education are all in one cluster, so, technically speaking, there should be coordination because we should be having a crosscutting initiative." (Managers, NDoH, 2004)
- 33. "At the moment, an estimated 4.300 Community Health Workers are working in KZN, of which 2.600 were appointed through NGOs and approximately 1.000 through hospitals. One of the aims of the programme is to bring Community Health Workers to the same level in all the districts of KZN, in terms of coverage as well as in terms of their qualification." (Notes from interview with CHWP manager, 2002)
- 34.
- a. "... we don't have enough Community Health Workers (...) But what happend in our district, we, since we don't have enough Community Health Workers, we didn't allocate the Community Health Workers into the townships. Like (two place names)." Q: "You don't have any there?" A: "We don't. We only have few, in there. When I came, when we allocated we felt the need definitely for the Community Health Worker to look into that." Q: "But you don't have enough?" A: "Not in the whole location. And another hope that we had is that in the township we had about three units. It's unlike our other areas where there are no clinics and they depend to the mobile. That is how we prioritized to allocate the Community Health Workers. Where there are no Community Health Workers and no clinic, where there are mobile points, we allocated, we said those are the areas we allocated Community Health Worker." Q: "There they are needed urgently, because there is no primary health care?" A: "Nothing! Because in town, in the township there aren't any. There are NGO resourced, who are doing the very same thing. Even if it's not exactly the same, but they do get the attention or the knowledge or the information from the NGO. Not that we have completely forgotten about it, the township. We are expecting to get some more Community Health Workers and then we shall deploy them even in our location."

- b. "We don't have enough Community Health Workers. But what happened in our district, since we don't have enough Community Health Workers, we did not allocate new Community Health Workers into the townships. We only have a few there. When we started to allocated new workers, we felt the need for the Community Health Worker programme to definitely look into that. But we don't have enough for all locations. And another hope that we had is that in the townships, we had about three clinics. It's unlike our other areas where there are no clinics and they depend only on the mobile clinics. That is how we prioritized to allocate the Community Health Workers. Where there are no Community Health Workers yet and no clinic, where there are only mobile points, those, we said, are the areas we allocate Community Health Workers to. (...) Not that we have completely forgotten about the townships. We are expecting to get some more Community Health Workers, and then we shall deploy them even in those locations." (CHWP manager A, 2004)
- 35.
- a. "Aemh, there is no, you know, we are having a problem. They resign, they die, something like that. At the present moment roughly we have got about hundred and seventy four. Because last, aemh, yesterday, like for instance yesterday, I got a message that we lost one of our Community Health Workers. So (it varies) more or less around that. (...) Though we are mandated now to replace those people."
- b. "You know, we are having a problem. They resign, they die, things like that. At the present moment we have got roughly about hundred and seventy four. Because like for instance yesterday, I got a message that we lost one of our Community Health Workers. So it varies more or less around that. Though, we are mandated now to replace those people." (CHWP manager A, 2004)
- 36.
- a. "Traditional healers. They are independent. But you find that they are they do work with the Community Health Workers. And you find that some of these Community Health Workers are also traditional healers."
- b. "Traditional healers are independent. But you find that they do work with the Community Health Workers. And you find that some of the Community Health Workers are also traditional healers." (PHC manager)
- 37.
- a. "To the, to the primary health care nurse there is aeehh although it's very informal. Ja, it's informal. But there is, we have this monthly meetings (??) with them, we conduct workshops with them, we discuss referral procedures with them. We designed some forms for them to refer."
- b. "Traditional healers have a link to the primary health care nurse here, although it is very informal. But we have these monthly meetings with them, we conduct workshops with them, we discuss referral procedures with them. We designed some forms for them to refer." (PHC manager)

- a. "so in case the uNompilo does not happen to visit a specific household, household members can also approach uNompilo and inform them about a problem like a stroke."
- b. "so in case the uNompilo does not happen to visit a specific household, household members can also approach uNompilo and inform them about a problem like a stroke." (Community Rehabilitation Workers, 2004)
- 39.

- a. "But what people always accept is people who they know. So the people who look after the ... are their neighbours, are their relatives, are their friends."
- b. "But what people always accept are people who they know. So the people who look after them are their neighbours, are their relatives, are their friends." (CBHP Manager, 2004)
- 40. "I have AIDS. I haven't told anyone here. I don't want them to know, also not the people here. My mother sometimes asks me why I am loosing weight ... But in (a place further away), I went to this support group, I met my partner there. He is also infected. So at least we know of each other." (CHW, private conversation, 2004)
- 41.
- a. "We don't just say, we are going to replace, we need to involve the community. We go to the community, we explain the situation and then we tell them to elect this person. We are not the person who is selecting that person. They are in the community."
- We don't just say, we are going to replace, we need to involve the community. We go to the community, we explain the situation and then we tell them to elect this person. We are not the ones who are selecting that person. They are in the community." (CHWP Manager A, 2004)
- 42.
- a. "And these people are being elected by the community and the amakhosi. This chief, this lady chief, who is very active, she has been doing so much for the community. So it's how they, we ask them to identify, we don't tell them. We tell them that we are asking, especially with so many people, who capable. It's a, you know, it's a sort of aehm something were we all are equal, not a one-man thing."
- b. "And these people are being elected by the community and the amakhosi. This chief, this lady chief is very active; she has been doing so much for the community. So, we ask them to identify (the oNompilo), we do not tell them. We tell them what we are asking for, especially with so many people, who are capable. It is something where we all are equal, not a one-man thing." (CBP Manager, 2004)
- 43. "A problem I see consists in the misuse of the Community Health Workers as a political tool. The appointment of Community Health Workers is sometimes misused. There is a lot of unemployment, and the position brings some money. It can be misused by political parties or leaders." (Notes from interview with CHWP manager, 2002)

- 44.
- a. "Because in KZN for instance, this persons gets elected by the by the community. And the committee that has been put together to form the Health Committee and it was such a trouble. It took years and years of hard work to get those committees in place. But actually to make sure that these are the ones responsibly."
- b. "It was such a trouble and took years and years of hard work to get those committees in place and actually to make sure that these are the ones responsible." (NDoH manager, 2004)
- 45.
- a. "But the problem that I see, it's huge numbers and their training is not really coordinated. We find that aehm some people train, one, there is no quality assurance, they're trained by NGOs, there are trained by all sorts of people, all the. That's why we are saying if we go the KZN model, at least there is a structure and there is a bit of supervision. Because in other areas, in other provinces just private individuals or just aehm new NGOs."
- b. "But the problem that I see is that these are huge numbers (of CHWs) and their training is not really coordinated. We find that some people train, where there is no quality assurance. They're trained by NGOs, there are trained by all sorts of people. That's why we are saying if we go to the KZN model, at least there is a structure and there is a bit of supervision. But in other areas, in other provinces, it is just private individuals or just new NGOs." (Civil servant, NDoH, 2004)

- a. "They are trained by the Community Health Facilitators. (...) In the future, the person who used to come from (the hospital), a district co-ordinator for the programme, is also going to be involved in their training. The district co-ordinator for the programme is going to be actively involved in their training. Community Health Workers themselves are trained by the Community Health Facilitators."
- b. "They are trained by the Community Health Facilitators. (...) In the future, the person who used to come from (the hospital), a district co-ordinator for the programme, is also going to be involved in their training. The district co-ordinator for the programme is going to be actively involved in their training. Community Health Workers themselves are trained by the Community Health Facilitators." (CHWP manager A, 2004)
- 47.
- a. "For the Community Health Workers, they are trained in their district. Most of the time, we are supported by Valley Trust, because the province allocated funds to The Valley Trust, even for training. I don't know lately, maybe the new programme director is going to have her own strategy. But before, the money was allocated to The Valley Trust. And then we have got, when we were conducting training here, we contacted The Valley Trust that we are going to have the training and please support us. They give us money for catering; they give money for seminary, if we are going to use seminary sites."
- b. "The Community Health Workers are trained in their district. Most of the time, we are supported by the Valley Trust, because the Province allocated funds to The Valley Trust, even for training. I

don't know lately, maybe the new (provincial) programme director is going to have her own strategy. But before, the money was allocated to The Valley Trust. And when we were conducting training here, we contacted The Valley Trust that we are going to have the training and asked them to please support us. They give us money for catering; they give money for a seminary, if we are going to use seminary sites." (CHWP manager A, 2004)

- a. They come, they are trained directly here in the district. ... Most of the time we used to organise the venue with (name of the hospital). Because according to our area, there are Community Health Workers who are not in a position to go, to travel every day in the morning and afternoon. There are very people who are from very far, like from (place name), we are having Community Health Workers, who come here, they just stay here for a week and then Friday they go home, Sunday they come, until they completed the training."
- b. "They come to us; they are trained directly here in the district. Most of the time we used to organise the venue with (the hospital), because in our area there are Community Health Workers who are not in a position to travel every day in the morning and afternoon. There are many people who are from very far, like from (place name). We are having Community Health Workers, who come here, they just stay here for a week and then Friday they go home, Sunday they come back, until they completed the training." (CHWP manager A, 2004)
- 49.
- a. "We are busy with their graduation. We trained them for some years, and they are those that are being trained recently. So we felt that they must get sort of a graduation, just motivating, sort of. (...) So, in that regard now we are very busy with that. (...) it's a lot of work."
- b. "We are busy with their graduation. We trained oNompilo for some years, and they are those that have been trained recently. So we felt that they must get sort of a graduation, just for motivating, sort of. So, in that regard we are now very busy with that. It's a lot of work." (CHWP Manager, 2004)
- 50.
- a. "There, we still have got the old ones, that were employed by KwaZulu, they work four days a week. Though we are in the integration process. If it wasn't for the break that we had. We were planning that, the province planned that by December last year the integration process would have been completed. But unfortunately there was that gap. And then we have got these Community Health Workers that were employed from year 2000. They are working from Monday to Friday. Those are contracted by The Valley Trust and KZN PPHC. And then for the old Community Health Workers, because their money still send to the hospital, like for instance (name of hospital), we are also dealing with (name of hospital) financial people, for the old Community Health Workers, because their salaries, they get their salaries through the hospitals. They are not yet contracted

by The Valley Trust. Office is in the process now that they are contracted by The Valley Trust."

- b. "We still have got the old ones, who were employed by KwaZulu - they work four days a week. However, we are in the integration process and would have progressed, if it wasn't for the break that we had. We were planning that, the province planned that by December last year the integration process would have been completed. But unfortunately there was that gap. And then we have got these Community Health Workers who were employed from the year 2000. They are working from Monday to Friday. Those are contracted by The Valley Trust and KZN PPHC. And then for the old Community Health Workers, because their money is still being send to the hospital, like for instance hospital X. So, we are also dealing with hospital X's financial people for the old Community Health Workers, because they get their salaries through the hospitals. They are not yet contracted by The Valley Trust. However, the office is now in the process, so that they will be contracted by The Valley Trust." (CHWP manager, 2004).
- 51.
- a. "Even so there was a national breakthrough, the variation there in training was so dramatic. And also there was for the longest time, people didn't realize that the qualification that was already on the national qualifications framework could add value in terms of quality management. And that conflict is now been bought (??) into. Everybody wants to improve the quality of the training. Not saying that (??) the training was quick, all the training was quick. All the training was excellent and exceeded the requirements (??). But it's just to make sure that that that there is a spirit of care (??)."
- b. "Even so there was a national breakthrough; the variation in training was so dramatic. And although there was already one for the longest time, people didn't realize that the qualification that was on the national qualifications framework could add value in terms of quality management. And that conflict is now been bought into. Everybody wants to improve the quality of the training. I am not criticising that the training was quick, all the training was quick. All the training was excellent and exceeded the requirements. But it's just to make sure that there is a spirit of care." (NDoH manager, 2004)
- 52.
- a. "But the other thing that we must realize, that we cannot brand people forever to be stuck in their community. We expect that some people will want to stay there, especially the older persons are most probably would like to stay in their (??) community. And the expectations of these qualifications would allow this. They most probably would like to operate a small business, for example ancillary health care she(?) came up with child care (???). Which is excellent because a lot of people in the community wish to open services for child care, or wish to proof their services for child care. And it is perfect for an older grandmother who wants to rent her services. She doesn't want to become a nurse or physiotherapist or whatever. Her expectations are far more modest. We might have a young Grade 12 person and she has just completed, who would like to

become a physiotherapist or ... or radiographer or whatever. And he, that is a different challenges, because that person we also need to address. Because you cannot, through job creation initiatives, create a ... chain (??) for someone and lock them down this way. You need to make sure, and that's why we try to sort out responsibilities, because it's nice to discuss Community Health Care Workers and what they do and how they do it, but it's more important to ensure that they will be able to move somewhere ... (??). And you know about the Presidential Programme for Home-Based Care Givers, which is the expanded Public ...(???) in terms of the Expanded Public Works Programme. And that will create a whole lot of youth that have aot experience in community health. And that, you would like to find ways of those that wish to continue in the health profession to actually can do (?) that. Because we are heading into times, people entering the health profession with no longer the desirable gualifications."

b. "But the other thing that we must realize is that we cannot brand people forever to be stuck in their community. We expect that some people will want to stay there. Especially the older persons would most probably like to stay in their community. And these qualifications would allow this. They most probably would like to operate a small business, for example in ancillary health care, where someone can provide child care. So it is excellent, because a lot of people in the community wish to open services for child care, or wish to proof their qualifications for child care. And it is perfect for an older grandmother who wants to rent her services. She doesn't want to become a nurse or physiotherapist, or whatever. Her expectations are far more modest.

But we might have a young Grade 12 person and she has just completed the training, who would like to become a physiotherapist or radiographer or whatever. And that is a different challenges, because that person we also need to address. Because you cannot, through job creation initiatives, create a chain for someone and lock them down this way. You need to make sure, and that's why we try to sort out responsibilities, because it's nice to discuss Community Health Care Workers and what they do and how they do it, but it's more important to ensure that they will be able to move somewhere afterwards. And the Presidential Programme for Home-Based Care Givers, which is part of the Expanded Public Works Programme, will create a whole lot of youth that have got experience in community health. And so you would like to find ways for those that wish to continue in the health profession that they actually can do that. Because we are heading into times, where people would be entering the health profession without having the desirable gualifications." (NDoH civil servant, 2004)

53.

a. "The other thing that is important which is beside the standardization of the training and recognizing that on the National Qualifications Framework is also the other issue of ensuring that the standard of treatment meets certain norms and standards. And that the discussions, which are underway at the moment, actually get a body to regulate the health care workers."

- b. "The other thing that is important, which is beside the standardization of the training and recognizing it on the National Qualifications Framework, is also the other issue of ensuring that the standard of treatment meets certain norms and standards. And that the discussions, which are underway at the moment, actually lead to a body to regulate the health care workers." (NDoH manager, 2004)
- 54.
- a. "One of the things that you, I don't know if you realize, but there is a national qualification in ancillary health care, which is supposed to be a Community Health Worker qualification. It's the only formally recognized qualification in the country according to the National Qualifications Framework. Now this process was developed by the standards generating body for ancillary health care, and they just had their mandate extended, in which they will be able to come up with qualifications in the extend for training right to a pre higher-education level."
- b. "There is a national qualification in ancillary health care, which is supposed to be a Community Health Worker qualification. It's the only formally recognized qualification in the country according to the National Qualifications Framework. Now this process was developed by the Standards Generating Body for Ancillary Health Care, and they just had their mandate extended, in which they will be able to come up with qualifications in the extend for training right up to a pre higher-education level." (NDoH manager, 2004)
- 55.
- a. "So, that is going to change the environment of Community Health Workers tremendously, because all the Community Health Care Workers, say 60-70.000 odd Community Health Care Workers, will now be able to get their qualifications formally recognized."
- b. "So, that is going to change the environment of Community Health Workers tremendously, because all the Community Health Care Workers, say 60-70.000 odd Community Health Care Workers, will now be able to get their qualifications formally recognized." (NDoH manager, 2004)
- 56.
- a. "They may go through a training in the beginning, it's about a year, the basic training. And then what happens is, then they have in service, depending on what, like most of them they where trained on HIV and AIDS, but the issue of drugs, so some years ago it was not there, so now if then we are going to give drugs, they must be trained on that. If there are new things that are coming in or new technologies then they should be trained in service, like in other contracts."
- b. "They may go through the training in the beginning. It's about a year, the basic training. And then what happens is, then they have in-service training, depending on what there is. Like most of them, they were trained on HIV and AIDS, but the issue of drugs, some years ago, it was not there. So, now if we are going to give drugs, they must be trained on that. If there are new things that are coming in or new technologies then they should be trained in service, like in other contracts." (CHWP manager C, 2004)

- 57.
- a. "We organise another additional training. Each thing that happens, we organise training for the Community Health Workers. We give them the information and we structure it in such a way that they must cope and know what is going to happen and how to approach what issue."
- b. "We organise another additional training. Each thing that happens, we organise training for the Community Health Workers. We give them the information and we structure it in such a way that they must cope and know what is going to happen and how to approach what issue." (CHWP manager A, 2004)
- 58.
- a. "No, no. Not together. But there are fifteen in place that maybe we try that the information is the same or is like for instance like this IMCI. There are people who are trained for IMCI, they train others in that. But at the end, we hope that everybody is getting the very same information.
- b. "There maybe fifteen in one place, but we try that the information is the same. For example, there is IMCI (Integrated Management of Childhood Illnesses). There are people who are trained for IMCI; they then train others in that. But at the end, we hope that everybody is getting the very same information." (CHWP manager A, 2004)

59.

- a. Q:"How many facilitators are you responsible for?" A: How many have we? Four." Q: "Is this for each of these local health sub-districts?" A: "No. Only (name of the area). Catchment area for my clinic. The others would report to the clinic manager at that. (point onto the map)." Q: "At the next clinic?" A: "Ja. At directly at that clinic."
- b. "We have four Facilitators for (name of the area), for the catchment area of my clinic. Other Facilitators would report to the clinic manager directly at the next clinic." (PHC Supervisor)

- a. "Some of them are based at the clinic, some at the hospital. But because of this person, the PHC supervisor, is at the clinic, is at the hospital. Then you will find the facilitator here, at hospital. You do find a few, but more seldom, because the programme was initiated at the hospital."
- b. "Some of the facilitators are based at the clinic, some at the hospital. It depends if this person, the PHC supervisor, is at the clinic or at the hospital. Then you will find the facilitator here, at the hospital. You do find a few at the clinic, but more seldom, because the programme was initiated at the hospital." (CHWP manager B, 2004)
- 61.
- a. "The norm, we have got the norm, though we at the present moment, because we don't have enough units, the number is about thirty, the person must look after thirty Community Health Workers."
- b. "We have got a norm. Although at the present moment it is lower, because we don't have enough units. The number is about thirty, the person must look after thirty Community Health Workers." (CHWP manager A, 2004)
- 62.
- a. Q: "So that is one facilitator for a quite big area?" A: "Big area. And the number of the Community Health Workers, which she is working with, like for instance with Mrs B. (full name), she is looking after about 27 Community Health Workers. And then S.S. (full name), she is looking after 22 and so on."
- b. "It's one facilitator for a big area. And the number of the Community Health Workers, who she is working with, varies. Like for instance, Mrs B., she is looking after about 27 Community Health Workers. And then S.S., she is looking after 22 and so on." (CHWP manager A, 2004)

- a. "Ja, but it is done by area, 'cause each facilitator will have about 50 sisters, and each sister is bringing his or her reports."
- b. "It is done by area, because each Facilitator will have about 50 sisters, and each sister is bringing his or her reports." (CHWP Manager C, 2004); (sister=uNompilo)

- a. "I am working with the Community Health Facilitator. I got about 12 at the present moment." Q: "In the whole district?" A: "In the whole district. To improve their supervision coverage, I selected them according to their area. There are areas that they work in, like for instance, there is Mrs B. (full name), she is working from (town name) to (a sub-district) and a part of (a second subdistrict). I've got S.S., she is doing the (name of sub-district) area. I've got Mrs D., she is doing (name of sub-district), that is the (town name) area. And so on."
- b. "I am working with the Community Health Facilitators. I got about 12 at the present moment in the whole district. To improve their supervision coverage, I selected them according to their area. There are areas that they work in, like for instance, there is Mrs B., she is working from (town name) to (a sub-district) and a part of (a second sub-district). I've got S.S., she is doing the (name of sub-district) area. I've got Mrs D., she is doing (name of sub-district), that is the (town name) area. And so on." (CHWP manager A, 2004)
- 65.
- a. "And unfortunately we lost another facilitator last week. He passed away. And we are going to see how we are going to distribute his load to other facilitators until such time that there is another facilitator. But he passed away. He was buried last week Sunday. But other team members are busy looking into that."
- b. "And unfortunately we lost another facilitator last week. He passed away. And we are going to see how we are going to distribute his load to other facilitators until such time that there is another facilitator. But he passed away. He was buried last week Sunday. But other team members are busy looking into that." (CHWP manager A, 2004)

- a. "And then, these, the contract worker and the Facilitator," (encircles CHW and Facilitator) "we said, they would meet at least once a week."
- b. "And then, these, the contract worker and the Facilitator, we said, they would meet at least once a week." (CHWP manager C, 2004)
- 67.
- a. "Like for instance, there is a ...(????) or there is one facilitator from her area where she wants to do the mini-show where they are going to display their handworks or project, whatever project they are doing."
- b. "Like for instance, there is one Facilitator, who wants to do a kind of mini-show in her area. They are going to display their handworks or projects, whatever project they are doing." (CHWP manager A, 2004)

68.

- a. "And at the same time, also the Community Health Facilitator is going to come at any time."
- b. "And at the same time, also the Community Health Facilitator is going to come at any time." (CHWP manager A, 2004)

69.

- a. "The facilitator is the person who looks after the quality of the interventions."
- b. "The facilitator is the person who looks after the quality of the interventions." (CHWP manager C, 2004)

70.

- a. "The supervisor and the health facilitator, they meet, and again it could be maybe once, once a month."
- b. "The supervisor and the health facilitator, they meet, and again it could be maybe once, once a month." (CHWP manager C, 2004)
- 71.
- a. "It should, if we have enough transport, it should be at least every day or maybe once a week. Because the facilitator is supposed to go there to check if the Community Health Worker has done the work. And she is supposed, even if she does this both checking, she is supposed to go and check, compare the work that she says she is doing with the fact. She is writing her daily work. So on average let's say every week. Because of the situation of the transport difficulties at the moment."
- b. "If we have enough transport, it should be at least every day or maybe once a week. Because the facilitator is supposed to go there to check if the Community Health Worker has done the work. And she is supposed to go and check, compare the work that she says she is doing with the facts. She is writing her work down daily. So on average let's say she is visiting once every week. Because of the situation of the transport difficulties at the moment." (CHWP manager A, 2004)

72.

a. "In the morning, they report in the co, in the local supervisor, and at the same time, the Community Health Facilitator will be, or she has got the schedule, where is she going to go. On a certain day, where is she going to, what is it that she is going to do. There is a lot of work that they are doing."

b. "The Community Health Facilitator will have the schedule, where is the CHW going to go. On a certain day, where is she going to, what is it that she is going to do. There is a lot of work that they are doing." (CHWP manager A, 2004)

73.

- a. "There are areas, which do not have a Facilitator from the Department of Health."
- b. "There are areas, which do not have a Facilitator from the Department of Health." (CHWP manager B, 2004)

74.

- a. "In fact, all the facilitators should be employed by the Department. We only have our own facilitators, because there was a gap."
- b. "In fact, all the facilitators should be employed by the Department. We only have our own facilitators, because there was a gap." (NGO manager, 2004)

- a. "But at the moment, they are trying to clarify those issues. Like this thing of the Community Health aehm of the Facilitators. According to the Department of Health aeh aeh, the person that is supposed to be Community Health Facilitator would come from the clinic. ... And have a health background. But you know there are some people that put other people in the position of Community Health Facilitators and don't know."
- b. "But at the moment, they are trying to clarify those issues. Like this thing with the Community Health Facilitators. According to the Department of Health, a person that is supposed to become a new Community Health Facilitator would come from the clinic. And have a health background. But, you know, there are some people that put other people in the position of Community Health Facilitators and don't know." (PHC manager)
- 76.
- a. "You know lately, before aehm it used to be the allocation, we used to allocate people. But people are not the same. This problem needs people who are responsible and committed. So we said from last year, okay, let's advertise the position, it's not a post, it's just a position. We said people who are interested and then we set the criteria and the requirements. Like a drivers license is a requirement. Grad 10 is a requirement. Because the person is going to the training, come back, train other people, so really the responsibility is there. But we advertised that, we interviewed people and then eventually we selected."
- b. "We used to allocate people. But not all people are the same. This problem needs people who are responsible and committed. So we decided last year, okay, let's advertise the position. It is not a post, it is just a position. We know that we need people who are interested. And thus, we set the criteria and the requirements. A driver's license is a requirement. Grade 10 is a requirement. Because the person is going to the training and then will come back to train other people. So, really there is a lot

of responsibility. But we advertised the position, we interviewed people and then we eventually selected." (CHWP manager A, 2004)

- 77.
- a. "We look that according to the district there is unity. I told you that we just allocate the area to each and every facilitator. What I do, in other areas, in fact, each has, there are not doing the way we are doing, but it's the way we feel more it is going to improve the work and aehm other issues around the programme if we do it this way, in this way. So we feel there must be some other items that are sanitised. But it depends how we are proactive to do at it(?). Like for instance, ... (??) here, some of the things are not happening in other places."
- b. "We look that according to the district there is unity. I told you that we just allocate the area to each and every facilitator. In other areas, they are not doing it the way we are doing things. But it's the way we feel it is going to improve the work and other issues around the programme, if we do it in this way. So, we feel there are some other items that must be clarified. But it depends, how proactive we are to do it. Like for instance, what we do here, some of the things are not happening in other places." (CHWP manager A, 2004)
- 78.
- a. "Community Health Facilitators are trained at Amatikulu."
- b. "Community Health Facilitators are trained at Amatikulu." (CHWP manager A, 2004)
- 79.
- a. "With the Community Health Facilitator, most of the time they are trained in one place. They are trained in one place. Even if they are new methods that is going to be used, because maybe at some stage ... must be closed down, but the information is definitely sure I hope the same."
- b. "The Community Health Facilitators, most of the time they are trained in one place. They are trained in one place. Even if there are new methods that are going to be used, because maybe at some stage the centre must be closed down, but the information is definitely sure I hope the same." (CHWP manager A, 2004)

- a. "They do one-year course. They got modular system. They go to Amatikulu four times."
- b. "They do a one-year course. They got a modular system. They go to Amatikulu four times." (CHWP manager A, 2004)
- 81. "The CHW programme gives communities the chance to take responsibilities for their own lives. The programme should be driven by the communities themselves, though the Department of Health assists them, for example with the payment of salaries." (Notes from interview with CHWP manager, 2002)
- 82. "A good recent development was the implementation of the Local Government Act. It gives local government and communities greater responsibilities." (Notes from interview with CHWP manager, 2002)

- 83.
- a. "The other way of, even if the system would not have the programme at all, this programme was not there, still the committee, this committee (pointing at the Community Health Committee) they are not for CHW, they are Health Committees, from the various communities, there is a forum, then they select people who will sit in the district management team. Even the district management team, when they make decisions, they must get in information from the very people themselves. So the community is presented at the district level now. It's a policy decisions. And they would come in and be the voice of the people."
- b. "Even if the system would not have the CHW programme at all, if this programme was not there, still the Community Health Committee would exist. They are not for Community Health Worker Supervisors, they are Health Committees. From the various communities, there is a forum. From the forum, they select (one or two) people who will sit in the district management team. Even the district management team, when they make decisions (on health issues), they must get in information from the very people themselves. So the community is presented at the district level now. It's a policy decisions. And they would come in and be the voice of the people." (CHWP manager C, 2004)
- 84.
- a. Q: "Who is electing them?" A: "The very community themselves. What happens is, this is where it starts, they elect, the community, they have a big meeting, community meeting and then they decide that ja, who is going to be in the health committee, it's only those with an interest in health."
- b. "The very community themselves. What happens is, it starts with an election. The community, they have a big community meeting and there they decide who is going to be in the health committee. It is only those with an interest in health." (CHWP manager C, 2004)

- a. "Because in KZN for instance, this persons gets elected by the by the community. And the committee that has been put together to form the Health Committee and it was such a trouble. It took years and years of hard work to get those committees in place. But actually to make sure that these are the ones responsibly."
- b. "In KZN for instance, this persons gets elected by the community and by the committee that has been put together to form the Health Committee. It was such a trouble and took years and years of hard work to get those committees in place and actually to make sure that these are the ones responsible." (NDoH manager, 2004)
- 86.
- a. "Then once these (referring to Community Health Committee) are there, then from the bigger community, then they will sort of like allocate who is going to look after how many sisters and then have this kind of people who are then looking after them."
- b. "Then once the Community Health Committee is there, then from the bigger community, they will sort of allocate who is going to

look after how many sisters. And thus have this kind of people, who are then looking after them (the oNompilo)." (CHWP manager C, 2004) (JF: sisters – an occasionally-used term for CHWs)

- 87.
- a. "The Community Health Worker Supervisors are not necessarily members of the Community Health Committee. They are selected by the community."
- b. "The Community Health Worker Supervisors are not necessarily members of the Community Health Committee. They are selected by the community." (Community Rehabilitation Worker, 2004)
- 88.
- a. "Not necessarily the member of the committee, because in fact the member of the committee are not available always. But any responsible and honest member of the community who can take this responsibility, (...) Okay, in other areas it depends, maybe the committee members are available, you can still say one of them can supervise a person. As long as the person is available every day, and she'll be honest to each other, because we still have got some problems as well."
- b. "Not necessarily the member of the committee, because in fact the members of the committee are not always available. But any responsible and honest member of the community who can take this responsibility. (...) Okay, in other areas it depends, maybe the committee members are available. Then you can still say one of them can supervise a person. As long as the person is available every day, and they'll be honest to each other, because we still have got some problems as well." (CHWP manager A, 2004)
- 89.
- a. Q: "So the supervisor, is that one supervisor per oNompilo, or can one supervisor be responsible for more?" A: "It does happen that maybe two or three, they report to one family. Or it depends how this area is aehm the situation of this area. Some areas, I said to you, we have got areas, where the families are sparse, little populated, like (place name). You will see if we go up. It depends. If maybe, maybe they have things nearer to each other, it does happen."
- b. "It does happen that maybe two or three oNompilo report to one family. It depends how the situation of this area is. We have got areas, where the families are sparse and there is little population, like (place name). It depends. If maybe they have things nearer to each other, it does happen." (CHWP manager A, 2004)
- 90. "The Community Health Committee is just there to help the community. It is not prepared to look after the oNompilo, but is prepared to support their job." (From notes taken during Weekly CHW meeting, 2004)
- 91.
- a. "And then the Community Health Workers, they work directly with the local supervisor. They are members of the community, maybe asked to look after or they where the Community Health

Worker report every morning and every afternoon. In the morning, they report in the co, in the local supervisor, and at the same time, the Community Health Facilitator will be, or she has got the schedule, where is she going to go. On a certain day, where is she going to, what is it that she is going to do."

- b. "The Community Health Workers, they work directly with the local supervisor. They are members of the community, maybe asked to look after a Community Health Worker. They are the people, where the Community Health Workers report every morning and every afternoon. In the morning, they report in the community, with the local supervisor. And (the CHW Supervisor) has got the schedule, where is (the CHW) going to go. On a certain day, where is she going to, what is it that she is going to do." (CHWP manager A, 2004)
- 92.
- a. Q: "I was told that the CHW is meeting with the supervisor." A: "Every day." Q: "Every day. Every day once, or?" A: "Twice. They clock in and out." Q: "So is this a mechanism to control what they are doing?" A: "Ja, to control. Number one, to check that they are, they come on duty. This is a gap here, 'cause this person can show that this person has clocked in and out, but what they do, they are not involved in the quality of the intervention, because they don't know. (...) That is just clocking in and out. It's the facilitator, this person (pointing at the facilitator in graph) who looks after the quality of intervention. So these (supervisors) are just clocking in and out, and taking care of a person's support, if they need any support."
- b. "The CHW is meeting with the supervisor every day. Twice. They clock in and out. It's to control. Number one, to check that they come on duty. This is a gap here, because this person can show that this person has clocked in and out, but what they do, they are not involved in the quality of the intervention, because they don't know. That is just clocking in and out. It is the facilitator, who looks after the quality of intervention. So these (supervisors) are just clocking in and out, and taking care of a person's support, if they need any support." (CHWP manager C, 2004)
- 93.
- a. "Especially if there are problems with the family they are visiting, the safety when they enter, chased by a dog or ... then she can talk to the supervisor, because this person is a member, is in the community. She can either talk to the family or she refers them to the bigger health committee. And then they do that. And then it's just a kind of support."
- b. "Especially if there are problems with the family they are visiting, with the safety when they enter, if they are chased by a dog or something similar. Then she can talk to the supervisor, because this person is a member of the community. (The supervisor) can either talk to the family, or she refers them to the bigger health committee. And then they deal with this. And it is just a kind of support." (CHWP manager C, 2004)

94.

a. "Sometimes you'll find that some people are late. You will find that a Community Health Worker is now a friend of this supervisor in the location. Now they do this, she will report, then she will go to town and do her things and will forget about the work. But if the person is strict, she will always be honest."

- b. "Sometimes you'll find that some people are late. You will find that a Community Health Worker is now a friend of this supervisor in the location. Now they do this, she will report, then she will go to town and do her things and will forget about the work. But if the person is strict, she will always be honest." (CHWP manager A, 2004)
- 95.
- a. "I wouldn't say there is much that goes to that person 'cause this person (CHW Supervisor) is chosen by the community, so theirs is to sign the timesheets of the Community Health Worker, and if the CHW is not up to standard then she communicates with the facilitator to say we have a problem, or if the Community Health Worker has disappeared. There is a problem. And then the Community Health Worker, aeh, then the Facilitator will come down, and they go from house to house to see if the Community Health Worker is doing the work."
- b. "The (CHW Supervisor) is chosen by the community. So their task is to sign the timesheets of the Community Health Worker, and if the CHW is not up to standard then she communicates with the facilitator to say we have a problem, or if the Community Health Worker has disappeared. There is a problem. And then the Community Health Facilitator will come down, and they go from house to house to see if the Community Health Worker is doing the work. (CHWP manager B, 2004)

96.

- a. "The supervisor and the health facilitator meet. And again, it could be maybe once a month."
- b. "The supervisor and the health facilitator meet. And again, it could be maybe once a month." (CHWP manager C, 2004)

- a. "Yes, they report problems. They will have a meeting, in fact the whole committee meet at least once a month, and the facilitator attends that meeting. So in that meeting, I mean, they would give whatever, they discuss the results, good or bad, and also all of these. And these two, this and this (pointing at PHC Nurse and Community Health Facilitator), can I write something? This again (encircling PHC Nurse, Facilitator, CHW Supervisor and CH Committee), including this, could be once a month. 'cause the Primary Health Care nurse, if the Committee is sitting, she must also be part of this meeting. She could report about whatever, then they would report as well. So maybe, I don't know, it could be problems, it could be good things, so that would be the whole team that will meet once a month."
- b. "They report problems. They will have a meeting, in fact the whole committee meets at least once a month, and the facilitator attends that meeting. So in that meeting, they would give whatever, they discuss the results, good or bad. And also these, the Primary Health Care Nurse and the Community Health Facilitator, including the Community Health Worker Supervisor and the Community Health Committee, would all attend. It could be once a month, because the Primary Health Care nurse, if the Committee is sitting, she must also be part of this meeting. She

could report about whatever, then they would report as well. So maybe, I don't know, it could be problems, it could be good things, so that would be the whole team that will meet once a month. (CHWP manager C, 2004)

98.

a. "It's about the whole decision making. Let's say they want to talk about ARVs. Maybe the people, 'cause there are people that are professionals, they come in and talk about whatever, the community can say it doesn't work or it works. Talk about the formula feeding or HIV and AIDS, they would tell you the reality. And if you really want a woman to put a child baby on a formula, then maybe don't talk to the mother, talk to the mother-in-law, those kinds of things."Q: "Cause they know the reality." A: "Ja, the reality, mmh, mmh. But whatever is decided, it's for the very people themselves. Not by some people sitting in the city."

b. "It is about the whole decision making. Let's say they want to talk about ARVs. Maybe the people, because there are people that are professionals, they come in and talk about something. Then the community can say it does not work or it works. If you talk about the formula feeding or HIV and AIDS, they would tell you the reality. And if you really want a woman to put a child baby on a formula, then maybe don't talk to the mother, talk to the mother-in-law, and those kinds of things. (...) But whatever is decided, it's for the very people themselves. Not by some people sitting in the city." (CHWP manager C, 2004)

99.

- a. "So when they are planning, they are planning with information that has come from the people themselves."
- b. "So when they are planning, they are planning with information that has come from the people themselves." (CHWP manager A, 2004)
- 100. "The provincial CHW programme works together with two NGOs in KZN: The Valley Trust & the Progressive Primary Health Care Network. These two NGOs assist with implementing the programme and with the appointment and payment of CHWs. NGOs are involved because the Department couldn't employ CHW themselves." (Notes from interview with CHWP manager, 2002)

101.

- a. "Then these, the Facilitator and the PHC nurse, they should be meeting again at least once a week, but I'm not sure. It should, we already said this should happen, but people cannot be forced. But in reality they should be meeting once a week."
- b. "Then these, the Facilitator and the PHC nurse, they should be meeting again at least once a week, but I'm not sure. It should, we already said this should happen, but people cannot be forced. But in reality they should be meeting once a week." (CHWP manager C, 2004)

- a. "All the primary health care nurses in the district, they will then report to the coordinator."
- b. "All the primary health care nurses in the district, they will then report to the coordinator." (CHWP manager C, 2004)

- a. "The co-ordinator (...) placed in the district. The relationship, at least (...) there are overseeing each district. At least the person ... It's a very new thing. (...) Hasn't been around ... But ... by right, they should have their job description and be appointed. But I think at the present moment, I'm not sure, if they are dedicated(?) or not."
- b. "The co-ordinator, they must be placed in the district. The relationship, at least, they will be overseeing each district. So at least the person would. It's a very new thing; we did not have this kind of a person. Just for a couple of month, five or so. I'm not sure. But by right, they should have their job description and be appointed. But I think at the present moment, I'm not sure, if they are dedicated or not." (CHWP manager, 2004)

104.

- a. "The information, once it gets to the district, is then taken to the province. From all the various districts. Before it goes, this (CHW) co-ordinator would report to the district manager, because this person (CHW co-ordinator) reports to that one, the District Manager. She would write a report and take it to this person. This person may decide that he or she will send the same information to the province. But at the end of the day it's the manager who must ensure that the report is correct."
- b. "The information, once it gets to the district, is then taken to the province. From all the various districts. Before it goes, this (CHW) co-ordinator would report to the district manager, because this person (CHW co-ordinator) reports to that one, the District Manager. She would write a report and take it to this person. This person may decide that he or she will send the same information to the province. But at the end of the day it's the manager who must ensure that the report is correct." (CHWP manager, 2004)
- 105.
- a. "No, it's a provincial issue, this one. Because they are the people who are supposed to develop the structure and say that, no, we are advertising the post for this at this level, or whatever."
- "No, it is a provincial issue, this one. Because they are the people who are supposed to develop the structure and say that, now, we are advertising the post for this at this level, or whatever." (CHWP manager, 2004)

106.

- a. "And if there is that gap from provincial level, everybody is affected. Even the programme is affected itself."
- "And if there is that gap from provincial level, everybody is affected. Even the programme is affected itself." (CHWP manager, 2004)

107.

a. "Though we are in the integration process if it wasn't the break that we had, we were maybe, we were planning that, the province planned that by December last year the integration process to be completed. But unfortunately there was that gap."

- b. "Though we are in the integration process if it wasn't the break that we had, we were maybe, we were planning that, the province planned that by December last year the integration process to be completed. But unfortunately there was that gap." (CHWP manager, 2004)
- 108.
- a. But what we wanted first was to mobilize the community, make them aware of the problem. Identify the problem. Look for the needs. It was then that we were funded in April 2002. And when the programme started we were supposed to identify the orphans and the vulnerable children. Meaning, according to Nelson Mandela Children Fund, was to consider kids when they are before age 22. But according to the South African law age 18. So this was the problem we had. Fine, it was not easy, when we started there was this stigma, you couldn't even, we couldn't even talk about HIV. It was a nightmare, when we started. But fortunately, it came to our mind that because there was the Department of Health was training the people. And then amakozi and isinduma locally were trained by the Department of Health. After that training, I think it was an eye opener, it became better." J.: "So who was training? The community health workers, the onumpili?" G: "The oNompilo. They were already trained by then by the Department of Health. So what we decided, we said amakozi should identify them for us." (...) "It was not easy, because first we had to explain what the term vulnerable is, and an orphan. First, when we started it was so critical, you know, because people couldn't identify. But after going for the training, which was based in Mpumalanga, by Nelson Mandela Children Fund, we came up with another concept. Because we had models from Uganda and other places. Because the main thing was HIV/AIDS, but you know, they couldn't take it, they know there where things behind but not HIV. But as time goes on, they, you know there was that change. Although it's not so much.'
- b. "But what we wanted first was to mobilize the community, make them aware of the problem. Identify the problem. Look for the needs. (...) Fine, it was not easy. When we started, there was this stigma. You couldn't even, we couldn't even talk about HIV. It was a nightmare when we started. But fortunately, it came to our mind that the Department of Health was training the people. And then amakozi and isinduma locally were trained by the Department of Health. After that training, I think it was an eye opener, it became better. (...) The oNompilo were already trained by then by the Department of Health. So we decided that amakozi, the traditional leaders, should identify them for us. (...) It was not easy, because first we had to explain what the term vulnerable is, and an orphan. First, when we started, it was so critical, you know, because people couldn't identify. (...) Because the main thing was HIV/AIDS, but you know, they couldn't take it, they know there where things behind but not HIV. But as time goes on, they, you know there was that change. Although it's not so much." (CBP manager, 2004)

a. "Because you know, like this there's a aehm provinces that are extremely rural, they're looking at the Community Health Care

Worker working in deep rural areas together with out-reach health services. So, the mobile clinic that's going out will have a Community Health Care Worker attached to it that can provide other services while the nurse is (??) in that area. And also, support that community. So that it's another sort of redefining what, 'cause usually when you see a Community Health Care Worker we see a township or informal settlement of some sort that is nicely geographically defined, from there to there. And the other conflict is how do we use these people to support deep rural communities where you might have three or four farming communities in the close proximity to each other, or where there is really few and far between. How do you then support them, how do they work then together with the primary health care nurses that's riding around. So that's that's the other guestion."

b. "There are provinces that are extremely rural, they're looking at the Community Health Care Worker working in deep rural areas together with out-reach health services. So, the mobile clinic that's going out will have a Community Health Care Worker attached to it, who can provide other services while the nurse is busy in that area. And also, support that community. So that is another sort of redefining it. Because usually, when you see a Community Health Care Worker, we see a township or informal settlement of some sort that is nicely geographically defined, from here to there. And the other conflict is: how do we use these people to support deep rural communities, where you might have three or four farming communities in close proximity to each other, or where there is really few and far between? How do you support them then? How do they work then together with the primary health care nurses that are riding around? So that's the other question." (DoH manager, 2004)

- a. "We drew a plan, office was helping us a lot, we drew the plan, how we're going to work, how going to share the cars. Because with this programme, cars is very important. Very important that we have got the cars for supervision. So unfortunately, we didn't have enough cars. We had to request the District Office, the transport officer to give us some cars. And fortunately he gave us one. And here, from (place name) Primary Health Care Mobile I also gave them two cars. So we are sharing and plus one from (a different hospital). So it means for the programme we got four. ... Two from here, one from the district and one from (the other hospital). So they, I encourage the sharing really. They must share this so that that they supervise properly. Aemh, what I also did here, we have got our plan. I encourage them to draw their itinerary for every month, even if they share the transport, but they still use their itineraries so that the supervision is balanced.
- b. "The district health office was helping us a lot to draw a plan, how we're going to work, how we are going to share the cars. Because with this programme, cars are very important. It is very important that we have got the cars for supervision. So unfortunately, we didn't have enough cars. We had to make a request to the District Office, to the transport officer to give us some cars. And fortunately he gave us one. And here, from (place name) Primary Health Care Mobile, I could also give them two cars. So we are sharing and plus one from (a different

hospital). So that means for the programme that we got four. Two from here, one from the district and one from (the other hospital). I really encourage the sharing. They must share the cars, so that they can supervise properly. So, what I also did here, we have got our plan. I encourage them to draw their itinerary for every month, even if they share the transport, but they should still use their itineraries so that the supervision is balanced." (CHWP manager A, 2004)

- a. "Everyday, when they visit a home, in each home, they write a report about each, whatever they've done. They keep a record for themselves, their own report, and they leave another record in the household. So if you go into a household and ask for that card, they give it to you and you can see what has been done for this household."
- b. "Every day, when they visit a home, in each home, they write a report about each task, whatever they have done. They keep a record for themselves, their own report, and they leave another record in the household. So if you go into a household and ask for that card, they give it to you and you can see what has been done for this household." (CHWP manager, 2004)
- 112.
- a. "Okay. Do you know what we are trying to do these days. In the clinic, they do record. Like for instance, if they want or they want to treat a person for TB, they record this down. But now what we are doing because we are working we do come across, if we do it this way, I think it will improve the situation or likewise. Now I am saying they must have aemh (shows a black notebook) a book like this one, where they write their health education, where they write the problems. They do have, but now it must be strengthened, because we want to take this information now to our district information officer. Because normally it should end up to the clinic, it used to be the communication between the clinic. the facilitator of the area and uNompilo. But now like for instance we do encourage them to encourage people to register when they are born and dead. So we want them to use it as a book. So that we take that information to our district information officer. She or he will get the summary from the clinics."
- b. "Let me explain what we are trying to do these days. In the clinic, they record their activities. Like for instance, if they treat a person for TB, they record this. But now, we want to do something similar. If we do it this way, I think it will improve the situation. Now I am saying that they must have a book like this one [shows a black notebook], where they write down the health education they have done and the problems they encounter. They already used to do some record keeping. But now it must be strengthened, because we want to take this information to our district information officer. Because normally it ended up at the clinic level: it used to be the communication between the clinic. the facilitator of the area and uNompilo. But now, for instance, we do encourage them to encourage people to register when someone was born or died. So we want them to use it as a book, so that we can take that information to our district information officer. She or he will get the summary from the clinics." (CHWP manager, 2004)

- 113.
- a. Q: "Is there a specific form for CH Facilitators' reports? So is there something which they always fill in or is it something that?" A: "No, not yet. For CHW, there is one that the Department designed. But we modified it. But what is happening, the one, 'cause we do have our own facilitators that we employ as The Valley Trust and PPHC. So we do have, at least when we have the report received, this is how I want to report, but the once that are employed by the DoH, I don't know."
- b. "No, not yet. But what is happening, we have one, because we do have our own facilitators that we employ as The Valley Trust and PPHC. So we do have a guideline – at least when we receive the CHFs' reports – this is how we want to report. But for the one that are employed by the DoH, I don't know." (CHWP manager, 2004)

- a. "I think it's structured, it will be a book. The book will be structured because it will say these are the health talks, this is the type of information that | got, this is the problem that. It has been sorted out, the person that was treated for TB and so on. So maybe, as time goes on we can maybe even, maybe the information officer can develop a structured system or form, something like this. But at the present moment, we are using the FH book."
- b. "The notebook will be structured. It will have sections for the health talks, for various types of information, for different problems. This issue has been sorted out, that person was treated for TB and so on. So maybe, as time goes on, we or maybe even the information officer can develop a structured system or form, something like this. But at the present moment, we are using the Family Health book." (CHWP manager A, 2004)
- 115.
- a. "No, the district information officer takes all the information to the province and on to the national. But at the present moment, for the Community Health Workers it's not yet well structured. They know that they do form the Community Health Workers how they do it, and they even know that if we've got this outbreak, these are the people who are working and who we are using. But it's not well structured. But that information will go up. But even if they report the facilitators, right, she will take that information up to the province, eventually. To our district manager up to the province."
- b. "No, the district information officer takes all the information to the province and on to the national. But at the present moment, for the Community Health Workers it's not yet well structured. They know that they do form the Community Health Workers how they do it, and they even know that if we've got this outbreak, these are the people who are working and who we are using. But it's not well structured. But that information will go up. But even if they report the facilitators, right, she will take that information up to the province, eventually. To our district manager up to the province." (CHWP manager, 2004)

References

- Anonymous (2002), History of Health Policy, in D. Burger (ed.), South African Yearbook 2002/03 book, Government Communication and Information System (GCIS), Pretoria, p.26-43.
- Anonymous (2004), KZN CHW programme progress. Summary report, May-June 2004, internal report, paper copy.
- Abdool Karim, Q. (2004), HIV treatment in South Africa: overcoming impediments to get started, *Lancet*, Vol. 363, p.1394.
- Abdul-Quader, A. S., Des Jarlais, D. C., Chatterjee, A., Hirky, A. E. and Friedman, S. R. (1999), Interventions for Injecting Drug Users, in L. Gibney. DiClemente, R. J. and Vermund, S. H. (eds.), *Preventing HIV in Developing Countries. Biomedical and Behavioral Approaches*, Kluwer Academic/ Plenum Publishers, New York, p.283-312.
- Abt Associates (South Africa) Inc. (2001), Impending Catastrophe Revisited. An update on the HIV/AIDS epidemic in South Africa, loveLife, Parklands, South Africa.
- Adler, M. and Ziglio, E. (1996), Gazing into the Oracle: The Delphi Method and Its Application to Social Policy and Public Health, Jessica Kingsley Publishers, London.
- African National Congress (1994a), ANC second draft Health Plan, quoted in Makan and Bachmann (1997), Durban, Johannesburg.
- African National Congress (1994b). A National Health Plan for South Africa, http://www.anc.org.za/ancdocs/policy/health.htm, accessed 24 July 2006.
- African National Congress (1994c), *The Reconstruction and Development Programme a policy framework*, Umanyano Publications, Johannesburg.
- Ainsworth, M. and Filmer, D. (2002), *Poverty, AIDS and Children's Schooling*. The World Bank, <u>http://econ.worldbank.org</u>.
- Albert, A. E., Warner, D. L., Hatcher, R. A. and et al. (1995), Condom use among female commercial sex workers in Nevada's legal brothels, *American Journal of Public Health*, Vol. 85, p.1514-1520.
- Aldhous, P. (2004), Called to account, Nature, Vol. 430 (6996), p.133.
- Anema, A., Chan, K., McGuire, A., Barer, J. M. and Hogg, R. S. (2004), Is "3 by 5" enough? Recalculating the global need for antiretroviral treatment, *Lancet*, Vol. 364 (9439), p.1034-1035.
- Arndt, C. and Lewis, J. D. (2000), The macro implications of HIV/AIDS in South Africa: A preliminary assessment, *South African Journal of Economics*, Vol. 68 (5), p.856-887.

- Arndt, C. and Lewis, J. D. (2001), The HIV/AIDS pandemic in South Africa: sectoral impacts and unemployment, *Journal of International Development*, Vol. 13, p.427-449.
- Auvert, B., Buvé, A., Lagarde, E. and et. al. (2001), Male circumcision and HIV infection in four town in sub-Saharan Africa, *AIDS*, Vol. 15 (Suppl. 4), p.S31-S40.
- Awusabo-Asare, K. and Amarfi, J. (1999), Routes to HIV transmission and intervention: an analytical framework, in I. O. Orubuloye, Caldwell, J. C. and Ntozi, J. P. M. (eds.), *The continuing HIV/AIDS epidemic in Africa : responses and coping strategies*, Health Transition Centre, National Centre for Epidemiology and Population Health. Australian National University, Canberra, p.1-8.
- **Badcock-Walters, P.** (2002), Education, in C. Desmond (ed.), *Impacts and Interventions. The HIV/AIDS Epidemic and the Children of South Africa*, University of Natal Press, Pietermaritzburg, p.95-110.
- Baleta, A. (2002), South Africa hints at HIV/AIDS policy rethink, *Lancet*, Vol. 360 (9341), p.1232-1232.
- Baloyi, O. (1999), KwaZulu-Natal Policy Document on Community Health Workers, KwaZulu-Natal Department of Health, Durban, <u>http://www.kznhealth.gov.za</u>.
- **Barnett, T. and Whiteside, A.** (2002). *AIDS in the Twenty-First Century. Disease and Globalization.*, Palgrave Macmillan, New York.
- Barré-Sinoussi, F., Chermann, J. C., Rey, F., Nugeyre, M. T., Chamaret, S., Gruest, J., Dauguet, C., Axler-Blin, C., Vezinet-Brun, F., Rouzioux, C., Rozenbaum, W. and Montagnier, L. (1983). Isolation of a T-Lymphotropic Retrovirus from a Patient at Risk for Acquired Immune Deficiency Syndrome (AIDS), Science, Vol. 220 (4599), p.868-871.
- Barron, P. and Strachan, K. (1996), Year in Review, in D. Harrison, Barron, P. and Edwards, J. (eds.), South African Health Review 1996, Health Systems Trust. Durban, p.xi-xix.
- Bayley, A. (1984), Aggressive Kaposi's Sarcoma in Zambia, Lancet, Vol. 1 (2), p.1318-1320.
- **Baylies, C.** (2002), The impact of AIDS on rural households in Africa: A shock like any other?, *Development and Change*, Vol. 33 (4), p.611-632.
- **BBC News** (2004), *Malawi rolls out free AIDS drugs*, <u>http://news.bbc.co.uk/go/pr/fr/-/1/hi/world/africa/3705143.stm</u>, accessed 11 May 2004.
- Bedford, T. and Burgess, J. (2001), The focus-group experience, in M. Limb and Dwyer, C. (eds.), *Qualitative Methodologies for Geographers. Issues and Debates*, Arnold, London, p.121-135.

- Benatar, S. R. (1997), Health Care Reform in the New South Africa, *New England Journal of Medicine*, Vol. 336 (12), p.891-895.
- Benatar, S. R. (2004), Health Care Reform and the Crisis of HIV and AIDS in South Africa, *New England Journal of Medicine*, Vol. 351 (1), p.81-92.
- Benotsch, E. G., Stevenson, L. Y., Sitzler, C. A., Kelly, J. A., Makhaye, G., Mathey, E. D., Somlai, A. M., Brown, K. D., Amirkhanian, Y., Fernandez, M. I. and Opgenorth, K. M. (2004), HIV prevention in Africa: Programs and populations served by non-governmental organizations, *Journal of Community Health*, Vol. 29 (4), p.319-336.
- Bentley, M. (2003), Cuba leads the way in HIV fight. HIV medication has been made widely available, <u>http://news.bbc.co.uk/1/hi/in_depth/sci_tech/2003/denver_2003/2770631.stm</u>, accessed 18/02/2003.
- Berege, Z. and Klokke, A. (1997), Reducing HIV transmission via blood transfusion: a district strategy, in D. Schapink (ed.), *HIV prevention and AIDS care in Africa :* a district level approach, Royal Tropical Institute, Amsterdam, p.292-304.
- Berger, J. and Geffen, N. (2004), MTCT programmes in South Africa: nevirapine and the minister, *HIV Treatment Bulleting*, Vol. 5 (7), p.2.
- **Bollinger, L. and Stover, J.** (1999), *The economic impact of AIDS*, The Futures Group International, Glanstonbury, CT.
- Bonga, N. (2007), Community Health Workers, <u>http://www.kznhealth.gov.za</u>, accessed 25. July 2007.
- Bongaarts, J. (1996), Global trends in AIDS mortality, *Population and Development Review*, Vol. 22 (1), p.21-45.
- Borgdorff, M., Floyd, K. and Broekmans, J. F. (2002). Interventions to reduce tuberculosis mortality and transmission in low- and middle-income countries, *Bulletin of the World Health Organization*, Vol. 80 (3), p.217-227.
- Bredekamp, H. C. J. and Messina, E. (2002), Chapter 2: History, in D. Burger (ed.), South African Yearbook, Government Communication and Information System (GCIS), Pretoria, p.18.
- Brunet, J. B., Bouvet, E., Chaperon, J., Gluckman, J. C., Kernbaum, S.,
 Klatzmann, D., Lachiver, D., Leibowitch, J., Mayaud, C., Picard, O., Revuz,
 J., Rozenbaum, W., Villalonga, J. and Wesselberg, C. (1983), Acquired
 Immunodeficiency Syndrome in France, Lancet, Vol. 321 (8326), p.700-701.
- **Bureau for Economic Research** (2001), *The macro-economic impact of HIV/AIDS in South Africa*, University of Stellenbosch, Stellenbosch.
- **Burger, D.** (2005), Health, in D. Burger (ed.), *South African Yearbook 2004/05*, Government Communication and Information System (GCIS), Pretoria, p.343-368.

- Burris, S., Shearing, C. and Jenneker, M. (2002), Local capacity governance as HIV/AIDS prevention: The Zwelethemba model, *Int Conf AIDS*, Vol. 14.
- Buvé, A., Bishikwabo-Nsarhaza, K. and Mutangadura, G. (2002). The spread and effect of HIV-1 infection in sub-Saharan Africa, *Lancet*, Vol. 359, p.2011-2017.
- **Caldwell, J. C., Caldwell, P. and Quiggin, P.** (1989), The social context of A1DS in sub-Saharan Africa, *Population and Development Review*, Vol. 15 (2), p.185-234.
- **Caldwell, J. C. and Health Transition Centre** (eds.) (1999), *Resistances to behavioural change to reduce HIV/AIDS infection in predominantly heterosexual epidemics in third world countries*, Health Transition Centre, National Centre for Epidemiology and Population Health, Australian National University, Canberra.
- **Cameron, J.** (2005), Focusing on the Focus Group, in I. Hay (ed.), *Qualitative Research Methods in Human Geography*, Oxford University Press, Oxford, p.116-132.
- **Campbell, C. and MacPhail, C.** (2002), Peer education, gender and the development of critical consciousness: participatory HIV prevention by South African youth, *Social Science & Medicine*, Vol. 55 (2), p.331-345.
- **Campbell, C. and Williams, B.** (1999), Beyond the biomedical and behavioural: towards an integrated approach to HIV prevention in the Southern African mining industry, *Social Science & Medicine*, Vol. 48 (11), p.1625-1639.
- Campbell, C. and Williams, B. (2001), Briefing: Riding the tiger: Contextualizing HIV prevention in South Africa, *African Affairs*, Vol. 100 (398), p.135-140.
- **Campbell, C. M. and Williams, B. G.** (1996), Academic research and HIV/AIDS in South Africa, *South African Medical Journal*, Vol. 86 (1), p.55-60.
- Caraël, M. (2000), The Dynamics of HIV Epidemics in Sub-Saharan Africa: what are the determinants?, in UNESCO and UNAIDS (eds.), A Cultural Approach to HIV/AIDS Prevention and Care. UNESCO/UNAIDS Research Project. Proceedings of the Nairobi International Conference 2-4 October 2000, UNESCO, Nairobi, p.45-58.
- **Carroll, R. and Boseley, S.** (2003), *Discovery of immune group in Uganda raises Aids* vaccine hopes, <u>http://www.guardian.co.uk/print/0.3858.4672736-</u> <u>106925.00.html</u>, accessed 03/03/2005.
- Center for Disease Control (1981a), Kaposi's Sarcoma and Pneumocystis Pneumonia Among Homosexual Men - New York City and California, *Morbidity and Mortality Weekly Report (MMWR)*, Vol. 30, p.305-308.
- Center for Disease Control (1981b), Pneumocystis pneumonia--Los Angeles, Morbidity and Mortality Weekly Report (MMWR), Vol. 30 (21), p.250-252.

- **Center for Disease Control** (1982a), A cluster of Kaposi's Sarcoma and Pneumocystis carinii Pneumonia among Homosexual Male Residents of Los Angeles and range Counties, California, *Morbidity and Mortality Weekly Report (MMWR)*, Vol. 31 (23), p.305-307.
- Center for Disease Control (1982b), Current Trends Update On Acquired Immune Deficiency Syndrome (AIDS) - United States, *Morbidity and Mortality Weekly Report (MMWR)*, Vol. 31 (37), p.507-508, 513-514.
- **Center for Disease Control** (1982c), Diffuse, Undifferentiated Non-Hodgkins Lymphoma among Homosexual Males - United States, *Morbidity and Mortality Weekly Report (MMWR)*, Vol. 31 (21), p.277-279.
- **Center for Disease Control** (1982d), Epidemiological Notes and Reports. Persistent, Generalized Lymphadenopathy among Homosexual Males, *Morbidity and Mortality Weekly Report (MMWR)*, Vol. 31 (19), p.249-251.
- **Center for Disease Control** (1982e), Epidemiological Notes and Reports. Possible Transfusion-Associated Acquired Immune Deficiency Syndrome (AIDS) -California, *Morbidity and Mortality Weekly Report (MMWR)*, Vol. 31 (48), p.652-654.
- Center for Disease Control (1982f), Epidemiological Notes and Reports. Update on Kaposi's Sarcoma and Opportunistic Infections in Previously Healthy Persons -United States, *Morbidity and Mortality Weekly Report (MMWR)*, Vol. 31 (22), p.294; 300-301.
- Center for Disease Control (1982g), Pneumocystis carinii pneumonia among persons with hemophilia A, *Morbidity and Mortality Weekly Report (MMWR)*, Vol. 31 (27), p.365-7.
- **Center for Disease Control** (1982h), Unexplained Immunodeficiency and Opportunistic Infections in Infants - New York, New Jersey, California, *Morbidity and Mortality Weekly Report (MMWR)*, Vol. 31 (49), p.665-667.
- Center for Disease Control (2001), Revised Guidelines for HIV Counseling. Testing and Referral and Revised Recommendations for HIV Screening of Pregnant Women, *Morbidity and Mortality Weekly Report (MMWR)*, Vol. 50 (RR19), p.1-29?
- Centers for Disease Control and Prevention (2003), Where did HIV come from?, http://www.cdc.gov/hiv/pubs/faq/faq3.htm, accessed 01/08/2004.
- **Centers for Disease Control and Prevention** (2004), *What is Epidemiology?*, <u>http://www.cdc.gov/excite/about.htm</u>, accessed 15/09/2004.
- **Cheru, F.** (2001), Overcoming apartheid's legacy: the ascendancy of neoliberalism in South Africa's anti-poverty strategy, *Third World Quarterly*, Vol. 22 (4), p.505-527.
- CHGA Economic Commission for Africa (2004), Preventing mother-to-child transmission of HIV in Africa: issues and challenges, CHGA Interactive,

Commission on HIV/AIDS and Governance in Africa, Gaborone, Botswana, 26-27 July 2004, p.9.

- Chowdhury, A. M., Alam, A., Chowdhury, S. A. and Ahmed, J. (1992), Tuberculosis control in Bangladesh, *Lancet*, Vol. 339, p.1181-1182.
- Clark, S. J., Saag, M. S., Decker, W. D., Campbell-Hill, S., Roberson, J. L., Veldkamp, P. J., Kappes, J. C., Hahn, B. H. and Shaw, G. M. (1991). High titers of cytopathic virus in plasma of patients with symptomatic primary H1V-1 infection, *New England Journal of Medicine*, Vol. 324 (14), p.954-964.
- **Clarke, E.** (1998a), The collaboration between traditional healers and the department of health, *HST update*, Vol. Issue 37 (October 1998), p.5.
- **Clarke**, E. (1998b), A prime example of collaboration between traditional healers and conventional medicine, *HST update*, Vol. Issue 37 (October 1998), p.8.
- Clavel, F., Guetard, D., Brun-Vezinet, F., Chamaret, S., Rey, M. A., Santos-Ferreira, M. O., Laurent, A. G., Dauguet, C., Katlama, C. and Rouzioux, C. (1986), Isolation of a new human retrovirus from West African patients with AIDS, *Science*, Vol. 233 (4761), p.343-346.
- Clayton, J. (2004), Out of Thailand, into Africa, Nature, Vol. 430 (6996), p.136-137.
- Clumeck, N., Mascart-Lemone, F., De Maubeuge, J., Brenez, D. and Marcelis, L. (1983), Acquired Immune Deficiency Syndrome in Black Africans, *Lancet*, Vol. 321 (8325), p.642.
- Coetzee, D., Hildebrand, K., Boulle, A., Maartens, G., Louis, F., Labatala, V., Reuter, H., Ntwana, N. and Goemaere, E. (2004). Outcomes after two years of providing antiretroviral treatment in Khayelitsha, South Africa, *Aids*, Vol. 18 (6), p.887-895.
- Cohen, D. (2002): *Human Capital and the HIV epidemic in sub-Saharan Africa*, Working paper, June 2002, ILO Programme on HIV/AIDS and the World of Work, Geneva.
- **Cohen, J.** (2000), Is AIDS in Africa a Distinct Disease?, *Science*, Vol. 288 (5474), p.2153-2155.
- **Colvin, M., Gumede, L., Grimwade, K., Maher, D. and Wilkinson, D.** (2003), Contribution of traditional healers to a rural tuberculosis control programme in Hlabisa, South Africa, *International Journal of Tuberculosis and Lung Disease*, Vol. 7 (9), p.S86-S91.
- Constantine, N. T., Abesamis, C. G. and Dayrit, M. M. (1999), Intervening in Blood Supply and Use Systems, in S. H. Vermund (ed.), *Preventing HIV in Developing Countries. Biomedical and Behavioral Approaches*, Kluwer Academic/ Plenum Publishers, New York, p.71-85.

- **Cook, I.** (1997), Participant observation, in R. Flowerdew and Martin, D. (eds.), *Methods in Human Geography: a guide for students doing research projects*, Pearson Education Limited, Harlow, England, p.127-149.
- Coutinho, F. A. B., Lopez, L. F., Burattini, M. N. and Massad, E. (2001). Modelling the natural history of HIV infection in individuals and its epidemiological implications, *Bulletin of Mathematical Biology*, Vol. 63 (6), p.1041-1062.
- **Coutinho, R. A.** (2000), Some aspects of the natural history of HIV infection, *Tropical Medicine and International Health*. Vol. 5 (7), p.A22-A25.
- Cross, S. and Whiteside, A. (1993). Facing up to AIDS : the socio-economic impact in Southern Africa, St. Martin's Press, New York.
- **Cruse, D.** (ed.) (1997), Community Health Workers in South Africa: Information for Provincial Policy Makers, Health Systems Trust for the National Department of Health, Durban.
- Cuddington, J. T. (1993), Further Results on the Macroeconomic Effects of A1DS: The Dualistic, Labour-Surplus Economy, *World Bank Economic Review*, Vol. 7 (3), p.403-417.
- **Cullinan, K.** (2002), HIV does cause AIDS but it's hard to prescribe the drugs, says South Africa's ANC, *Bulletin of the World Health Organization*, Vol. 80 (5), p.421-422.
- Cullinan, K. (2004), Comment: Mbeki and AIDS, <u>http://www.health-e.org.za</u>, accessed 19/02/2004.
- Daar, E. S., Cohen, C., Remien, R., Sherer, R. and Smith, K. (2003). Improving Adherence to Antiretroviral Therapy, *AIDS Reader*, Vol. 13 (2), p.81-90.
- De Cock, K. M., Mbori-Ngacha, D. and Marum, E. (2002), Shadow on the continent: public health and HIV/AIDS in Africa in the 21st century, *Lancet*, Vol. 360 (9326), p.67-72.
- **De Cock, K. M. and Weiss, H. A.** (2000). The global epidemiology of HIV/AlDS, *Tropical Medicine and International Health.* Vol. 5 (7), p.A3-A9.
- **De Guzman, A.** (2001), Reducing social vulnerability to HIV/AIDS: models of care and their impact in resource-poor settings, *Aids Care*, Vol. 13 (5), p.663-675.
- De Lay, K. S., Heaton, L., Way, P. O. and International Programs Center (U.S.) (1995), Sexually transmitted diseases in Sub-Saharan Africa and associated interactions with HIV, International Programs Center, Population Division, U.S. Bureau of the Census, Washington D.C.
- Defilippi, K. (2003), Dealing with Poverty, in L. Uys and Cameron, S. (eds.), *Home*based HIV/AIDS care, Oxford University Press, Oxford, p.162-172.
- **Delius, P. and Glaser, C.** (2002), Sexual Socialisation in South Africa: a historical perspective, *African Studies*, Vol. 61 (1), p.27-54.

Dempster, C. (2003), South African men resist condoms, <u>http://news.bbc.co.uk/go/pr/fr/-/1/hi/world/africa/3268567.stm</u>, accessed 14 November 2003.

- **Department of Health, KwaZulu-Natal** (1999a), *KwaZulu-Natal Policy Document on Community Health Workers*, KZN DoH, Pietermaritzburg.
- Department of Health, KwaZulu-Natal (2001), KwaZulu-Natal Health Facility Data, http://www.kznhealth.gov.za, accessed 13/02/2002.
- **Department of Health, KwaZulu-Natal** (2002a), *KwaZulu-Natal, Strategic Position Statement. Executive Summary*, Department of Health, KwaZulu-Natal, Pietermaritzburg,
- **Department of Health, KwaZulu-Natal** (2002b), Strategic Plan for the Department of Health for the 2003 MTEF Period (Draft Version), Department of Health, KwaZulu-Natal, Pietermaritzburg, hard copy.
- **Department of Health, KwaZulu-Natal** (2004a), *Health Statistics Available for KZN: HIV prevalence in the general population using ASSA 2003 for the year 2004*, <u>http://www.kznhealth.gov.za/italian.htm</u>, accessed 08/03/2006.
- Department of Health, KwaZulu-Natal (2006a), Annual Performance Plans, MTEF Period: 2006/2007 - 2008/2009 [Strategic Plan 2005/06 - 2009/10], http://www.kznhealth.gov.za, accessed 10/06/2007.
- **Department of Health, KwaZulu-Natal** (2006b), *Map of the Province of KwaZulu-Natal, South Africa*, <u>http://www.kznhealth.gov.za</u>, accessed 10/10/2007.
- **Department of Health, KwaZulu-Natal** (2007a), *Amatikulu Primary Health Training Centre*, <u>http://www.kznhealth.gov.za</u>, accessed 13/09/2007.
- **Department of Health, South Africa** (1997), *White Paper for the Transformation of the Health System for South Africa, Notice 667 of 1997*, Government Gazette no. 17910, Pretoria.
- **Department of Health, South Africa** (1999b), *Health Sector Strategic Framework* 1999 - 2004, <u>http://www.doh.gov.za/docs/policy/framewrk/framewrk99-04.html</u>. accessed 15/11/2002.
- Department of Health, South Africa (2000a), *HIV/AIDS and STD Strategic Plan for South Africa: 2000-2005*, <u>http://www.doh.gov.za</u>, accessed 21/05/2003.
- Department of Health, South Africa (2000b), Recomendations for the prevention and treatment of oportunistic and HIV related diseases in adults, http://www.doh.gov.za/aids/index.html, accessed 22/01/2004.
- **Department of Health, South Africa** (2003), Operational Plan for comprehensive HIV and AIDS care, management and treatment for South Africa, <u>http://www.doh.gov.za</u>, accessed 15/05/2004.

- **Department of Health, South Africa** (2004b), *Community Health Worker Policy Framework*, Department of Health, Pretoria.
- **Department of Health, South Africa** (2004c), Monitoring and Evaluation Framework for the Comprehensive HIV and AIDS Care, Management and Treatment Programme for South Africa, <u>http://www.doh.gov.za</u>, accessed 15/01/2005.
- Department of Health, South Africa (2004d), Monitoring Review. Progress Report on the Comprehensive HIV and AIDS Care, Management and Treatment Programme for South Africa. Issue 1: September 2004, <u>http://www.doh.gov.za</u>, accessed 15/01/2005.
- **Department of Health, South Africa** (2004e), *National 'Community Health Worker Policy Framework', draft*, Pretoria.
- Department of Health, South Africa (2004f), Strategic Plan 2004-2007, http://www.doh.gov.za, accessed 10/12/2004.
- **Department of Health, South Africa** (2004g), *Strategic Priorities for the National Health System 2004-2009*, <u>http://www.doh.gov.za/docs/policy/stratpriorities.pdf</u>, accessed 20/01/2006.
- Department of Health, South Africa (2006c), Broad Frame-Work for HIV & AIDS and STI Strategic Plan for South Africa 2007-2011, <u>http://www.doh.gov.za</u>, accessed 14/08/2007.
- **Department of Health, South Africa** (2006d), *National HIV and Syphilis Antenatal* Sero-Prevalence Survey in South Africa 2005, <u>http://www.doh.gov.za/</u>,
- Department of Health, South Africa (2006e). Strategic Plan for 2006/2007 to 2008/2009, http://www.doh.gov.za. accessed 20/07/2006.
- **Department of Health, South Africa** (2007b), *HIV and AIDS and STI Strategic Plan* for South Africa 2007-2011, <u>www.doh.gov.za/misc/stratplan-f.html</u>, accessed 14/08/2007.
- Department of Health, South Africa (2007c), National HIV and Syphilis Prevalence Survey in South Africa 2006, <u>http://www.doh.gov.za/docs/hivaids-</u> progressrep.html, accessed 14/11/2007.
- **Department of Health, South Africa** (2007d), South Africa has the largest ARV programme worldwide, says Health Minister, <u>www.doh.gov.za</u>, accessed 12 December 2007.
- **Department of Health, South Africa** (2007e), *What is Khomanani?*, <u>http://www.healthinsite.net</u>, accessed 10 November 2007.
- **Department of National Health and Population Development, South Africa** (1990), *CHW Forum on Community Health Workers - Role, training, supervision / support, evaluation and remuneration*, unpublished report, South Africa, cited in Makan & Bachmann (1997).

- **Department of Public Works, South Africa** (2006), *Welcome to the Expanded Public Works Programme*, <u>http://www.epwp.gov.za</u>, accessed 17 September 2007.
- **Dixon, S., McDonald, S. and Roberts, J.** (2001), HIV/AIDS and Development in Africa, *Journal of International Development*, Vol. 13, p.381-389.
- **Donovan, B. and Ross, M. W.** (2000), Preventing HIV: determinants of sexual behaviour, *Lancet*, Vol. 335, p.1897-1901.
- Dorrington, R., Bourne, D., Bradshaw, D., Laubscher, R. and Timaeus, I. M. (2001), *The impact of HIV/AIDS on adult mortality in South Africa*, Burden of Disease Research Unit, Medical Research Council, South Africa, <u>http://www.mrc.ac.za/bod/complete.pdf</u>.
- **Dorrington, R. and Johnson, L.** (2002), Epidemiological and Demographic, in J. Gow and Desmond, C. (eds.), *Impacts and Interventions. The HIV/AIDS Epidemic and the Children of South Africa*, University of Natal Press and UNICEF, Pietermaritzburg, p.13-57.
- Dorrington, R. E., Bradshaw, D., Johnson, L. and Daniel, T. (2006), The Demographic Impact of HIV/AIDS in South Africa. National and Provincial Indicators 2006, Centre for Actuarial Research, South African Medical Research Council, Actuarial Society of South Africa, Cape Town.
- **dplg** (2004), *A National Policy Framework for Community Development Workers in South Africa*, Discussion Document, Version 4, 19 January 2004.
- **Duesberg, P.** (1988), HIV is not the cause of AIDS, *Science*, Vol. 241 (4865), p.514-517.
- Duesberg, P. (1991), AIDS epidemiology: inconsistencies with human immunodeficiency virus and with infectious disease, *Proc Natl Acad Sci USA*, Vol. 88 (4), p.1575-1579.
- **Duesberg, P.** (1994), Infectious AIDS stretching the germ theory beyond its limits, *Int Arch Allergy Immunol*, Vol. 103 (2), p.118-127.
- Eaton, D. (2004), Understanding AIDS in Public Lives, in E. Kalipeni, Craddock, S., Oppong, J. R. and Ghosh, J. (eds.), *HIV and AIDS in Africa. Beyond Epidemiology*, Blackwell Publishing Ltd., Oxford, p.279-290.
- Eaton, L., Flisher, A. J. and Aaro, L. E. (2003), Unsafe sexual behaviour in South African youth, *Social Science & Medicine*, Vol. 56 (1), p.149-165.
- Egerö, B. (1991), South Africa's Bantustans. From Dumping Grounds to Battlefronts., Nordiska Afrikainstitutet (The Scandinavian Institute of African Studies), Uppsala.
- Elsey, H. (2004), What challenges and opportunities do Sector Wide Approaches offer for HIV/AIDS mainstreaming? Experiences from Uganda. Powerpoint presentation, seminar series at the Centre for AIDS Research, University of Southampton, March 2004.

- Esparza, J. (2001), An HIV vaccine: how and when?, Bulletin of the World Health Organization, Vol. 79 (12), p.1133-1137.
- Ewing, D. (2002), Welfare, in J. Gow and Desmond, C. (eds.), Impacts and Interventions. The HIV/AIDS Epidemic and the Children of South Africa, University of Natal Press, Pietermaritzburg, p.79-93.
- Eyles, J. (1988), Interpreting the geographical world: qualitative approaches in geographical research, in J. Eyles and Smith, D. M. (eds.), *Qualitative methods in human geography*, Polity Press, Cambridge, p.1-16.
- Falk, G. (2001) STIGMA: How We Treat Outsiders, Prometheus Books, Amherst, NY.
- Fan, H., Conner, R. and Villarreal, L. (1991), *The biology of AIDS*, Jones and Bartlett Publishers, Boston.
- Farmer, P. (1995), Culture, Poverty, and the dynamics of HIV transmission in rural Haiti, in H. Brummelhuis and Herdt, G. H. (eds.), *Culture and sexual risk*. *Anthropological perspectives on AIDS*, Gordon & Breach Publishers, New York, p.3-28.
- Farmer, P. (1996), Social Inequalities and Emerging Infectious Diseases. *Emerging Infectious Diseases*, Vol. 2 (4), p.259-269.
- Farmer, P., Léandre, F., Mukherjee, J., Gupta, R., Tarter, L. and Kim, J. Y. (2001), Community-based treatment of advanced HIV disease: introducing DOT-HAART (directly observed therapy with highly active antiretroviral therapy), *Bulletin of the World Health Organization*, Vol. 79 (12), p.1145-1151.
- Fassin, D. and Schneider, H. (2003), The politics of AIDS in South Africa: beyond the controversies, *British Medical Journal*, Vol. 326 (7387), p.495-497.
- Finch, J. (2003), *Diageo makes HIV pledge to staff*, <u>http://www.guardian.co.uk</u>. accessed 23 September 2003.
- Fleming, D. T. and Wasserheit, J. N. (1999), From epidemiological synergy to public health policy and practice: the contribution of other sexually transmitted diseases to sexual transmission of HIV infection, *Sexually Transmitted Infections*, Vol. 75 (1), p.3-17.
- Folbre, N. and Nelson, J. A. (2000), For love or money or both?, *Journal of Economic Perspectives*, Vol. 14 (4), p.123-140.
- Ford, C., Lewis, G. and Bates, B. (2002), The macroeconomic impact of HIV/AIDS in South Africa, in K. Kelly, Parker, W. and Gelb, S. (eds.), *HIV/AIDS, Economics* and Governance in South Africa : Key Issues in Understanding Response - A Literature Review 2002, The Centre for Aids Development, Research and Evaluation (Cadre), Johannesburg, p.10-20.

- Ford, N. and Koetsawang, S. (1999). A pragmatic intervention to promote condom use by female sex workers in Thailand, *Bulletin of the World Health Organization*, Vol. 77 (11), p.888-894.
- Foulkes, M. A. (1998), Advances in HIV/AIDS statistical methodology over the past decade, *Statistics in Medicine*, Vol. 17 (1), p.1-25.
- Fournier, A. M. and Carmichael, C. (1998), Socioeconomic influences on the transmission of human immunodeficiency virus infection The hidden risk, *Archives of Family Medicine*, Vol. 7 (3), p.214-217.
- **Frankenberg, R.** (1989), One Epidemic or Three? Cultural, Social and Historical Aspects of the AIDS Pandemic, in P. Aggleton, Hart, G. and Davies, P. (eds.), *AIDS: Social Representations, Social Practices*, The Falmer Press, New York, p.21-38.
- Friedman, I. (2002), Community Based Health Workers, in P. ljumba, Ntuli, A. and Barron, P. (eds.), South African Health Review 2002, Health Systems Trust. Durban, p.161-180.
- Friedman, I. (2005), CHWs and Community Caregivers, in P. Ijumba and Barron, P. (eds.), South African Health Review 2005, Health Systems Trust, Durban, p.176-188.
- Galvin, S. R. and Cohen, M. S. (2004), The role of sexually transmitted diseases in HIV transmission, *Nature Reviews Microbiology*, Vol. 2 (1), p.33-42.
- Garrett, L. (1994), *The coming plague. Newly emerging diseases in a world out of balance*, Penguin Books, New York.
- Gibney, L. (1999), HIV Prevention in Developing Countries: Tenets of Behavioral and Biomedical Approaches, in S. H. Vermund (ed.), *Preventing HIV in Developing Countries. Biomedical and Behavioral Approaches*, Kluwer Academic/ Plenum Publishers, New York, p.1-7.
- Gibney, L., DiClemente, R. J. and Vermund, S. H. (eds.) (1999), Preventing HIV in Developing Countries. Biomedical and Behavioral Approaches, Kluwer Academic/ Plenum Publishers, New York.
- Gilbert, L. and Walker, L. (2002), Treading the path of least resistance: HIV/AIDS and social inequalities - a South African case study, *Social Science & Medicine*, Vol. 54 (7), p.1093-1110.
- Global Expanded Interagency Task Team (IATT) on Prevention of HIV Infection in Pregnant Women, Mothers and their Children (2007), 2007 Report Card. Executive Summary, *Conference Booklet for the PMTCT High-Level Global Partners Forum, 26-27 November 2007*, South Africa, Johannesburg, p.26-29.
- Gould, P. (1993a), The Geography of Aids, New York Times Book Review, Vol., p.23.
- **Gould, P.** (1993b), *The slow plague: a geography of the AIDS pandemic*, Blackwell, Oxford.

- **Government of South Africa** (2006), *Social Sector Cluster Media Briefing*, 7 July 2006, <u>http://www.doh.gov.za/docs/pr/2006/pr0707a.html</u>, accessed 28.07.2006.
- Grassly, N. C., Garnett, G. P., Schwartlander, B., Gregson, S. and Anderson, R. M. (2001), The effectiveness of HIV prevention and the epidemiological context, *Bulletin of the World Health Organization*, Vol. 79 (12), p.1121-1132.
- Gray, R. H., Li, X., Wawer, M. J., Gange, S. J., Serwadda, D., Sewankambo, N. K., Moore, R., Wabwire-Mangen, F., Lutalo, T., Quinn, T. C. (2003), Stochastic simulation of the impact of antiretroviral therapy and HIV vaccines on HIV transmission, Rakai, Uganda. *Aids*, Vol. 17 (13), p.1941-1951.
- Green, E. C., Zokwe, B. and Dupree, J. D. (1995), The Experience of an Aids-Prevention Program Focused on South- African Traditional Healers, *Social Science & Medicine*, Vol. 40 (4), p.503-515.
- Gregson, S., Garnett, G. P. and Anderson, R. M. (1994), Assessing the Potential Impact of the HIV-1 Epidemic on Orphanhood and the Demographic Structure of Populations in sub-Saharan Africa, *Population Studies*, Vol. 48 (3), p.435-458.
- Grosskurth, H., Mosha, F., Todd, J., Mwijarubi, E., Klokke, A., Senkoro, K.,
 Mayaud, P., Changalucha, J., Nicoll, A., ka-Gina, G., Newell, J., Mugeye,
 K., Mabey, D. and Hayes, R. (1995), Impact of improved treatment of sexually
 transmitted diseases on HIV infection in rural Tanzania: randomised controlled
 trial, *Lancet*, Vol. 346 (8974), p.530-536.
- **Grosskurth, H. and Mwijarubi, E.** (1997), STD control efforts in health units, in J. Ng'weshemi, Boerma, T., Bennett, J. and Schapink, D. (eds.), *HIV prevention and AIDS care in Africa : a district level approach*, Royal Tropical Institute, Amsterdam, p.221-240.
- Guinness, L. and Alban, A. (2000), *The economic impact of AIDS in Africa: A review of the literature*, UNAIDS, Geneva.
- **Gumodoka, B., Favot, I. and Dolmans, W.** (1997), Medical care-related transmission, in J. Ng'weshemi, Boerma, T., Bennett, J. and Schapink, D. (eds.), *HIV* prevention and AIDS care in Africa : a district level approach, Royal Tropical Institute, Amsterdam, p.280-291.
- Gupta, G. R., Whelan, D., Allendorf, K. and International Center for Research on Women (2003), Integrating Gender into HIV/AIDS Programmes, Expert Consultation 3-5 June 2002, WHO, Geneva, <u>http://www.who.int</u>.
- Haacker, M. (2002a), *The economic consequences of HIV/AIDS in Southern Africa*, International Monetary Fund, African Department, Washington, D.C.
- Haacker, M. (2002b), *Modelling the Macroeconomic Impact of HIV/AIDS*, International Monetary Fund, Washington, D.C., IMF Working Paper 02/195.

- Haacker, M. (2004), HIV/AIDS: The Impact on the Social Fabric and the Economy, in M. Haacker (ed.), *The Macroeconomics of HIV/AIDS*. International Monetary Fund, Washington, D.C., p.41-95.
- Harber, M. (1998), Social policy implications for the care and welfare of children affected by HIV/AIDS in KwaZulu-Natal, School of Development Studies, University of KwaZulu-Natal. Durban, sds/ukzn.ac.za/files/rr17.pdf.
- Harries, A. D., Hargreaves, N. J., Chimzizi, R. and Salaniponi, F. M. (2002), Highly active antiretroviral therapy and tuberculosis control in Africa: synergies and potential, *Bulletin of the World Health Organization*, Vol. 80 (6), p.464-469.
- Harrison, A., Karim, S. A., Floyd, K., Lombard, C., Lurie, M., Ntuli, N. and Wilkinson, D. (2000a). Syndrome packets and health worker training improve sexually transmitted disease case management in rural South Africa: randomized controlled trial, *Aids*, Vol. 14 (17), p.2769-2779.
- Harrison, A., Smit, J. A. and Myer, L. (2000b). Prevention of HIV/AIDS in South Africa: a review of behaviour change interventions, evidence and options for the future, *South African Journal of Science*, Vol. 96 (6), p.285-290.
- Harrison, D. (1995), Preface, in D. Harrison and Nielson, M. (eds.), South African Health Review 1995, Health Systems Trust, Durban, p.6-7.
- Harvey, B., Stuart, J. and Swan, T. (2000), Evaluation of a drama-in-education programme to increase AIDS awareness in South African high schools: a randomized community intervention trial, *International Journal of Std & Aids*, Vol. 11 (2), p.105-111.
- Health Systems Trust, (HST) and Health Information Systems Programme, (HISP) (2005), Monitoring and Evaluation of the Operational Plan for Comprehensive HIV and AIDS Care, Management and Treatment for South Africa. Training manual for Facilitators April 2005, Department of Health, South Africa, Pretoria, <u>http://www.doh.gov.za</u>.
- Health Systems Trust and Department of Health, KwaZulu-Natal (1996), Health Care in KwaZulu-Natal. Implications for Planning. Durban and Pietermaritzburg.

Heatherton, T. F., Kleck, R. E., Hebl, M. R. and Hull, J. G. (2000), *The Social Psychology of Stigma*, The Guilford Press, New York.

- Helmer, O. (1977), Problems in future research: Delphi and causal cross-impact analyis, *Futures*, Vol. 9 (1), p.17-31.
- Hickey, A. (2002), Governance and HIV/AIDS: Issues of Public Policy and Administration, in K. Kelly, Parker, W. and Gelb, S. (eds.), *HIV/AIDS*, *Economics and Governance in South Africa : Key Issues in Understanding Response - A Literature Review 2002*, The Centre for Aids Development, Research and Evaluation (Cadre), Johannesburg, p.37-56.

- Hillery, G. (1955), Definitions of community: areas of agreement, *Rural Sociology*, Vol. 20, p.111-121.
- Holmberg, S. D., Horsburgh, C. R., Ward, J. W. and Jaffe, H. W. (1989), Biologic factors in the sexual transmission of human immunodeficiency virus, *Journal of Infectious Diseases*, Vol. 160 (1), p.116-125.
- Homsy, J., King, R., Balaba, D. and Kabatesi, D. (2004). Traditional health practitioners are key to scaling up comprehensive care for H1V/A1DS in sub-Saharan Africa, *AIDS*, Vol. 18 (12), p.1723-1725.
- Horsburgh, C. R., Ou, C. Y., Jason, J., Holmber, S. D., Longini, I. M., Schable, C., Mayer, K. H., Lifson, A. R., Schochetman, G., Ward, J. W., Rutherford, G. W., Seage, G. R., Evatt, B. L. and Jaffe, H. W. (1989). Duration of human immunodeficiency virus infection before detection of antibody. *Lancet*. Vol. 2 (8664), p.637-640.
- Horton, M. and Aggleton, P. (1989), Perverts, Inverts and Experts: The Cultural Production of an AIDS Research Paradigm, in P. Aggleton, Hart, G. and Davies, P. (eds.), *AIDS: Social Representations, Social Practices*, The Falmer Press, New York, p.74-100.
- Hrdy, D. B. (1987), Cultural Practices Contributing to the Transmission of Human Immunodeficiency Virus in Africa, *Reviews of Infectious Disease*, Vol. 9 (6), p.1109-1119.
- HST (2007), *HIV prevalence (%) (antenatal)*, <u>http://www.hst.org.za/healthstats/13/data</u>, accessed 01.August 2007.
- Hu, D. J., Dondero, T. J., Rayfield, M. A., George, R., Schochetman, G., Jaffe, H.
 W., Luo, C. W., Kalish, M. L., Weniger, B. G., Pau, C. P., Schable, C. and Curran, J. W. (1996), The emerging genetic diversity of HIV: the importance of global surveillance for diagnostics, research, and prevention., JAMA, Vol. 275 (3), p.210-216.
- Hudson, C. P. (2001), Community-based trials of sexually transmitted disease treatment: repercussions for epidemiology and H1V prevention, *Bulletin of the World Health Organization*, Vol. 79 (1), p.48-58.
- Hutchinson, J. F. (2001), The biology and evolution of HIV, *Annual Review of Anthropology*, Vol. 30, p.85-108.
- **ING Barings** (2000), *Economic impact of AIDS in South Africa: A dark cloud on the horizon*, ING Barings, Johannesburg.
- International HIV/AIDS Allicance (2002), Improving access to HIV/AIDS-related treatment. A report sharing experiences and lessons learned on improving access to HIV/AIDS-related treatment, International HIV/AIDS Allicance, Brighton, UK, http://www.aidsalliance.org.
- International Medical Volunteers Association (2004), Community Health Workers, http://www.imva.org/Pages/chws.htm, accessed 18 March 2004.

- International Treatment Preparedness Coalition (ITPC) (2007), Missing the Target #4: Time is Running Out to End AIDS - Treatment and Prevention for All!, www.aidstreatmentaccess.org, accessed November 2007.
- Jaffar, S., Grant, A. D., Whitworth, J., Smith, P. G. and Whittle, H. (2004). The natural history of HIV-1 and HIV-2 infections in adults in Africa: a literature review, *Bulletin of the World Health Organization*, Vol. 82 (6), p.462-469.
- Jewkes, R. and Murcott, A. (1996). Meanings of community, *Social Science and Medicine*, Vol. 43 (4), p.555-563.
- Jewkes, R. and Murcott, A. (1998), Community representatives: representing the 'community'?, *Social Science and Medicine*, Vol. 46 (7), p.843-858.
- Kahn, J. G. and Marseille, E. A. (2002), A saga in international HIV policy modeling: Preventing mother- to-child HIV transmission, *Journal of Policy Analysis and Management*, Vol. 21 (3), p.499-505.
- Kaleeba, N., Kadowe, J. N., Lalinaki, D. and Williams, G. (2000), Open Secret: People facing up to HIV and AIDS in Uganda, ActionAid, London,
- Kasente, D. (2000), Gender and social security reform in Africa. *International Social Security Review*, Vol. 53 (3), p.27-41.
- Kault, D. (2000), Uncertainties in predicting the demographic impact of AIDS, *Theoretical Population Biology*, Vol. 57 (4), p.309-324.
- Kearns, R. A. (2005), Knowing Seeing? Undertaking Observational Research, in I. Hay (ed.), *Qualitative Research Methods in Human Geography*, Oxford University Press, Oxford, p.192-206.
- Kelly, K., Parker, W. and Gelb, S. (eds.) (2002), *HIV/AIDS, Economics and Governance in South Africa : Key Issues in Understanding Response A Literature Review 2002*, The Centre for Aids Development, Research and Evaluation (Cadre), USAID, Johannesburg.
- Kim, J. and Motsei, M. (2002), "Women enjoy punishment": attitudes and experiences of gender- based violence among PHC nurses in rural South Africa, *Social Science & Medicine*, Vol. 54 (8), p.1243-1254.
- Kim, J. Y., Millen, J. V., Irwin, A. and Gershman, J. (eds.) (2000), Dying for growth: global inequality and the health of the poor, Series in Health and Social Justice, Common Courage Press, Monroe/Maine.
- Kuhn, L., Steinberg, M. and Mathews, C. (1994), Participation of the School Community in Aids Education - an Evaluation of a High-School Program in South-Africa, *Aids Care-Psychological and Socio-Medical Aspects of Aids/Hiv*, Vol. 6 (2), p.161-171.
- Kuhn, L., Zwarenstein, M. F., Thomas, G. C., Yach, D., Conradie, H. H., Hoogendoorn, L. and Katzenellenbogen, J. (1990), Village Health Workers

and GOBI-FFF - An Evaluation of a Rural Programme, *South African Medical Journal*, Vol. 77 (9), p.471-475.

- Kumar, P., Hawkes, S. J. and Buse, K. (2002), Societal variables are central to effective HIV intervention models, *Bulletin of the World Health Organization*, Vol. 80 (5), p.419-420.
- Kun, K. E. (1998), Vaginal Drying Agents and HIV Transmission, *International Family Planning Perspectives*, Vol. 24 (2), p.93-94.
- Kvalsvig, J. D., Taylor, M. and Knight, S. (2002), Evaluation of the contracted Community Health Worker Programme. Third Report: 30 September 2002, unpublished report.
- KZN AIDS Action Unit (2002), Status Report: June 2002, Department of Health, Pietermaritzburg, paper copy.
- Lagarde, E., Taljaard, D., Puren, A., Rain-Taljaard, R. and Auvert, B. (2003), Acceptability of male circumcision as a tool for preventing HIV infection in a highly infected community in South Africa, *AIDS*, Vol. 17 (1), p.89-95.
- Laurence, P. (2004), Aids in Africa a 'computer game'accessed 16/03/2004.
- Lawson, L., Katzenstein, D. and Vermund, S. (1999), Emerging Biomedical Interventions, in L. Gibney, DiClemente, R. J. and Vermund, S. H. (eds.). *Preventing HIV in Developing Countries. Biomedical and Behavioral Approaches*, Kluwer Academic/ Plenum Publishers, New York, p.43-69.
- Leclerc-Madlala, S. (2002), Youth. HIV/AIDS and the importance of sexual culture and context, CSSR Working Paper No.9. Centre for Social Science Research, Cape Town, South Africa, <u>http://www.uct.ac.za/depts/cssr</u>.
- Lee, T., Esterhuyse, T., Steinberg, M. and Schneider, H. (1996), Demographic modelling of the HIV/AIDS epidemic on the Soweto population Results and health policy implications, *South African Medical Journal*, Vol. 86 (1), p.60-63.
- Legido-Quigley, H. (2003), The South African Old Pension: Exploring the role on poverty alleviation in households affected by HIV/AIDS, 4th International Research Conference on Social Security "Social Security in a long life society", International Social Security Association, Antwerp, Belgium, 5-7 May 2003, p.31.
- Lehmann, U., Friedman, I. and Sanders, D. (2004), Review of the Utilisation and Effectiveness of Community-Based Health Workers in Africa, A Joint Learning Initiative: Human Resources for Health and Development, WHO, World Bank and Rockefeller Foundation. Global Health Trust,
- Lemon, A. and Fox, R. (2000), Consolidating democracy in South Africa: the second open election, *Area*, Vol. 32 (3), p.337-344.

- Levin, B. R., Bull, J. J. and Stewart, F. M. (2001), Epidemiology, Evolution, and Future of the HIV/AIDS Pandemic, *Emerging Infectious Diseases*, Vol. 7 (3 (Supplement)), p.505-511.
- Levy, J. A., Hoffman, A. D., Kramer, S. M., Landis, J. A., Shimabukuro, J. M. and Oshiro, L. S. (1984), Isolation of lymphocytopathic retroviruses from San Francisco patients with AIDS. *Science*, Vol. 225 (4664), p.840-842.
- Loewenson, R. and Thompson, C. (eds.) (2004). *Health Personnel in Southern Africa: Confronting maldistribution and brain drain*, EQUINET, HST (RSA) and MEDACT (UK), Durban.
- Lomax, K. and Mametja, D. (1995), Assessing the Feasibility of Greater State Support to Community-based Health Programmes, Health Systems Trust, Durban.
- Long, L. D. (1997), Refugee women, violence, and HJV, in G. H. Herdt (ed.), *Sexual Cultures and Migration in the Era of AIDS*, Clarendon Press, Oxford, p.87-103.
- Low-Beer, D., Stoneburner, R. L. and Mukulu, A. (1997), Empirical evidence for the severe but localized impact of AIDS on population structure, *Nature Medicine*, Vol. 3 (5), p.553-557.
- Lugalla, J., Emmelin, M., Mutembei, A., Sima, M., Kwesigabo, G., Killewo, J. and Dahlgren, L. (2003), Social, cultural and sexual behavioral determinants of observed decline in HJV infection trends: lessons from the Kagera Region, Tanzania, Social Science & Medicine, Vol.
- MacFarlan, M. and Sgherri, S. (2001), *The Macroeconomic Impact of HIV/AIDS in Botswana*, International Monetary Fund, Washington, D.C.
- MacQueen, K. M. (1994), The Epidemiology of Hiv Transmission Trends, Structure and Dynamics, *Annual Review of Anthropology*, Vol. 23, p.509-526.
- Makan, B. and Bachmann, M. (1997). An Economic Analysis of Community Health Worker Programmes in the Western Cape Province, The Health Systems Trust, Durban, <u>http://www.hst.org.za/research/econ_chw.htm</u>.
- Manning, R. (2002), HIV/AIDS and Democracy: What do we know?, in K. Kelly, Parker, W. and Gelb, S. (eds.), *HIV/AIDS, Economics and Governance in South Africa : Key Issues in Understanding Response - A Literature Review 2002*, The Centre for Aids Development, Research and Evaluation (Cadre), Johannesburg, p.21-36.
- Marseille, E., Kahn, J. G., Billinghurst, K. and Saba, J. (2001), Cost-effectiveness of the female condom in preventing HIV and STDs in commercial sex workers in rural South Africa, *Social Science & Medicine*, Vol. 52 (1), p.135-148.
- Martin, R. (2004), Quality Assurance with HIV Testing Technologies, New Strategies for HIV/AIDS Surveillance in Resource-Constrained Settings, Addis Ababa, Ethiopia, 26-29 January 2004, p.18-20.

- Mathews, C., Guttmacher, S. J., Coetzee, N., Magwaza, S., Stein, J., Lombard, C., Goldstein, S. and Coetzee, D. (2002), Evaluation of a video based health education strategy to improve sexually transmitted disease partner notification in South Africa, *Sexually Transmitted Infections*, Vol. 78 (1), p.53-57.
- Mathews, C., van der Walt, H. and Barron, P. (1994). A Shotgun Marriage -Community-Health Workers and Government Health-Services - Qualitative Evaluation of a Community-Health Worker Project in Khayelitsha, *South African Medical Journal*, Vol. 84 (10), p.659-663.
- Mathews, C., van der Walt, H., Hewitson, D. W., Toms, I. P., Blignaut, R. and Yach, D. (1991), Evaluation of a Periurban Community-Health Worker Project in the Western Cape, *South African Medical Journal*, Vol. 79 (8), p.504-510.
- Mbizvo, M. T. and Bassett, M. T. (1996), Reproductive health and AIDS prevention in sub-Saharan Africa: The case for increased male participation. *Health Policy* and Planning, Vol. 11 (1), p.84-92.
- McCoy, D., Besser, M., Visser, R. and Doherty, T. (2002), Interim Findings on the National PMTCT Pilot Sites. Lessons and Recommendations, Health Systems Trust, Durban, South Africa, <u>http://www.hst.org.za</u>.
- McKenzie-Mohr, D. (2000), Fostering sustainable behavior through community-based social marketing, *American Psychologist*, Vol. 55 (5), p.531-537.
- Meche, H., Dibeya, T. and Bennett, J. (1984), The training and use of community health agents in Ethiopia, *Ethiopian Journal of Health Development*, Vol. 1 (1), p.31-40.
- Médecins sans Frontières South Africa, Department of Public Health at the University of Cape Town and Provincial Administration of the Western Cape South Africa (2003), Antiretroviral therapy in primary health care: experience of the Khayelitsha Programme in South Africa. Case Study. WHO, Geneva, <u>http://www.who.org</u>.
- Medical Research Council of South Africa (2001), *HJV/AJDS: Its impact on mortality*, MRC, Tygerberg, South Africa, <u>www.mrc.ac.za/mrcnews/dec2001/hivaids.html</u>.
- Mekonnen, Y., Jegou, R., Coutinho, R. A., Nokes, J. and Fontanet, A. (2002), Demographic impact of AIDS in a low-fertility urban African setting: Projection for Addis Ababa, Ethiopia, *Journal of Health Population and Nutrition*, Vol. 20 (2), p.120-129.
- Miles, N. (2005), *Texting to help SA HIV patients*, http://news.bbc.co.uk/2/hi/africa/4437447.stm, accessed 13.April 2005.
- Mkuye, M., Schapink, D., Hamelmann, C. and Masesa, E. (1997), Training health workers, in J. Ng'weshemi, Boerma, T., Bennett, J. and Schapink, D. (eds.), *HIV prevention and AIDS care in Africa : a district level approach*, Royal Tropical Institute, Amsterdam, p.205-220.

- Morison, L., Buvé, A., Zekeng, L. and et. al. (2001), HIV-1 subtypes and the HIV epidemics in four cities in sub-Saharan Africa, *AIDS*, Vol. 15 (Suppl. 4), p.S109-S116.
- Mtshali, L. (2002), The war on HIV/AIDS in KwaZulu-Natal. Extract of 'State of the Province Address by the Premier of KwaZulu-Natal, the Honourable Lphm Mtshali', Office of the Premier, KwaZulu-Natal, Ulundi, 25 February 2002.
- Mullen, P. M. (2003), Delphi: myths and reality, *Journal of Health Organization and Management*, Vol. 17 (1), p.37-52.
- Murphy, V. (2003), *Mbeki stirs up Aids controversy*, <u>http://news.bbc.co.uk/go/pr/fr/-/1/hi/world/africa/3143850.stm</u>, accessed 28/09/2003.
- Muyinda, H., Seeley, J., Pickering, H. and Barton, T. (1997), Social aspects of AIDS-related stigma in rural Uganda, *Health & Place*, Vol. 3 (3), p.143-147.
- Myer, L., Ehrlich, R. I. and Susser, E. S. (2004), Social Epidemiology in South Africa, *Epidemiologic Reviews*, Vol. 26, p.112-123.
- Myer, L., Mathews, C. and Little, F. (2002), Improving the accessibility of condoms in South Africa: the role of informal distribution, *Aids Care-Psychological and Socio-Medical Aspects of Aids/Hiv*, Vol. 14 (6), p.773-778.
- Myer, L., Mathews, C., Little, F. and Karim, S. S. A. (2001), The fate of free male condoms distributed to the public in South Africa, *Aids*, Vol. 15 (6), p.789-793.
- Myers, M. (2002), From Awareness to Action: Tackling HIV/AIDS through Radio and Television Drama, Benfield Creig Hazard Research Centre, London, <u>http://www.benfieldhrc.org</u>.
- Ndlovu, N. (2004), *HIV/AIDS expenditure in the 2004/5 provincial budgets: Trends in budget allocations and spending*, IDASA, <u>http://www.idasa.org.za</u>.
- Nelufule, M. D. (2004), *AIDS and Democracy: What do we know? A Literature Update Review*, Health Economics and HIV/AIDS Research Division (HEARD), Durban, South Africa, <u>www.heard.org.za</u>.
- Ngwira, N., Bota, S. and Loevinsohn, M. (2001), *HIV/AIDS, Agriculture and food* security in Malawi, Background to Action, RENEWAL Working Paper 1, Lilongwe and The Hague.
- NIAID (1995), The Relationship between the Human Immunodeficiency Virus and the Acquired Immunodeficiency Syndrome, http://www.niaid.nih.gov/publications/hivaids/all.htm, accessed 01/12/2004.
- NIAID Division of AIDS (2003), Challenges in Developing AIDS Vaccines, http://www.niaid.nih.gov/daids/vaccine/challenges.htm, accessed 01/12/2004.
- Nicolosi, A., Correa Leite, M. L., Musicco, M., Arici, C., Gavazzeni, G., Lazzarin, A., Angarano, G., Costigliola, P. and Gafa, S. (1994), The efficiency of male-to-female and female-to-male sexual transmission of the human

immunodeficiency virus - a study of 730 stable couples. Italian Study Group on HIV Heterosexual Transmission. *Epidemiology*, Vol. 5 (6), p.570-575.

Njobeni, S. (2005), AIDS 'threatens farm production', HIV/AIDS News, Vol. 117, p.1-2.

- Ntuli, A., Ijumba, P., McCoy, D., Padarath, A. and Berthiaume, L. (2003), HIV/AIDS and Health Sector Responses in South Africa. Treatment Access and Equity: Balancing the Act, HST, Equinet and Oxfam, Durban.
- Nullis-Kapp, C. (2005), Africa is worst hit by dual epidemic, *Bulletin of the World Health Organization*, Vol. 83 (3), p.165-166.
- Nyawo, M. J. and Xaba, T. (2002), *Targeted HIV/AIDS hostel dwellers programme*, XIV International Conference on HIV/AIDS, Barcelona, Spain, 7-12 July 2002.
- Nzilambi, N., De Cock, K., Forthal, D., Francis, H., Ryder, R., Malebe, I., Getchell, J., Laga, M., Piot, P. and McCormick, J. (1988), The prevalence of infection with human immunodeficiency virus over a 10-year period in rural Zaire, N Engl J Med, Vol. 318 (5), p.276-279.
- Offenstadt, G., Pinta, P., Hericord, P., Jagueux, M., Jean, F., Amstutz, P., Valade, S. and Lesavre, P. (1983), Multiple opportunistic infection due to AIDS in a previously healthy black woman from Zaire, *New England Journal of Medicine*, Vol. 308 (13), p.775.
- **Oinyaku, S. O.** (2002), Using cultural leaders and parents as peer educators for HIV prevention among the rural maasai youth of Kenya, XIV International Conference on HIV/AIDS, Barcelona, 7-12 July 2002
- Okero, F. A., Aceng, E., Madraa, E., Namagala, E. and Serutoke, J. (2003), Scaling Up Antiretroviral Therapy: Experience in Uganda. Case Study, WHO, Geneva. http://www.who.org.
- Okware, S., Opio, A., Musinguzi, J. and Waibale, P. (2001), Fighting HIV/AIDS: is success possible?, *Bulletin of the World Health Organization*, Vol. 79 (12), p.1113-1120.
- **Organisation of African Unity** (2001), *Abuja Declaration on HIV/AIDS, Tuberculosis* and Other Related Infectious Diseases, Abuja, Federal Republic of Nigeria.
- **Orubuloye, I. O., Caldwell, J. C. and Caldwell, P.** (1993), The role of high-risk occupations in the spread of AlDS: truck drivers and itinerant market women in Nigeria, *International Family Planning Perspectives*, Vol. 19 (2), p.43-48, 71.
- **Over, M.** (1992), *The Macroeconomic Impact of HIV/AIDS in Sub-Saharan Africa*, Population Health and Nutrition Division, Africa Technical Department, World Bank, Washington, D.C., Africa Technical Working Paper No. 3.
- **Over, M.** (1998), The effects of societal variables on urban rates of HIV infection in developing countries: An exploratory analysis, in M. Ainsworth, Fransen, L. and Over, M. (eds.), *Confronting AIDS: Evidence from the Developing World*, The European Commission, Brussels, p.39-51.

- Pantaleo, G., Graziosi, C. and Franci, A. S. (1993), The immunopathogenesis of human immunodeficiency virus in infection, *New England Journal of Medicine*, Vol. 328 (5), p.327-335.
- Parkhurst, J. O. and Lush, L. (2004), The political environment of HIV: lessons from a comparison of Uganda and South Africa, *Social Science & Medicine*, Vol. 59, p.1913-1924.
- Patel, P. (2001), The Politics of AIDS in Africa, *International Relations*, Vol. 15 (4), p.79-91.
- Patton, C. (2002), Globalizing AIDS, University of Minnesota Press, Minneapolis.
- Pick, W. (1995), Human Resources Development, in D. Harrison and Nielson, M. (eds.), South African Health Review 1995, Health Systems Trust, Durban, p.86-96.
- Pilcher, H. (2004), Starting to gel, Nature, Vol. 430 (6996), p.138-140.
- Pillay, Y. and Marawa, N. (eds.) (2000), A Synopsis of Health Policies and Legislation: 1994-2000, Department of Health, Pretoria, <u>http://www.doh.gov.za/docs/policy/synopsis.html</u>.
- Pio, A., Luelmo, F., Kumaresan, J. and Spinaci, S. (1997). National tuberculosis programme review: experience over the period 1990-95, *Bulletin of the World Health Organization*, Vol. 75 (6), p.569-581.
- **Piot, P.** (1999), Foreword, in L. Gibney, DiClemente, R. J. and Vermund, S. H. (eds.), *Preventing HIV in Developing Countries. Biomedical and Behavioral Approaches*, Kluwer Academic/ Plenum Publishers, New York, p.ix-xi.
- Poku, N. K. (2001), Africa's AIDS crisis in context: 'how the poor are dying', *Third World Quarterly*, Vol. 22 (2), p.191-204.
- Poku, N. K. (2002), Poverty, debt and Africa's HIV/AIDS crisis, *International Affairs*, Vol. 78 (3), p.531-546.
- Poku, N. K. and Cheru, F. (2001), The Politics of Poverty and Debt in Africa's AIDS Crisis, *International Relations*, Vol. 15 (6), p.37-54.
- Porco, T. C., Martin, J. N., Page-Shafer, K. A., Cheng, A., Charlebois, E., Grant, R. M. and Osmond, D. H. (2004), Decline in HIV infectivity following the introduction of highly active antiretroviral therapy, *AIDS*, Vol. 18 (1), p.81-88.
- Poundstone, K. E., Strathdee, S. A. and Celentano, D. D. (2004), The Social Epidemiology of Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome, *Epidemiologic Reviews*, Vol. 26, p.22-35.
- Pretorius, E. (1999), Traditional healers, in N. Crisp and Ntuli, A. (eds.), *South African Health Review 1999*, Health Systems Trust, Durban, p.249-256.
- Price, N. (2001), The performance of social marketing in reaching the poor and vulnerable in AIDS control programmes, *Health Policy and Planning*, Vol. 16 (3), p.231-239.
- Pronyk, P. M., Kim, J. C., Makhubele, M. B., Hargreaves, J. R., Mohlala, R. and Hausler, H. P. (2002), Introduction of voluntary counselling and rapid testing for HIV in rural South Africa: from theory to practice, *Aids Care-Psychological and Socio-Medical Aspects of Aids/Hiv*, Vol. 14 (6), p.859-865.
- **Provincial District Health Systems Committee, KwaZulu-Natal** (1999), Annual Report of the Provincial District Health Systems Committee, KwaZulu-Natal, South Africa, for 1999, Pietermaritzburg.
- **Prusiner, S.** (2002), Historical Essay: Discovering the Cause of AIDS, *Science*, Vol. 298 (5599), p.1726-1727.
- Quinn, T. C., Mann, J. M., Curran, J. W. and Piot, P. (1986), AIDS in Africa: An epidemiological paradigm, *Science*, Vol. 234 (4779), p.955-963.
- Quinn, T. C., Mann, J. M., Curran, J. W. and Piot, P. (2001), AIDS in Africa: An epidemiologic paradigm, *Bulletin of the World Health Organization*, Vol. 79 (12), p.1159-1167.
- Ramjee, G., Gouws, E., Andrews, A., Myer, L. and Weber, A. E. (2001), The Acceptability of a Vaginal Microbicide among South African Men, *International Family Planning Perspectives*, Vol. 27 (4), p.164-170.
- Rasheed, S. and Chole, E. (1994), Human Development: An African Perspective, UNDP, New York, Occasional Paper 17, http://gd.tuwien.ac.at/soc/undp/oc17.htm.
- Reddy, P., Meyer-Weitz, A., van den Borne, B. and Kok, G. (2000), Determinants of condom-use behaviour among STD clinic attenders in South Africa, *International Journal of Std & Aids*, Vol. 11 (8), p.521-530.
- Reddy, P., Taylor, S. E. and Sifunda, S. (2002), Research capacity building and collaboration between South African and American partners: The adaptation of an intervention model for HIV/AIDS prevention in corrections research, *Aids Education and Prevention*, Vol. 14 (5), p.92-102.
- Rely, K., Bertozzi, S. M., Avila-Figueroa, C. and Guijarro, M. T. (2003), Costeffectiveness of strategies to reduce mother-to-child HJV transmission in Mexico, a low-prevalence setting, *Health Policy Plan.*, Vol. 18 (3), p.290-298.
- **Republic of South Africa** (2003), *National Health Act*, Cape Town, Government Gazette, <u>http://www.info.gov.za/gazette/acts/2003/a61-03.pdf</u>.
- **Republic of South Africa** (2006), Progress Report on Declaration of Commitment on HIV and AIDS. Prepared for United Nations General Assembly on HIV/AIDS, Pretoria, <u>http://www.doh.gov.za/docs/aids</u>.

- Roberts, M., Rau, B., Emery, A. R. and Family Health International (Organization). AIDS Control and Prevention (AIDSCAP) Project. (1998), Private sector AIDS policy : businesses managing HIV/AIDS : a resource for businesses in designing HIV/AIDS prevention policies and programs, Family Health International/AIDSCAP, Arlington, VA.
- Rhodes, T. and Simic, M. (2005). Transition and the HIV risk environment, *British Medical Journal*, Vol. 331 (7510), p.220-223.
- Rodger, A. J., Toole, M., Lalnuntluangi, B., Muana, V. and Deutschmann, P. (2002), DOTS-based tuberculosis treatment and control during civil conflict and an HIV-epidemic, Churachandpur District, India. *Bulletin of the World Health Organization*, Vol. 80 (6), p.451-456.
- Rohleder, P. and Swartz, L. (2005), 'What I've noticed what they need is the stats': Lay HIV counsellors' reports of working in a task-orientated health care system. *Aids Care*, Vol. 17 (3), p.397-406.
- Rose, K. M., Marin, M., Kozak, S. L. and Kabat, D. (2004). The viral infectivity factor (Vif) of HIV-1 unveiled, *Trends in Microbiology*, Vol. 10 (6), p.291-297.
- Rosen, S., Sanne, I., Collier, A. and Simon, J. L. (2005), Hard Choices: rationing antiretroviral therapy for HIV/AIDS in Africa, *Lancet*, Vol. 365 (9456), p.354-356.
- **Ross, M. W. and Williams, M. L.** (2002). Effective targeted and community H1V/STD prevention programs, *Journal of Sex Research*, Vol. 39 (1), p.58-62.
- Russel, M. and Schneider, H. (2000a), Models of community-based HIV/AIDS care and support, in A. Ntuli, Crisp, N., Clarke, E. and Barron, P. (eds.), *South African Health Review 2000*, Health Systems Trust, Durban, South Africa, p.327-333.
- Russel, M. and Schneider, H. (2000b), A Rapid Appraisal of Community-based HIV/AIDS Care and Support Programs In South Africa, Centre for Health Policy, University of Witwatersrand, Johannesburg, <u>www.hst.org.za</u>.
- Safai, B., Groopman, J. E., Popovic, M., Schüpbach, J., Sarngadharan, M. G., Arnett, K., Sliski, A. and Gallo, R. C. (1984). Seroepidemiological Studies of Human T-Lymphotropic Retrovirus Type III in Acquired Immunodeficiency Syndrome, *Lancet*, Vol. 323 (8392), p.1438-1440.
- South African Qualifications Authority (2000), Public Notice by NSB 09, Health Sciences and Social Services, of the Registration of an SGB for Ancillary Health Care, Notice 1416 of 2000, Government Gazette Vol. 417, No. 21014, 27 March 2000.
- SAQA (2003), Public Notice by NSB 09, Health Sciences and Social Services, of an application to re-register the SGB for Ancillary Health Care for NQF levels 1-3, http://www.saqa.org.za/docs/legislation/notices/2003/healthcare.html, accessed 25 October 2007.

- SAQA (2007a), Public Notice by NSB 09. Health Sciences and Social Services, to extend the brief of the SGB for Ancillary Health Care, <u>http://www.saqa.org.za/structure/sgb/regsgbs/ancillhealth-brief.html</u>, accessed 25 October 2007.
- SAQA (2007b), South African Qualifications Authority Registered Qualification: Certificate: Community Health Facilitator Training, <u>http://regqs.saqa.org.za/viewQualification.php?id=22065</u>, accessed November 2007.
- SAQA (2007c), South African Qualifications Authority Registered Qualification: Further Education and Training Certificate: Community Health Work, <u>http://regqs.saqa.org.za/showQualification.php?id=49131</u>, accessed November 2007.
- SAQA (2007d), South African Qualifications Authority Registered Qualification: General Education and Training Certificate: Ancillary Health Care, <u>http://regqs.saqa.org.za/showQualification.php?id=49606</u>, accessed November 2007.
- SAQA (2007e), South African Qualifications Authority Registered Qualification: National Certificate: Ancillary Health Care, <u>http://regqs.saqa.org.za/showQualification.php?id=49085</u>, accessed November 2007.
- SAQA (2007f), South African Qualifications Authority Registered Qualification: National Certificate: Community Health Work, <u>http://regqs.saqa.org.za/showQualification.php?id=49128</u>, accessed November 2007.
- SAQA (2007g), South African Qualifications Authority Registered Unit Standard: Demonstrate knowledge of the provision and implementation of primary health care within the community, <u>http://regqs.saqa.org.za/viewUnitStandard.php?id=117498</u>, accessed November 2007.
- Schneider, H. (2002), On the fault-line: the politics of AIDS policy in contemporary South Africa, *African Studies*, Vol. 61 (1), p.145-167.
- Schneider, H. and Fassin, D. (2002), Denial and defiance: a socio-political analysis of AIDS in South Africa, *AIDS*, Vol. 16 (Suppl 4), p.S45-S51.
- Schneider, H. and Stein, J. (2001), Implementing AIDS policy in post-apartheid South Africa, *Social Science & Medicine*, Vol. 52 (5), p.723-731.
- Schneider, H., Hlophe, H. and van Rensburg, D. (2008), Community health workers and the response to HIV/AIDS in South Africa: tensions and prospects, *Health Policy and Planning*, Vol. 23 (3), p.179-187.
- Schoepf, B. G. (1992), AIDS, Sex and Condoms: African Healers and the Reinvention of Tradition in Zaire, in R. Bolton and Singer, M. (eds.), *Rethinking HIV*

prevention. Cultural Approaches, Gordon and Breach Science Publishers, Yverdon, p.87-104.

- Scott, B. E., Weiss, H. A. and Viljoen, J. I. (2005), The acceptability of male circumcision as an HIV intervention among a rural Zulu population, KwaZulu-Natal, South Africa, *Aids Care*, Vol. 17 (3), p.304-313.
- Scrace, M. (2006), Cholera in the Mdletsheni Tribal Authority, *Journal of Rural and Tropical Health*, Vol. 5, p.70-77.
- Seage, G. R., Mayer, K. H. and Horsburgh, C. R. (1993), Risk of human immunodeficiency virus infection from unprotected receptive anal intercourse increases with decline in immunological status of infected partner, *American Journal of Epidemiology*, Vol. 137 (8), p.899-908.
- Segal, S. and Hill, A. V. S. (2003), Genetic susceptibilit to infectious disease, *Trends in Microbiology*, Vol. 11 (9), p.445-448.
- Seidel, G. (1996), Confidentiality and HIV status in Kwazulu-Natal, South Africa: Implications, resistances and challenges, *Health Policy and Planning*, Vol. 11 (4), p.418-427.
- Shannon, G. W. and Pyle, G. F. (1989), The origin and diffusion of AIDS: a view from medical geography, *Annals of the Association of American Geographers*, Vol. 79 (1), p.1-24.
- Shisana, O., Rehle, T., Simbayi, L., Parker, W., Zuma, K., Bhana, A., Connolly, C., Jooste, C. and Pillay, V. (2005), South African national HIV prevalence, HIV incidence, behaviour and communications survey, HSRC Press, Cape Town.
- Sidel, V. W. (1972), Barefoot Doctors of the People's Republic of China, *New England Journal of Medicine*, Vol. 286, p.1292 1300.
- Snyder, L. B. and Rouse, R. A. (1995), The Media Can Have More Than an Impersonal Impact - the Case of Aids Risk Perceptions and Behavior, *Health Communication*, Vol. 7 (2), p.125-145.
- South African AIDS Vaccine Initiative (2004), Background and establishment of SAAVI, <u>http://www.saavi.org.za</u>, accessed 11/10/2004.
- South African Council for Social Work (1994), *Government Gazette*, No. 15658 of 29 April 1994.
- South African Management Development Institute and Health Sciences Research Council (2005), Evaluation of the Community Development Worker (CDW) Programme, Research Report, financed by Department of Provincial and Local Government, Pretoria, <u>www.hsrc.org.za</u>.
- Stadler, J. and Hlongwa, L. (2002), Monitoring and evaluation of loveLife's AIDS prevention and advocacy activities in South Africa, 1999-2001, *Evaluation and Program Planning*, Vol. 25 (4), p.365-376.

- Steinberg, M., Johnson, S., Schierhout, G. and Ndegwa, D. (2002), A Survey of Households Impacted by HIV/AIDS in South Africa: What are the Priority Responses, Henry J. Kaiser Foundation,
- Steinberg, M., Kinghorn, A., Sderlund, N., Schierhout, G. and Conway, S. (2000), HIV/AIDS - facts, figures and the future, in A. Ntuli. Crisp, N., Clarke, E. and Barron, P. (eds.), South African Health Review 2000, Health Systems Trust. Durban, p.301-326.
- Stephenson, J. (2000), Apocalypse now: HIV/AIDS in Africa exceeds the experts' worst predictions, *Jama-Journal of the American Medical Association*, Vol. 284 (5), p.556-557.
- Stover, J. (1996), *The Future Demographic Impact of AIDS: What do we know?*, AIDS in Development: The Role of Government, Chateau de Limette, 17-19 June 1996.
- Stover, J. and Way, P. (1998), Projecting the impact of AIDS on mortality, *Aids*, Vol. 12, p.S29-S39.
- Strode, A. and Barrett Grant, K. (2004), Understanding the institutional dynamics of South Africa's response to the HIV/Aids pandemic, IDASA, Pretoria, www.idasa.org.za.
- Sumartojo, E., Carey, J. W., Doll, L. S. and Gayle, H. (1997), Targeted and general population interventions for HIV prevention: towards a comprehensive approach, *AIDS*, Vol. 11 (10), p.1201-1209.
- Sumartojo, E., Doll, L., Holtgrave, D., Gayle, H. and Merson, M. H. (2000). Enriching the mix: incorporating structural factors into HIV prevention. *AIDS*, Vol. 14 (Suppl. 1), p.S1-S2.
- Suri, A., Gan, K., Carpenter, S. (2007). Voices from the Field: Perspectives from Community Health Workers on Health Care Delivery in Rural KwaZulu-Natal, South Africa, *Journal of Infectious Diseases*, Vol. 196 (Suppl. 3), p.S505-S511.
- Taelman, H., Dasnoy, J., van Marck, E. and Eyckmans, L. (1983), Acquired immune deficiency syndrome in 3 patients from Zaire, *Annals de la Société belge de Médecine tropicale*, Vol. 63 (1), p.73-74.
- Tarantola, D., Lamptey, P. R. and Moodie, R. (1999), The Global HIV/AIDS Pandemic, in S. H. Vermund (ed.), *Preventing HIV in Developing Countries*. *Biomedical and Behavioral Approaches*, Kluwer Academic/ Plenum Publishers, New York, p.9-41.
- **Taylor-Ide, D. and Taylor, C.** (2002), *Just and Lasting Change. When Communities Own Their Future.*, The John Hopkins University Press with Future Generations. Franklin, Baltimore and London.
- The Cochrane Collaborative Review Group on HIV Infection and AIDS (2004), Evidence Assessment: Strategies for HIV/AIDS Prevention, Treatmen and Care.

Institute for Global Health, University of California, San Francisco, San Francisco, <u>http://www.igh.org/Cochrane</u>.

- The Valley Trust (2004), Annual Report 2004, <u>http://www.thevalleytrust.org.za/pdfs/valley_trust_AR2004.pdf</u>, accessed 02.07.2006.
- The Valley Trust (2005a), Community Health Worker Programme, <u>http://www.thevalleytrust.org.za/index.php?page=com_health</u>, accessed 02.07.2006.
- The Valley Trust (2005b). Community Health Worker Programme, The Valley Trust, http://www.thevalleytrust.org.za/, 2006.
- The Valley Trust (2007), Annual Report 2007, The Valley Trust, http://www.thevalleytrust.org.za/pdfs/valley_trust_AR2007.pdf, 2007.
- The World Bank (1999), Confronting AIDS: Public Priorities in a Global Epidemic, Oxford University Press, New York.
- **The World Bank AIDS Campaign Team for Africa** (2000), *Exploring the Implications of the HIV/AIDS Epidemic for Educational Planning in Selected African Countries: The Demographic Question*, The World Bank, New York.
- **Thomas, R. W.** (2001), Geography of AIDS, in N. Smelser (ed.), *International Encyclopedia of the Social and Behavioural Sciences*, Elsevier, p.350-355.
- **Thornton, R. and Byrnes, R. M.** (1996), A Country Study: South Africa Health Care Services, <u>http://lcweb2.loc.gov/frd/cs/zatoc.html</u>, accessed 22/03/2006.
- **Tollman, S.** (1994), The Pholela Health Centre the origins of community-oriented primary health care (COPC). An appreciation of the work of Sidney and Emily Kark, *South African Medical Journal*, Vol. 84 (10), p.653-658.
- Tshabalala-Msimang, M. (2003a), Minister of Health's Closing Remarks: Community: Health Worker Lekgotla, Durban, 31 October 2003, http://www.doh.gov.za/docs/sp/2003/sp1031.html, accessed 09/03/2004.
- **Tshabalala-Msimang, M.** (2003b), Minister's Speech to the Primary Health Care Conference, 24 August 2003, in Y. Pillay and Caminsky, M. (eds.), *Celebrating the achievements of Alma-Ata: Strengthening Primary Health Care in South Africa, Conference Report*, Gauteng, p.65-69.
- Tshabalala-Msimang, M. (2003c), Speech by the Minister of Health: Gala Dinner for Community Health Workers, Durban, 30 October 2003, <u>http://www.doh.gov.za/docs/sp/2003/sp1030.html</u>, accessed 09/03/2004.
- Tshabalala-Msimang, M. (2003d), Speech for the Minister of Health: Opening CHW Workshop, Durban, 30 October 2003, <u>http://www.doh.gov.za/docs/sp/2003/sp1030.html</u>, accessed 09/03/2004.

- Tshabalala-Msimang, M. (2004a), Speech by the Minister of Health at the Comprehensive Plan Stakeholders Meeting on 16 March 2004, Holiday Inn, Johannesburg Airport, <u>http://www.doh.gov.za/</u>, accessed 27.07.2006.
- Tshabalala-Msimang, M. (2004b), Speech by the Minister of Health at the Lauch of the Community Health Worker Programme, Mabopane, 26 February 2004, http://www.doh.gov.za/docs/sp/2004/sp0226.html, accessed 27.07.2006.
- Tshabalala-Msimang, M. (2005), Address by Minister of Health at the Community Health Worker Workshop at Free State University, Qwa qwa, 27 June 2005, <u>http://www.info.gov.za/speeches/2005/05062915151001.htm</u>, accessed 27.07.2006.
- Tshabalala-Msimang, M. (2007), Budget Vote speech by the Minister of Health, Dr. Manto Tshabalala-Msimang, for 2007/08 financial year. National Assembly, http://www.doh.gov.za/, accessed 20.10.2007.
- Turner, C. F., Miller, H. G. and Moses, L. E. (1989). *AIDS, Sexual Behavior and Intravenous Drug Use*, National Academy Press, Washington.
- Uganda AIDS Commission (1993): The multi-sectoral approach to AIDS control in Uganda, Executive summary, February 1993, <u>http://www.aidsuganda.org</u>.
- **UNAIDS** (2004), *Report on the global HIV/AIDS epidemic*, Joint United Nations Programme on HIV/AIDS (UNAIDS), Geneva, <u>http://www.unaids.org</u>.
- UNAIDS and WHO (2001), Fighting HIV-related intolerance: Exposing the Links between Racism, Stigma and Discrimination, Joint United Nations Programme on HIV/AIDS (UNAIDS), World Health Organization (WHO), http://www.socstats.soton.ac.uk/cshr/pdf/bpracism%5B2%5D.PDF.
- UNAIDS and WHO (2007), AJDS epidemic update: December 2007, UNAIDS, Geneva, <u>http://www.unaids.org</u>.
- UNDP (2004), Human Development Report 2004. Cultural liberty in today's diverse world, United Nations Development Programme, New York, <u>http://hdr.undp.org/reports/global/2004/pdf/hdr04_complete.pdf</u>.
- United Nations General Assembly (2001), Declaration of Commitment on HIV/AIDS.
- Uys, L. and Cameron, S. (eds.) (2003), *Home-based HIV/AIDS care*, Oxford University Press Southern Africa, Oxford.
- Valentine, G. (1997), Tell me about ...: using interviews as research methodology, in R. Flowerdew and Martin, D. (eds.), *Methods in Human Geography: a guide for students doing research projects*, Pearson Education Limited, Harlow, England, p.110-126.
- Valentine, G. (2001), At the drawing board: developing a research design, in M. Limb and Dwyer, C. (eds.), *Qualitative Methodologies for Geographers. Issues and Debates*, Arnold, London, p.41-54.

- Van Damme, W. and Van Lerberghe, W. (2000), Epidemics and fear, *Tropical Medicine and International Health*, Vol. 5 (8), p.511-514.
- van der Linde, I. (1997), Drop secrecy around HIV/AIDS, South African Medical Journal, Vol. 87 (1), p.12-13.
- van der Walt, H. and Mathews, C. (1995), How do health service managers respond to qualitative research?, *Social Science & Medicine*, Vol. 41 (12), p.1725-1729.
- van Praag, E., Schweyen, V. and Ng'weshemi, J. (1997), Care and counselling, in J. Ng'weshemi, Boerma, T., Bennett, J. and Schapink, D. (eds.), *HIV prevention* and AIDS care in Africa. A district level approach, Royal Tropical Institute. Amsterdam, p.307-324.
- Van Rensburg, H. C. and Harrison, D. (1995), History of health policy, in D. Harrison and Nielson, M. (eds.), *South African Health Review 1995*, Health Systems Trust, Durban, p.42-63.
- Vernazza, P., Gilliam, B. L., Flepp, M., Dyer, J. R., Frank, A. C., Fiscus, S. A., Cohen, M. and Eron, J. J. (1997), Effect of antiviral treatment on the shedding of HIV-1 in semen, *AIDS*, Vol. 11 (10), p.1249-1254.
- Vittinghoff, E., Scheer, S., O'Malley, P., Colfax, G., Holmberg, S. D., Buchbinder, S. P. (1999): Combination Antiretroviral Therapy and Recent Declines in AIDS Incidence and Mortality. *The Journal of Infectious Diseases*, 179 (3), pp.717-720.
- Wallman, S. (2000), Risk, STD and HIV infection in Kampala. *Health Risk & Society*, Vol. 2 (2), p.189-203.
- Walt, G. (1988), CHWs: are national programmes in crisis?. *Health Policy and Planning*, Vol. 3 (1), p.1-21.
- Walt, G. (1994), *Health Policy. An Introduction to Process and Power*, Witwatersrand University Press, Johannesburg.
- Walt, G., (ed.), with Gilson, L., Heggenhougen, H. K., Knudsen, T., Owuor-Omondi, L., Perera, M., Ross, D., Salazar, L. and Malins, S. (1990), Community health workers in national programmes: just another pair of hands?, Open University Press, Milton Keynes, Philadelphia.
- Wasserheit, J. N. (1992), Interrelationship between human immunodeficiency virus infection and other sexually transmitted infections, *Sexually Transmitted Infections*, Vol. 19, p.61-77.
- Wawer, M., Gray, R., Sewankambo, N. K., Serwadda, D., Paxton, L., Berkley, S., McNairn, D., Wabwire-Mangen, F., Li, C., Nalugoda, F., Kiwanuka, N., Lutalo, T., Brookmeyer, R., Kelly, R. and Quinn, T. C. (1998), A randomized, community trial of intensive sexually transmitted disease control for AIDS prevention, Rakai, Uganda, *AIDS*, Vol. 12 (10), p.1211-1225.

- Way, P. O., De Lay, K. S. and Center for International Research (U.S.) (1991), The demographic impact of an AIDS epidemic on an African country : application of the Iwgaids model, Center for International Research U.S. Bureau of the Census, Washington.
- Wayland, C. and Crowder, J. (2002), Disparate views of community in primary health care: Understanding how perceptions influence success, *Medical Anthropology Quarterly*, Vol. 16 (2), p.230-247.
- Webb, D. (1997), *HIV and AIDS in Africa*, Pluto Press/David Philip/University of Natal Press, London/Cape Town/Pietermaritzburg.
- Weeks, J. (1989), AIDS: The Intellectual Agenda, in P. Aggleton, Hart, G. and Davies, P. (eds.), AIDS: Social Representations, Social Practices, The Falmer Press, New York, p.1-20.
- Weiss, H. A., Buvé, A., Robinson, N. J. and et. al. (2001). The epidemiology of HSV-2 infection and its association with H1V infection in four urban African populations, *AIDS*, Vol. 15 (Suppl. 4), p.S97-S108.
- Whiteside, A. (ed.) (1998), *Implications of AIDS for Demography and Policy in Southern Africa*, University of Natal Press, Pietermaritzburg, South Africa.
- Whiteside, A. (2002), Poverty and HIV/AIDS in Africa, *Third World Quarterly*, Vol. 23 (2), p.313-332.
- Whiteside, A. and Sunter, C. (2000), *AIDS. The challenge for South Africa*. Human & Rousseau/ Tafelberg, Cape Town.
- WHO (1948), Preamble to the Constitution of the World Health Organization, as adopted by the International Health Conference, New York, 19 June - 22 July 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948.
- WHO (1985), Workshop on AIDS in Central Africa, Bangui, Central African Republic, Workshop on AIDS in Central Africa, WHO, Bangui, Central African Republic, 22-25 October 1985, p.1-15.
- **WHO** (1986), Acquired Immunodeficiency Syndrome (AIDS). WHO/CDC case definition for AIDS, *Weekly Epidemiological Record*, Vol. 61 (10), p.69-73.
- WHO (1987), The Community Health Worker, World Health Organization, Geneva.
- WHO (1997), 1997 WHO Overview of AIDS Case Definitions used in Countries, http://www.who.int/hiv/strategic/surveillance/definitions/en/, accessed 10/09/2004.
- **WHO** (1998), The importance of simple/rapid assays in HIV testing. WHO recomendations, *Weekly Epidemiological Record*, Vol. 73 (42), p.321-326.

- WHO (2001), *Combating TB The DOTS strategy*, <u>http://w3.whosea.org/tb/dot.htm</u>, accessed 05/05/2005.
- WHO (2002), Scaling up Antiretroviral Theraphy in Resource-Limited Settings. Guidelines for a Public Health Approach. Executive Summary, WHO, HIV/AIDS Department, Family and Community Health Cluster, Geneva.
- WHO (2003), *Treating 3 million by 2005. Making it happen: the WHO strategy*, WHO, Geneva.
- WHO (2004a), 3 by 5 Progress Report. December 2003 through June 2004, http://www.who.int/3by5/en/, accessed 25/09/2004.
- WHO (2004b), AIDS and HIV Case Definitions. Overview of Internationally Used HIV/AIDS Case Definitions, <u>http://www.who.int/hiv/strategic/surveillance/definitions/en/</u>. accessed 10/09/2004.
- WHO (2004c), Coverage and need for antiretroviral treatment. Coverage of adults in developing countries on antiretroviral treatment, by WHO Region, situation as of June 2004, <u>http://www.who.int/3by5/coverage/en/</u>, accessed 25/09/2004.
- WHO (2007), Towards universal access: scaling up priority HIV/AIDS interentions in the health sector: progress report, April 2007, World Health Organization, UNAIDS, UNICEF, Geneva, <u>http://www.who.int/</u>.
- WHO and UNICEF (1978), Alma Ata 1978: Primary Health Care, WHO/UNICEF, Geneva.
- Wilkinson, D. (1994), High-compliance tuberculosis treatment programme in a rural community, *Lancet*, Vol. 343, p.647-648.
- Wilkinson, D. and Davies, G. R. (1997a), Coping with Africa's increasing tuberculosis burden: Are community supervisors an essential component of the DOT strategy?, *Tropical Medicine & International Health*, Vol. 2 (7), p.700-704.
- Wilkinson, D. and Davies, G. R. (1997b), The increasing burden of tuberculosis in rural South Africa impact of the HIV epidemic, *South African Medical Journal*, Vol. 87 (4), p.447-450.
- Wilkinson, D., Floyd, K. and Gilks, C. F. (1998), Antiretroviral drugs as a public health intervention for pregnant HIV-infected women in rural South Africa: an issue of cost-effectiveness and capacity, *AIDS*, Vol. 12 (13), p.1675-1682.
- Wilkinson, D., Floyd, K. and Gilks, C. F. (2000), National and provincial estimated costs and cost effectiveness of a programme to reduce mother-to-child HIV transmission in South Africa, *South African Medical Journal*, Vol. 90 (8), p.794-798.
- Williams, B. G., Gouws, E. and Karim, S. S. A. (2000a), Where are we now? Where are we going? The demographic impact of HIV/AIDS in South Africa, South African Journal of Science, Vol. 96 (6), p.297-300.

- Williams, B. G., MacPhail, C., Campbell, C., Taljaard, D., Gouws, E., Moema, S., Mzaidume, Z. and Rasego, B. (2000b), The Carletonville-Mothusimpilo Project: limiting transmission of HIV through community-based interventions. *South African Journal of Science*, Vol. 96 (6), p.351-359.
- Wilson, D., Wichai, C. and Chamcheun, A. (2004), HIV-1 prevention in the context of increasing access to treatment, *Lancet*, Vol. 364 (9439), p.1038.
- Wood, E., Braitstein, P., Montaner, J. S. G., Schechter, M. T., Tyndall, M. W., O'Shaughnessy, M. V. and Hogg, R. S. (2000), Extent to which low-level use of antiretroviral treatment could curb the AIDS epidemic in sub-Saharan Africa, *Lancet*, Vol. 355 (9221), p.2095-2100.
- Worger, W. H. (1996), A Country Study: South Africa Historical Setting, http://memory.loc.gov/frd/cs/zatoc.html, accessed 22.03.2006.