

New Technology in the Human Services

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Coding and Classification in the Human Services

This issue of the journal carries five papers on the same subject. Coding and classification has recently become an increasingly important issue in the information management of human services. Coding and classification has a long history in the human services, going back to the beginning of the century. Social policy developments have recently provided the main impetus for coding and classification systems as the increased awareness of the need for accountability, the split between service purchasers and service providers and notably, the quest for scientific, rational approaches in social services have increased. Information technology has, however, provided an additional drive for these developments. Although computers can handle non-structured data (e.g. word-processing), most information systems call for structured, coded data entry in order to make number crunching analysis possible.

There are a number of national initiatives in the development and implementation of coding and classification systems for the human services. This issue carries an overview and reports on four of them. Other national developments, about which we are aware, are those in Japan and Finland. Unfortunately, we see no sign of international co-ordination between these national systems; apart from one international expert meeting, in 1994. This identified the need for international co-ordination and called for action to be taken (see literature overview p 35). Only limited informal contacts between the different people involved in the national projects keep our hopes alive that some minimum level of international comparative social welfare statistics will be established.

In the area of education and health care, the Office of Economic Co-operation and Development (OECD) is taking a co-ordinating role in structuring the gathering of data, conducting the analysis and disseminating the results (see literature reviews). One can only hope that an international organisation takes on this role for the area of social services.

There are several professional initiatives to develop a coding and classification system. The most well-known are the Diagnostic and Statistical Manual (DSM) for mental health and International Classification of Diseases

(ICD) for health care. Both are well established and have a long tradition. A similar system has been developed for social work (PIE, see article in this issue) but still struggles to achieve wide implementation. The professional developments however make clear that we must bear in mind coding and classification systems always involve a multiplicity of stakeholders. Most systems are initiated and promoted by policy makers, often in coalition with researchers. Few take into account the information needs of the professional. It would be intriguing to think about the implications of giving preference to the service user as stakeholder in these activities.

A major issue is whether these policy oriented and professional coding and classification systems can and/or should be linked. Are the policy/managerial information needs similar enough to be compatible with a system bearing a professional focus? This is an old debate (see literature reviews) that will be continued but not resolved by the publication of this journal issue.

It is predicted that the current efforts on coding and classification will result in the establishment of social service data warehouses, a kind of National Statistical Office bounded by geographical region and sector. This in turn will facilitate the use of social indicators in professional, managerial and policy decision making (see Potting's article in the previous issue of the journal for an example).

Van Yperen opens this issue with a paper that provides a definition and some examples of coding and classification systems, subsequently outlining the main characteristics, the aims and benefits as well as the possible pitfalls.

A series of national perspectives follow with *van Hove and Suetens* writing about the development of a minimal welfare data set that will structure the information flows between service providers and government administration. Their approach illustrates that the uniformity of a classification system need not create a strait jacket for service providers with diverse requirements.

De Smet describes recent developments in the Netherlands, where government withdrawal from involvement in service provision calls for an increase in

data flows. He outlines the recent history of the development and implementation of national standards for information exchange among social services.

Spackman, Glastonbury and Gilbert give an overview of UK developments, where the National Health Service has made considerable investment in the development of coding and classification for health care and allied professions, known as the Read Codes. Lately, this project has received considerable national press coverage due to alleged conflict of personal and public interests. This has unfortunately flawed the already complex debate on the cost/benefit balance of this and similar projects.

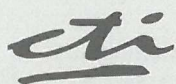
Finally, *Wandrei and Karls* outline the structure of PIE, an instrument they developed for the National Association of Social Workers in the USA. It differs from the previous reports in that it aims to build on the information needs of the professional service provider, rather than policy makers or managers.

As this issue of the journal is focused on a specific theme, it does not carry the usual sections; Controversial Issues

or Practice & Policy Reports. The editors wished to devote space to presenting a range of papers reflecting different opinions and cultural variety. We would be extremely interested in receiving responses in the form of letters, short reflections and arguments from our readers to be included in the next issue of the journal. The papers we present in this issue are written by those who are viewing coding and classification systems from the policy, development and implementation perspective. We would welcome contributions from those who have been involved in using such systems or those who wish to discuss the implications of coding and classification for consumers of the personal social services.

The usual collection of book and software reviews are also missing; instead annotated references to literature and software bearing relevance to the theme of coding and classification are provided.

Jan Steyaert and Ann Wilkinson



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Papers

On Coding and Classification in Social Welfare

Tom A. van Yperen, Netherlands Institute for Care and Welfare (NIZW)

Introduction

In recent years, systematic registration of client data has become routine practice in many social welfare organisations. Welfare has become a business in which information on the client's characteristics (like age, sex, social background, religion, ethnic origin, and type of problem) is considered a tool for operating the company. For the social worker standardised registration of client data is gaining importance, not only to serve the managers, policy makers and insurance companies, but also as an expression of social work as a professional activity.

Systems like the Diagnostic and Statistical Manual of mental disorders (DSM; American Psychiatric Association, 1994) and the International Classification of Diseases (ICD; World Health Organisation, 1992) are becoming the world's standard for the classification of the client's problems. Although these systems originate from the medical field, and are widely used in psychiatry, they have also been introduced in social work as tools for diagnosis and registration. There are many advantages in using systems that are accepted over the world. However, these advantages should be considered together with the hazards that are involved.

The purpose of this contribution is to elaborate on why coding and classification in mental health care and social work is currently gaining importance and on what criteria coding and classification schemes can be characterised and evaluated. First the core concepts involved will be described. The background and contents of the ICD and DSM are described briefly for illustrative purposes, then the reasons for the introduction of classification schemes, the general characteristics, the evaluative criteria, and the hazards of the schemes are discussed in more detail.

Terminology

The concepts of coding and classification refer to very common and basic activities (Jablensky, 1988; Sokal & Sneath, 1963). Classification refers to the ordering of entities (objects, concepts, persons) into groups or categories; for example, cars can be categorised according to the price (cheap, expensive), and mental problems in syndromes (major depression, psychosis, adjustment disorder). There are also classifications for diagnoses, treatment goals, types of interventions, etc.

A set of categories are called a classification *scheme* or *system* if the classification is guided by rules that state how the categories interrelate or differ,

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or what categories are to be used in which cases. These systems can be very simple, such as the scheme that states that a person is classed as a child if their age is under 12 years old, as an adolescent if their age is 12-18 years old, and as an adult if they are older than 18. Examples of very complex schemes are the classification systems for plants.

The categories of a classification scheme are often labelled with names. Therefore, a classification scheme is often called a nomenclature: an ordered set of names and labels that can be attached to classed entities. The categories are often labelled with codes for registration purposes (e.g. 1 = male; 2 = female), so that data can be easily communicated and put into statistics. Classification, therefore, often implies coding, that is, registering the code for the category that is applicable.

In psychiatry a classification is often called a diagnosis. This diagnosis stands for a brief statement on the type of the patient's mental disorder and the associated factors, as in 'depression associated with relational problems'. In the social sciences, however, the concept of diagnosis is often used to refer to the report (or theory) that the diagnostician offers, with a description of the client's problems and with the diagnostician's explanation of the possible causes and solutions. In psychiatry, this story is usually called the 'diagnostic formulation' (cf. Goodwin & Guze, 1989; Verhulst, 1992; Van Yperen & Hirs, 1995). The difference in this meaning of the concept of diagnosis is a potential source of confusion. We will return to this issue when describing the hazards of coding and classification.

Examples: The ICD and the DSM

ICD and DSM have become widely used systems for the classification of mental disorders and problems related to mental health. We will describe each system here briefly, and use them to illustrate the issues that will be discussed in this paper.

The ICD (International Classification of Diseases and Health Related Problems) is a classification scheme developed by the World Health Organisation (WHO). It originates from classification schemes that appeared at the turn of this century. After World War II, many countries agreed on using the ICD as the international standard for the communication of statistics on cause of death, diseases and problems related to health. Most countries now use the ninth revision of the ICD as the official standard (ICD-9; WHO, 1978). In the future, the ICD-9 will be replaced by the newest revision, the ICD-10. The ICD is designed for the use in the entire field of mental and physical health care. It offers a system of thousands of categories for the naming and coding of types of physical and mental diseases, hazardous social circumstances, accidents, etc. The codes and labels can be used to typify the problems of an individual patient. For example, the clinical picture of an 18 year old male was coded with the ICD-10 as follows:

| | |
|-------|---|
| F32.0 | Mild depressive episode |
| F81.0 | Specific reading disorder |
| J45 | Asthma |
| Z56 | Problems related to unemployment |
| Z59 | Problems related to housing and economic circumstances. |

This classification can be seen as a message put in international codes. It offers a very condensed and sketchy insight into the problems of this young man. The manual of the classification scheme offers an explanation of what each label means. By registering the classifications of many clients, statistics can be compiled on, for example, the number and type of problems that are treated in mental and physical health care, or the social and environmental factors that appear to be related to health. In the Netherlands such statistics are published annually by the Netherlands Centre for Mental Health Care (Nederlands centrum Geestelijke volksgezondheid / Nationaal Ziekenhuisinstituut, 1996). The scheme has become the genitor of specific adaptations that are used in more particular fields. For child and adolescent psychiatry the ICD has been rebuilt into a special format, accounting for the different developmental areas of children (see e.g. Remschmidt & Schmidt, 1994; World Health Organisation, 1991). These adaptations all have in common that the codes can be translated back to the ICD standard.

The Diagnostic and Statistical Manual of mental disorders is a scheme for use in psychiatry in the United States. Just after World War II, army psychiatrists were confronted with many syndromes that could not be classified appropriately in the schemes used at that time. Several attempts to construct a widely accepted and more fitting scheme failed. The result was a situation in which several systems were used, without any unitary standard (Van den Brink & Van Yperen, 1995). With the publication of DSM-I (1952), the American Psychiatric Association made a new attempt to unify the US psychiatric nomenclature (Grob, 1991). In the same period, however, the US government committed health care to the international ICD standard. This led to a process of mutual adaptation of ICD and DSM. Almost all of the categories of the most recent version of DSM (DSM-IV; American Psychiatric Association, 1994) can be translated into the ICD format. The DSM-IV categories are divided over five parts (called 'axes'):

- I Clinical disorders and other conditions that may be a focus of clinical attention
- II Personality disorders and mental retardation
- III General medical conditions
- IV Psychosocial and environmental problems
- V Global assessment of functioning.

The categories in the axes I, II and III are directly related to the ICD standard. Axes IV and V cannot be translated to ICD.

ICD and DSM are examples of widely used classification schemes. In the Netherlands they are implemented in more and more institutions in order to register the clients' problems. They are incorporated in comprehensive registration procedures, together with classification schemes for the registration of demographic data (like sex, occupation, marital status), and sometimes also with systems for the classification of treatment goals and types of intervention. Thus all the Dutch local institutes for outpatient mental health care (known as RIAGG's), with more than 200,000 admissions each year, started, in 1995, to use the DSM-IV in a routine registration of the client's problems, in addition to the longer existing registration of demographic characteristics. Why are these registrations and schemes like ICD and DSM so popular? A number of reasons are discussed in the following section.

Increased Interest in Coding and Classification

Reasons for the interest

There are several reasons for the increased interest in registration in general, and the use of schemes like DSM and ICD in particular (Steyaert, 1993; Van Yperen & Giel, 1995).

- Scarcity of financial resources raises the need for control over the costs and the quality of the services offered. A fair distribution of these resources requires a 'book keeping' method or system that shows the type of clients and problems to which the services of an institution are provided. Routine classification and coding contributes to this 'book keeping' system. Usually, data like age, sex, and occupation are registered. By incorporating classifications like ICD or DSM, data on the problems of the clients are added, offering more insight into the nature of the populations that are using the resources.
- Modern professional standards imply that the actions undertaken by the clinician or the social worker should be based on a clear diagnosis. The clinician or social worker may prefer to use a classification scheme in order to summarise his or her diagnosis in a few statements. The use of a widely accepted scheme avoids possible misunderstandings in the interpretation of these statements.
- Scientific researchers have come to see clinical practice as an important source of data. Reviews on treatment effects show that laboratory findings are not representative of the effects that are found in practice (Kazdin et al. 1990; Weisz et al. 1992; Weisz et al. 1995). This makes it important for researchers to gather their data 'in vivo' - in the real life of practice. Gathering registrations at the start and at the end of a treatment period offers the opportunity to build a data base that can be used for evaluative research.

- Current information technology makes it very easy to register and communicate clinical data. Coding and classification is becoming an important tool in making this communication as efficient as possible by compressing clinical information into categories with standard codes and labels. Without this technology, many coding and classification schemes might not have become as widely used as they are today.

Basic functions of coding and classification

There are three functions of coding and classification schemes that are essential for their use.

I. Ordering and labelling reality and thoughts

The first basic function of a classification scheme is to order and label reality and thoughts. Without classification the world is a chaos, comprised of unique entities, unrelated to each other. Classification schemes help us to order our world, because they enable us to think about the world in a more abstract way, and to assign objects to higher order groups. In this way, we are able to think about a person not only as an individual, but also to see him or her as a man or a woman, or to distinguish a policeman from a criminal, or to distinguish a person that needs help from one who does not. Furthermore, these schemes facilitate the learning from reality (Benbenishty & Oyserman, 1995), as they help us to collect information on particular subjects, make overviews, and find features that are related to different classes.

II. Making concepts explicit and suitable for communication

The classifications we use for ordering and labelling reality can be divided into private and public versions. Private classifications are unique to one person's mind or are used on a very small scale, whereas public classifications are shared by a large population (Rutter & Gould, 1985; see also the classic review by Stengel, 1959). The language we use is an example of a public classification scheme, because it offers concepts that enable us to order our private world in a way we share with many others.

A public classification enables us to communicate with others outside the private world. Systems like ICD and DSM provide standard nomenclatures for summarising diagnostic information just like a language. Using a public classification does not automatically mean that the information will be communicated. For example, many clinicians use the ICD or the DSM to order their diagnostic material, without intending to communicate the classification to others. It is only that, if the clinician is asked to report diagnostic information to others, communication is facilitated.

III. To provide researchers and administrators with information

Coding and classification schemes can be specially

designed for providing researchers and administrators with information. ICD (and to a certain degree also DSM) is designed to gather health statistics. The codes that are used (e.g. F32.0, F81.0, Z56) are not only meant for the interchange of information independent from the languages used, but also for convenience of processing data. By using these codes, clinicians can provide managers, administrators and researchers with standardised data for building their statistics.

Different users will emphasise different functions. It is to be expected that clinicians will use ICD or DSM mainly for function I and II (ordering and communication), whereas managers, administrators and researchers will often be interested in function II and III (gathering and communicating information).

Coding and classification schemes designed for one particular function often cannot be used for other functions as well, without special adaptations. For example, axis IV of the DSM-IV is used for the classification of psychosocial and environmental problems. These problems can be labelled with terms like: problems with primary support group, educational problems, occupational problems, housing problems, economic problems. There are no codes for these categories. Therefore, axis IV serves mainly as a public system for ordering information and verbal communication, and is less suitable for the standardised exchange of statistical data, unless the labels themselves are used as codes or a private system of codes is added. In contrast with DSM, the ICD offers a public system for the coding of psychosocial and environmental problems. For example, the international standard code for 'Problems related to unemployment' is Z56. The result is that the ICD-10 serves the three functions better than DSM.

General Characteristics of Coding and Classification Schemes

Characterising a coding and classification scheme as either a private or a public system is just one way of characterising its features. Other characteristics are described below (see also Achenbach, 1988; Sartorius, 1988; Skinner, 1981, 1986; Van den Brink, 1989).

The construction

Firstly, a system can be characterised by the way it was constructed: theoretically, empirically, or by consensus. In the first approach, a system is designed on the basis of a theory that describes the categories. The classic example of a classification scheme for mental disorders based on theory (in this case the psychodynamic theory) is the system proposed by the Group for the Advancement of Psychiatry (GAP, 1966). In empirical classifications, categories are formed by the ordering of empirical data on objects or client characteristics, usually by applying statistical techniques like factor analysis, cluster analysis

or latent class analysis. This approach was used successfully in designing classifications for personality disorders (Costa & McCrae, 1992) and child emotional and behavioural disorders (Achenbach, 1991; Verhulst et al., 1996). In classifications based on consensus, the categories are the result of a process of debate and negotiations between experts, researchers and other 'parties'. ICD and DSM are often presented as systems based on consensus. However, the most recent versions of these systems are clearly the result of an interaction between theoretical ideas, empirical studies, debate, and persuasion (e.g. American Psychiatric Association, 1994; Sartorius, 1988; Spitzer, 1991; Cantwell & Rutter, 1994).

The domain

The second aspect in characterising a system is the domain that is covered. There are systems for the classification of matters like occupation, religion, the type of traffic accidents, and mental disorders. Usually the coverage of a scheme is enhanced by incorporating a category called 'Other'. This category is used for all cases that do not fit the more specific categories of the scheme. However, this 'Other'-category does guarantee that the coverage is good. For example, one could design a system for the classification of religion with only four categories: (1) Protestant; (2) Jewish; (3) Islam; (4) Other religions. The coverage should always be developed in terms of the context for which the system has been designed and the distribution of the classifications over meaningful, informative categories. Suppose, for example, that our scheme for the classification of religion is implemented in the field of social work in Italy. This may lead to the classification of almost all cases in the 'Other' category, since many Italians are Catholic. Therefore, the system is actually not suitable for that field. Although it covers all the religions, most subjects are classed in only one vague category.

Systems like ICD and DSM stem from the medical field. ICD, for example, contains more than twenty sections each with a large number of categories for physical disorders, and one section for mental disorders. Categories for social problems comprise only a part of one section. The coverage of this scheme for the field of social work may therefore be limited, although (to my knowledge) this has never been investigated properly.

Differences in structural characteristics

The third aspect to consider in describing classification and coding schemes are the structural characteristics. The structure of a classification is determined by a number of choices.

Hierarchical or non-hierarchical schemes

The first choice is whether to use hierarchies or not. In a hierarchical scheme, there are broadly defined main categories that contain subcategories. For example, in ICD

there is a category for problems related to the social environment (code F34), that includes several subcategories, like 'Atypical parenting situation' (Z60.1), 'Acculturation difficulty' (Z60.3), 'Social exclusion and rejection' (Z60.4). In non-hierarchical schemes, there are no higher-order categories that include subcategories.

In psychiatry, hierarchies often not only apply to a distinction in main categories and subcategories, but also in diagnostic priority. These schemes place organic disorders in a higher position than functional disorders, functional psychoses prevail above neuroses, and reactive disorders and other symptoms are placed on the bottom of the hierarchy (e.g. Foulds, 1976; Morey, 1987). This means that, for example, if a reactive disorder is present, but this reaction can be considered as a part of a psychosis, only the psychosis is classed, not also the reactive disorder. Such hierarchies can make a scheme very complex. It requires a very skilled user or a complex set of explicit rules, in order to have the right category selected for the right case.

Categorical or dimensional

Another choice is related to defining the boundaries of the categories. In a classic categorical system, there are mutually exclusive categories that are to be used in an 'all-or-none' style. According to this style, one is allowed to code for either the presence or the absence of a characteristic; there is no code for 'a little bit present'. Axes I, II and III of DSM contain many categories that are formulated in this 'all-or-none' style.

In a dimensional scheme, categories are points on a continuum. For example, for the global assessment of functioning in DSM-IV (axis V) a scale is used ranging from 1 (low functioning) to 100 (excellent functioning). This scale allows coding for a mild dysfunction as well.

To ease communication, a dimensional scale is often broken down into categories that label ranges (e.g. no dysfunctioning, mild, severe or extreme dysfunctioning). Sometimes, categories in classic categorical systems also represent ranges on a dimension. In ICD and DSM, for example, separate categories are available for the mild and the severe depression. This shows that the distinction between categorical and dimensional approach in classification is not an either-one-or-the-other issue. Compromises are possible.

Mutually exclusive or overlapping categories

In the classic categorical model, categories must be mutually exclusive, with the defining features being unique for the category. This often results in problems with classification. For example, in mental disorders, a symptom can often belong to different types of disorders. It is more a particular combination of a number of symptoms that define a disorder. The model of prototypes has been introduced as an alternative, in order to deal with this problem (Horowitz, Wright, Lowenstein & Parad,

1981; Frances et al., 1991). In this model a category is defined by a list of symptoms, of which only a limited number have to be present for a disorder to be classed. The list of symptoms includes features that can be found in other disorders as well. It is the number and the combination of the features that is unique for a disorder. Modern classifications, as DSM-IV and ICD-10, often apply the prototypical model. For example, in DSM the first criterion for the major depressive disorder states that "Five (or more) of the following symptoms have been present during the same 2-week period ...": 1. depressed mood; 2. diminished interest or pleasure in activities; 3. significant weight loss; 4. insomnia or hypersomnia; 5. psychomotor agitation; 6. fatigue; 7. feeling of worthlessness; 8. diminished ability to concentrate; 9. recurrent thoughts of death (American Psychiatric Association, 1994; the symptoms described here partly). The advantage of such a prototypical model is that it accounts for the fact that reality often cannot be classed into categories with unique features. The model allows categories to overlap to a certain extent in that they share certain features.

Single or multiple coding

A final characteristic of classification schemes described here, concerns the number of categories that are allowed to be used in a case. In the classic model, only one category can be used. In modern schemes, multiple coding systems allow as many categories to be selected as necessary for accurately depicting a case. In DSM-IV, for example, a clinical disorder (axis I) can be classed with more than one code (e.g. F90.0 Attention-Deficit/Hyperactivity Disorder and F91.9 Disruptive Behaviour Disorder). It will be clear that this leads to complex data bases, not only containing codes referring to classifications on different axes, but also with multiple codes within an axis. In order to keep things simple, DSM follows the rule that the first code on axis I should reflect the main diagnosis. In accord with this rule, DSM statistics are often presented with regard to this main diagnosis only.

Evaluative Criteria

There is a broad consensus on what the evaluative criteria are in describing the quality of a classification scheme (see e.g. Blashfield & Draguns, 1976; Jablensky, 1988; Rutter & Gould, 1985; Skinner, 1986; Cantwell & Rutter, 1994). In brief, the following criteria are important.

- The structure and the contents of the scheme should have logical consistency. The choices made in the structural characteristics of the scheme should be clear. The contents should be meaningfully related to the purpose for which the system is built.
- Classification data should be reliable. Reliability concerns the degree to which the coded information is stable, replicable and error free (Auslander & Cohen,

1995). Rules and classification criteria should guide users to such an extent that different users come to the same classifications in the same cases (interrater reliability). Furthermore, the rules and criteria should prevent a user making different classifications in cases that have not changed over time (stability).

- The classifications should be valid. The rules and criteria of the system should not only lead to reliable, but also to accurate classifications. For example, the DSM or ICD scheme should not lead to an over or an underclassification of problems. The system should have sufficient specificity: it should not include situations such as a disorder that is not a disorder in reality. It should also have sufficient sensitivity: persons who have a serious disorder should not be excluded. Ideally, the classification should also be meaningful in a broader sense. Systems that lead to statistics that not only show the prevalence of different types of disorders, but also allow inferences on the resources needed, are considered as highly valid.
- The scheme should adequately cover the field for which it has been designed. The coverage of the scheme is actually an aspect of the validity. It is, however, often mentioned separately, probably to stress its importance.
- A system should be feasible and practicable. Classification schemes that are very cumbersome, difficult to learn, or hard to understand, are of inferior quality, even if the logical consistency, reliability and validity are good.

It is difficult to meet all the criteria fully. For example, in order to enhance the reliability, a complex of rules and classification criteria are often needed. This reduces the practicability of the scheme. Therefore, the quality of a scheme exists mostly in the optimal balance found in meeting the evaluative criteria.

The Pitfalls

Classification systems have no intrinsic value. Only if applied for personal, clinical, administrative or research purposes do the schemes become useful. At the same time, however, classification data can only be used in a responsible way if the quality of the scheme is taken fully into account. The years have shown that, in this respect, there are many pitfalls.

A first pitfall is that classification systems may be attributed more status than justified. The fact that schemes like ICD and DSM are internationally accepted adds to the value, but does not guarantee good quality.

Another important pitfall is that classification data can be used without considering the reliability. Insufficient reliability may damage the usefulness of a system

considerably (cf. Auslander & Cohen, 1995). Recent reviews by Brook & Giel (1995) and Van Yperen, Verheggen & Roza (1995) show that the interrater reliability of ICD and DSM is not sufficiently high to use the data with confidence. Only with well trained interviewers and with the use of structured clinical interviews does the reliability of classification become satisfactory (e.g. Lavigne et al., 1994; Rey, Plapp & Stewart, 1989; Werry, Methven, Fitzpatrick & Dixon, 1983). In practice, where clinicians often have not been trained extensively and structured interviews are not used consistently, ICD and DSM classifications depend too much on the subjective influences of the rater. Statistics derived from ICD and DSM databases can therefore only be used with large error bands. If these bands are ignored, the statistics may be very deceiving.

The validity is even more important to consider in using and interpreting classification data. For example, it is essential to realise that a classification is always a reduction of reality. An ICD or a DSM classification is a summarised and coded description of the problems of the client, not a comprehensive report on the clinician's understanding of these problems. These two (the coded description and the comprehensive diagnostic formulation) should not be confused. The classification of a problem does not mean understanding the problem. Earlier, we mentioned that in psychiatry a classification is also called a diagnosis, whereas in the social sciences, a diagnosis stands for the description of the client's problems and the possible causes. There is a risk that this difference in terminology raises misunderstandings, and the term diagnosis used by the psychiatrist is used invalidly to refer to the understanding of the clinical picture.

A special issue concerning validity is that classifications do not allow inferences, unless these are supported by experience or research. A typical example is that, up to date, the relation between ICD and DSM classifications and treatment categories is not clear (Brook & Giel, 1995). This means that, in addition to the reliability problem, ICD and DSM classifications cannot be used adequately by insurance companies to allocate resources to clients, nor can administrators use ICD and DSM statistics to infer in the planning of treatment facilities. Kutchins and Kirk (1988), in a survey including 362 social workers, found that that DSM classifications were used mostly for insurance purposes. This is a striking fact, since it shows that the classification scheme is used for a purpose that is not justified by the state of the art concerning the validity of the system.

Another pitfall is that classifications may have adverse effects on persons. Therefore, effects of classifications should be considered carefully in relation to individual clients. It may have a stronger impact on the interaction between people and the perception of client's behaviours than can be justified. For example, the classification of a person as a psychiatric patient may lead to the attribution

of a person's characteristics and behaviours to the mental disorder, whereas these may have nothing to do with the disorder. A well known illustration of this is offered by the study of Rosenhan (1973). In this study, volunteers simulated that they heard voices. These 'pseudopatients' were admitted to a psychiatric ward, where they stayed for a period, studying the way they were treated. Rosenhan reported:

"One tacit characteristic of psychiatric diagnosis is that it locates the sources of aberration within the individual and only rarely within the complex of stimuli that surrounds him. Consequently, behaviours that are stimulated by the environment are commonly misattributed to the patient's disorder. For example, one kindly nurse found a pseudopatient pacing the long hospital corridors. "Nervous, Mr. X?" she asked. "No, bored," he said. " (Rosenhan, 1973, p. 253).

This adverse effect is also observed outside psychiatric sites. For example, in news bulletins we often hear that a perpetrator is an (ex) psychiatric patient (as in: "The president was attacked today by a man, an ex-psychiatric patient, but fortunately the president was not hurt.") The classification of being a psychiatric patient is over interpreted here. Having visited a psychiatrist does not automatically mean that one is mad or violent. Seeing a psychiatrist is something that many sensible people do. Suppose a news reporter would say: "The president was attacked today by a man who has never seen a psychiatrist." Would we consider this a logical statement?

Classification and Coding Schemes: A Solution or a New Problem?

The purpose of this contribution was to discuss why coding and classification in mental health care and social work is gaining importance and what aspects are relevant to consider in characterising and evaluating the systems. It was argued that there are a number of reasons for the popularity of classification schemes. Classifications help ordering and labelling reality and thoughts, they make concepts explicit and suitable for communication, and they help to provide others with information. Classification schemes can be built in different ways. This makes it possible to choose a type of system that suits the subject or the situation best. What makes a classification or coding scheme useful cannot be answered in simple terms. Often, it depends on the balance found in the different criteria that have to be met.

Classification and coding schemes can be powerful tools in order to get a grip on the complex reality and to communicate the findings. One main pitfall, however, is that classed or coded information is attributed more value than is justified. A person's problem classed as 'depression' does not explain anything, nor does it say what should be done about that problem. Moreover, although it tells something about the person's problems,

that is not the whole story about this person. He or she is more than just this classed item, and cannot be understood from just the codes and the labels used for classification. Also when the information on a group of clients is presented in statistics, the figures and bar charts seldom speak for themselves. Often, they need a careful interpretation, taking the nature and quality of the coding scheme into account. If this is not done, the widespread use of classed data may set out a new problem. It may result in a virtual reality that is created in computer networks, and presented in codes and statistics. Classification schemes are very useful, but only if they are used in a sensible way.

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Towards an integrated system of minimal welfare data collection

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Introduction: the need for minimal welfare data

Over the years and as needs became apparent and recognised by the Flemish Government, a variety of client oriented social services developed. Generally they started out as private initiatives which after a while received occasional subsidies. Still later, they were recognised and funded on a more permanent basis through several governmental decrees. Recently, the Government has been making an effort to streamline and integrate the multitude of small scale services which resulted from this process. This is no easy matter: these services are keen on their independence, their ideological origins and idiosyncratic approach. They are weary of outside evaluation and accountability. The project to set up a single, integrated collection of minimal welfare data, applicable to all general client oriented social services, is part of this Government's effort to achieve greater transparency in the sector. To better understand the background of this initiative, we refer to some recent developments.

Origins of the MWD-project

Three elements appear to make up the main driving forces leading to the MWD-project. First of all, the project meets the recommendations of the Flemish Welfare Congress. Second, it is the continuation of a scientific study from 1993-1994 and third, it is situated in a number of developments within the Flemish administration.

The First Flemish Welfare Congress

"Where are we and where do we want to go with social work in Flanders?". That was the key question of the first Flemish Welfare Congress in November 1990 (Baert, Vael, 1991). For all those involved in the domain, this conference offered a discussion forum to reflect in depth on the major goals of welfare policy for the coming years. Repeatedly attention was drawn to the need for a better transfer of information *about* and *for* social work. Three recommendations in the final report deserve our special attention.

Recommendation 112 states that Flemish social care practice and policy are still too little based on hard figures. Therefore the Flemish Government is asked to urgently put some work into a permanent and co-ordinated policy with regard to quantitative and qualitative data collection. The resulting data on developments in social care should be easily accessible to all interested parties.

Recommendation 123 advocates a central data bank in order to guarantee a wide range and comprehensiveness of the information gathered. Also, this should provide for continued collection and processing and broad accessibility of the available data.

Finally, recommendation 128 deals with compulsory registration. It invites the government to impose a uniform registration system on all sectors of social care and to provide the means for the necessary automation.

The study on 'Obligatory Client Registration'

A second important impetus to the Minimal Welfare Data project, is a study on obligatory client registration in general social work, carried out by the Department of Political and Social Sciences of the University of Antwerp.

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The final report (Steyaert et al., 1994) primarily makes an inventory of current registration practices in different sectors of social work in Flanders. Attention is mainly given to set-up, procedure, forms, processing and use of registration. Subsequently, on the basis of this inventory and relevant literature, the main bottlenecks and problems of current registration practice are highlighted. After a closer look at alternative registration systems at home and abroad, all these findings culminate in a series of policy proposals with respect to Flemish social work. The authors list a number of necessary conditions in order to obtain a meaningful registration system in Flemish social work. The findings of this report will be brought up where relevant.

The Flemish administration

Thirdly, the MWD project fits in with a number of processes within the Flemish administration. For instance, there is the work of the Team for Welfare Planning and Monitoring, which is responsible for the collection, the accessibility and the processing of quantitative data on Flemish social care. This team took the initiative to start up the MWD project. Currently in the broader context of the Ministry of Welfare, Public Health and Culture a lot of attention is given to data collection. Within the framework of the so-called 'Information Steering Plan', data is gathered on services that not only come under welfare, but also under culture and public health.

The 'Strategic Plan Flanders' is being developed within the whole Flemish administration. This will be an all-embracing plan to standardise and integrate working-methods in all domains of policy preparation work. Among other things, important efforts are being made to develop minimal datasets to monitor and evaluate crucial processes in all policy sectors.

Bottlenecks in current registration practice

In the current registration practice in Flemish social work there are a number of shortcomings. In the study by Steyaert et al. (1994), the most important bottlenecks listed that needed improvement are methodological flaws, deliberate errors and difficulties of interpretation.

The assumption that the data used is a perfect reflection of the object studied is easily made. Whereas in social work very often the validity and reliability of the registered data turn out to be problematic. This is due to several factors. Often forms and manuals leave much to be desired. The data is not clearly defined, the categories are not elaborated and most of the time not accompanied by operational guidelines. Another source of inaccuracy is the cumbersome collection process of registration data, subject to all kinds of indefinable influences. There is a long distance between the actual event and the registered event. First of all an event has to be perceived. Second it has to be understood. And even then it still has to be reported. So one can predict that often differences remain between what has really happened and what has been reported (Steyaert et al., 1994).

Besides methodological faults, which are the consequence of indistinct categories, vague registration procedures etc., people knowingly distort registration data to misrepresent reality. For example, if subsidies are directly attached to registration results, falsifications will invariably crop up. Social work services then benefit from putting themselves in a favourable light. Anticipating this tendency, nearly all elements in registration that could be seen as performance-measures have been removed from the proposed models. But from talks with the parties involved it appears that they still perceive the administrative obligation to register as an instrument of control. If social workers are convinced that the authorities use registration as a means of control, this will have its influence on their motivation and registration practice. Most social workers insist on their professional autonomy and do not tolerate any interference in the actual process of care provision.

Another important source of error arises in the interpretation of the registration data by social workers and organisation managers. To begin with, the essential knowledge of practical statistics is absent. In the curriculum of social work studies statistics courses are elementary and theoretical, rarely aimed at later practice. Second, interpretation opportunities are poor through lack of comparative material. The figures of one service cannot be compared to the figures and profiles of other centres as there is no uniform material available. Finally, those who have to interpret the data are those who have to register, render assistance, etc. Since most services are rather small, social workers have little time for statistics and no opportunity to develop expertise in this domain.

All these observations contributed to the awareness that a uniform classification and registration system was becoming indispensable for social care in Flanders. Therefore, the Flemish administration took the initiative to set up a project at the University of Antwerp to develop the necessary registration instrument.

Lessons from earlier registration and classification efforts in Belgium

When it comes to registration, attitudes in social work appear to be similar to those in health care. Steyaert et al. (1994) point out that the reason for this is to be found in their similar approach to care. Both are strongly oriented towards curative care in favour of the individual client; whereas registration supposes an approach focusing on the interests of the whole population and assembles data in favour of preventive care. Consequently, registration problems which have arisen in the medical field can offer useful information to a similar initiative in social care. In the next paragraphs, we will take a closer look at the 'Minimal Clinical Data', the 'Minimal Nursing Data', and the 'Minimal Psychiatric Data'. These are all registration initiatives in the health care domain.

Minimal Clinical Data (MCD)

Since the beginning of the eighties, hospital care in nearly all western countries has experienced a painful change from a period of great expansion to a period of sharp rationalisation. Mainly from the perspective of cost management and because of the need for health information at policy level, the Belgian government became convinced of the necessity to introduce certain information systems (Steyaert et al., 1994). Starting from January 1st 1985, the 'Minimal Clinical Data' system became obligatory in all Belgian University Hospitals. Eventually, MCD was introduced in all Belgian General Hospitals in 1990.

Inspired by the American UHDDS (Uniform Hospital Discharge Data Set), the MCD system gathers information about the patient (year of birth, sex, community), their stay (dates of admission and discharge, length of stay, destination after discharge), the diagnoses, the interventions and the administered care.

The data is registered continuously - in other words for all admitted patients all year round - at the moment of discharge of every patient. Every six months the registered data is transmitted to the Ministry of Public Health. For this registration (as well as for the MND registration) the hospitals receive a compensation per treatment day, which they can use at own discretion (personnel, infrastructure).

Minimal Nursing Data (MND)

Almost simultaneously with the MCD registration, a system to collect 'Minimal Nursing Data' was developed. In the early eighties, the idea that information about nursing care should play a role in hospital management as well as patient information. As a result of a pilot study carried out by the Universities of Leuven and Namur in 1985 and 1986, a minimal data set was defined. From January 1988 on, MND was adopted in all Belgian General Hospitals. Contrary to the MCD, not a patient's stay but the nursing unit constitutes the unit of registration. The MND is not meant to provide a full insight into the course of the nursing process of every individual patient but to furnish a general view of the nursing activities of the nursing unit as a whole. The MND are registered by means of sample surveys. Four times a year, the MND keep track of the administering of 23 sorts of nursing care over 15 days.

The fact that the registration takes place through a sample survey, enhances the MND's policy character. Sample data answer sufficiently the needs of a policy instrument that was primarily intended to conquer a seat at the future health policy negotiation table (Delesie, 1991).

Minimal Psychiatric Data

Given the specificity of psychiatry, the decision was made not to implement the existing registration systems of the general hospitals into the psychiatric sector. Residential psychiatry got its own registration instrument: the 'Minimal Psychiatric Data'. The MPD registration bears some resemblance but at the same time differs substantially from the Minimal Clinical Data and the Minimal Nursing Data. An attempt was made to retain the strong points of both systems and to improve their weaker sides.

The MCD system registers mainly data on the patients and their stay. The MND system registers nursing activities in the nursing unit. In the Minimal Psychiatric Data, these two aspects - information on patients on the one hand and on professional activities of the multidisciplinary team on the other hand - are combined.

On the one hand, the MPD system registers - like the MCD - continuous data about the admission of the patients, their socio-demographic background, their diagnoses and problems, the administered care, treatments and supervision, and their discharge. In contrast with the MCD, however, the procedures of registration differ. The MPD system aims to follow closely the transition and the treatment through different wards of the hospital, to gain a clear insight into the history of the patient during his stay in the institution. This point of difference also involves a specific way of data input. Unlike the MCD, one cannot wait to fill out the MPD until the patient is discharged. The MPD have to be gathered 'in real time', in other words the patient will have to be treated and registered at the same time.

In addition, a part of the MPD is registered by way of a sample survey. This section involves information on the patient's functioning and administered care on the one hand, and on the other hand information on the personnel put into service in the ward during the survey weeks.

Relevance of MCD, MND and MPD to Flemish social work

In their report on compulsory client registration in Flemish social work, Steyaert et al. (1994) explored the lessons taught by MCD, MND and MPD for registration in social care.

Although in some cases it is a matter of a combination, all these new information systems are oriented towards policy making rather than at further professionalisation of clinical care. In this context the distinction between clinical care and policy is crucial. In clinical care the care provider wants to know in detail all aspects of that one patient to secure an optimal diagnosis and treatment. The policy maker on the contrary, wants for their unit, hospital or area only that kind of information which is necessary to determine their policy. That's why the term 'minimal' was

chosen for MCD, MND as well as MPD (Steyaert et al., 1994).

In the three aforementioned registration systems, a uniform and international classification of diseases is involved. This concerns mainly ICD-9-CM, DRG and DSM-IV. Thanks to these classifications, local as well as international comparison of the results becomes possible. Social care too, has a need for such a classification. But to devise a like classification for social work will not be an easy task, if only for the very broad array of problems that are treated in this sector.

Furthermore, the balance between costs and benefits of a uniform registration system calls for a *minimal* dataset. The benefits of this undertaking mainly play at the level of policy making, while the registration of the data is chiefly executed at the care provider level. Consequently, if one is to secure the reliability of the delivered information, the amount of data to be registered should be restricted to a minimum. On the other hand one can attempt to heighten the benefits for the social worker. The more direct use a social worker finds in the registration, the more effort they will be willing to make. For instance, feedback, in the first place by distributing the results of the registration to those who register, is a *conditio sine qua non* to keep everybody motivated and to maintain the system (Steyaert et al., 1994).

Another incentive would be the inclusion of variables that are of direct use to the work of social workers, and not only to policy making. MCD, MND and MPD, too, encompass clinical data next to policy data. So for example, data that allow for an evaluation of the care process will not only provide policy makers with information on personal social services in Flanders, but will also help social workers to watch over the quality of their work.

In the context of MPD registration flexible frequency was mentioned. This kind of registration implies different registration frequencies for different items. According to Steyaert et al. (1994) a combination of continuous and discontinuous registration could be considered for social work too.

The MWD-project

As mentioned above, the Team Welfare Planning and Monitoring of the Flemish administration has eventually taken the step to commission the development of a Minimal Welfare Data registration system. In the following sections the goals, the set-up and the main features of that system as developed until now will be reviewed.

Goals

The main aim of the Minimal Welfare Data project is developing a registration system and a central data bank for the Flemish welfare sector to support social policy. Again, the term 'minimal' bespeaks the policy oriented character of the instrument. Nonetheless, in the longer term, it should also allow for better case management and self-evaluation of social work. In view of the realisation of these goals, the MWD project set out to realise the following objectives and principles:

- Policy makers and policy actors are in need of reliable quantitative information, which is not available at present.
- The selection and classification of the data should not be based on opportunistic grounds (which data are available and easy to obtain), but should be inspired by the functional use of the data.
- The work-load of the collection of these data should be minimal for the parties involved.
- It is the intention of both the MWD project and the Team Welfare Planning and Monitoring to design a reliable *policy* instrument, and not an instrument of control of the care providers.
- Information policy should not be reduced to a one-way traffic of information from services to authorities. The utility and the reliability of this information can be optimised by making it available to all policy-actors and by putting it to use in policy preparations and decisions. Therefore the Minimal Welfare Data should be made available in an accessible form to all interested parties.

Set-up

We started out from a confrontation between the actual supply and demand of information. To establish the variables to be collected, firstly, the information needs (the demand) of government as well as social work services have been gathered by interviews and policy documents. This way, the utility of the collected data will be guaranteed later on. By starting out from a number of desired 'end products', we will avoid data being demanded for which the policy relevance is not established in advance. Beside the demand, the variables as well as the code schemes currently applied in social work (the supply) were taken into account. The next step was to select, classify and describe the data to be included in the Minimal Welfare Data-set.

This is as far as the project has come to date. The result is a blueprint of a Minimal Welfare Data-registration through both the administration of the Flemish Community and the Flemish social work services. In the next year this

blueprint is to be implemented. This way the first concrete results will be available in the year that follows. However, a thorough implementation strategy and support are necessary to realise the MWD-plans. Therefore, CAUSA and the University of Antwerp proposed the following intermediary actions to be taken:

- To create an organisational support. Public authorities can enforce participation in this registration, but if not based on an organisational support, this will have destructive consequences on the reliability of the data provided. The MWD registration must be upheld by all organisations that are related to Flemish social care, on the government's side as well as in the field. To bring about a positive synergy between these organisations, it is necessary to give them sufficient information on the goals and the proceedings of the project and to involve them in the deliberations on the MWD registration. This involvement can be realised at best through the establishment of a joint committee.
- To create a support system to follow up content. Since undoubtedly the contents of the MWD registration will raise a whole series of questions and comments, a working group will be set up in which professional experts can evaluate and if necessary adapt the system. This working group will be concerned with the evaluation of the selection, definition and codification of the variables.
- To create technical support. The success of the MWD registration will not be entirely dependent on the availability of a proper software-instrument, but such technical support does mean an extra stimulus. So software should be developed for the registration of the MWD.
- To create a methodological support. Essential for the success of every client registration is the guarantee of reliability and validity. Therefore reliability and validity tests have to be carried out per variable and per codification and definition of the MWD system.
- To create a registrants support. Not only the many organisations of Flemish social care, but also all social workers who work in these organisations, will have to input sufficient information on the MWD registration. The field workers are those who will answer for the collection of the data when the project is put into practice. So that they can fully take on this function, introductory texts on the concept and set-up of the MWD project (in the professional press, circular letters, WWW), a detailed manual, training courses, and so on, will have to be offered.

All these steps have to be carried out in the near future. Meanwhile, a draft version of the registration has been published and we will now discuss the main features.

Main features of the system as developed until now

As was said before, the authorities will focus on five domains of data:

- Institutions: this concerns information on social work organisations. It should offer answers to questions like 'how many welfare organisations work in this sector?', 'what is their capacity?'
- Finances: this concerns information on the finances of Flemish social care. It should offer answers to questions like 'what is the part of sector Y in total welfare expenditures?', 'what is the partition between the regions?'
- Personnel: this concerns information on the personnel employed in Flemish social care. It should offer answers to questions like 'how many care providers work in sector x?', 'which training/qualifications do they have?'
- Clients: this concerns information on the clients of social work services. It should offer answers to a whole range of questions about their needs and socio-demographic characteristics.
- Care provision: this concerns information on the care delivered. It should offer answers to questions like 'how long do people have to wait before receiving help in sector x, as compared to sector y?', 'which forms of care prevail in different sectors?'

Only the last two domains - clients and care provision - will be organised through client registration in social work services. The first three will be assembled by the Team Welfare Planning and Monitoring through the subsidy files kept by the Flemish administration.

Although the way in which the data will be transferred from services to government is not yet fixed, the report for the time being adopts the position that services will transmit annually a number of tables. This will ensure the complete anonymity of the data. Even if this idea is left, the counting units, the variables, their definitions and the codification will still apply, so the loss of relevancy will be marginal.

Five counting units are to be distinguished: notifications, clients, client systems, projects and problems.

The variables that are gathered for the counting unit 'notification' are *consequence of the notification*, *notified problem*, *motive for eventual non-intake*, and *possible intermediary*.

Most variables that are asked are characteristics of 'clients': *age, sex, nationality, level of schooling, duration of assistance, living situation, socio-economic situation, sphere of problem, flow, and wait*.

| VARIABLE = AGE version CMW | | | | VARIABLE = AGE version BJZ | | | |
|-----------------------------|--|---|--------------------------|-----------------------------|--|--|--------------------------|
| /0<18y. | /0<15y. | /0<3y.j | /0y. /0<1y. /1<3y | /0<18y. | /0<15y. | /0<3y.j /3<6y. /6<12y. /12<15y. | /0y. /0<1y. /1<3y. |
| | /15<18y. | | | | /15<18y. | | |
| /18<60 | /18<22y. /22<25y. /25<30y. /30<40y. /40<50y. /50<60y. | | | /18<60 | /18<22y. /22<25y. /25<30y. /30<40y. /40<50y. /50<60y. | | |
| /60+ | /60<70y. /70<80y. /80+y. | /60<65y. /65<70y /70<75y. /75<80y. /80<85y. /85+y. | | /60+ | /60<70y. /70<80y. /80+y. | /60<65y. /65<70y. /70<75y. /75<80y. /80<85y. /85+y. | |
| /unknown /not applicable | | | | unknown /not applicable | | | |
| VARIABLE = AGE version CHS | | | | VARIABLE = AGE version CBZ | | | |
| /0<18y. | /0<15y. | /0<3y.j | /0y. /0<1y. /1<3y. | /0<18y. | /0<15y. | /0<3y.j /3<6y. /6<12y. /12<15y. | /0y. /0<1y. /1<3y. |
| | /15<18y. | | | | /15<18y. | | |
| /18<60 | /18<22y. /22<25y. /25<30y. /30<40y. /40<50y. /50<60y | | | /18<60 | /18<22y. /22<25y. /25<30y. /30<40y. /40<50y. /50<60y | | |
| /60+ | /60<70y. /70<80y. /80+y. | /60<65y. /65<70y. /70<75y. /75<80y. /80<85y. /85+y | | /60+ | /60<70y. /70<80y. /80+y. | /60<65y. /65<70y. /70<75y. /75<80y. /80<85y. /85+y. | |
| /unknown /not applicable | | | | /unknown /not applicable | | | |

Figure 1 Hierarchical coding scheme AGE as used by 4 agencies

For the description of 'client systems' the characteristics of 'clients' are used. For most of these variables are applicable to entire client systems as well. Only the variables *age*, *nationality*, *level of schooling* and *socio-economic situation* have to be separately assigned to each member of the client system.

Since 'projects' could be considered as aimed at a collection of clients, here also client characteristics are relevant. They are used then to describe the features of the project's target group. Nonetheless certain variables apply exclusively to projects: *residence status* and *state of housing* of the target group, and *territorial range* of the project.

At the level of 'problems' data are gathered on *treated problems* and *form of care given*.

In the first instance, the codification of the variables is based on code-schemes that are generally in use in current registrations in Flemish social work. This is in order to link the MWD and practice to a maximum. After all, current registration practices in social work have grown out of valuable experience (even if one has to admit that some of those systems are somewhat amateurishly conceived).

However, social care is a term which covers a whole range of divergent sectors. It would be a hopeless task to figure out for every variable the highest common factor of all these diverse sensitivities and interests. For instance, a retirement home will want to graduate the variable 'age' in detail above the age of sixty. While a youth service is not in the least interested in these categories. It will prefer small categories under twenty-five, and divide the other categories rather roughly. To reconcile these contrasting demands, a compromise has been worked out: hierarchical codes.

This means that for every variable we start out from a number of broad categories. Subsequently, each of these categories are split up into more detailed categories. Such a division can be repeated over and over again, and at each step the information becomes more specific in the underlying categories. The advantage of this coding system is that services can continue registering at the level of detail they were used to and that made sense to them. For every variable they'll be able to connect to the level of detail that is relevant to their sector. On the other hand, the authorities will nonetheless impose a minimum of

specificity and uniformity per sector, so that data are comparable at the particular level of a sector and not only at the level of the highest common factor of all sectors. This way services too obtain more relevant information.

Figure 1 gives an example of such a hierarchical coding scheme and how it works. Four different services, concerned with young people, the adult population and the elderly, can choose a subset of categories suited to their needs, while at the same time the overall consistency of the coding scheme is maintained. For each of the variables involved such a hierarchical coding scheme was developed, in some cases extending over several pages, but allowing each agency to reduce it to a manageable subset for its own use.

Conclusions

The challenge this registration model tries to meet is to obtain comparable data from a diversity of social services without losing out on the meaningfulness of the data to which a 'common denominator' approach would lead. This we try to achieve by the following design aspects:

- Allow for a diversity of units of registration (clients, client systems, problem cases, projects) but collect as much as possible comparable variables;
- Allow for flexibility in the coding schemes of the variables but maintain consistency by using hierarchical codes which services can tailor to their needs;
- Limit the data collection to those items which have proven merit for policy making and promote the in house use of the data through timely feedback.

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Data dictionaries in the Netherlands

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Introduction

As in other countries information is essential for policy development in the Netherlands' welfare sector: data on the amount of money circulating in the sector, how many people are employed and what their jobs are, on the sector's capacity and its use. There is also a need for information on the social problems the sector is focusing on and about the effects of the work. All this information is relevant to both the operational management of the institutions and to the policy decisions of the government that subsidises the majority of the work. It is complicated by the fact that welfare policy is determined by local authorities and carried out by local institutions but information provision has to be created on a national level, this was settled in the Welfare Act.

There are many reasons for information at a national level. All agents need information to carry out their policies and the three levels of government need information in order to grant subsidies to private institutions for welfare work. Furthermore, an account of the policy has to be given to the people's representatives: local councils, provincial states and parliament. Mutual provision of information is essential, to enable complementary administration of the three different levels of government (municipal, regional and national). The welfare institutions need information in order to carry out their work and in order to account for the efficient spending of the subsidies.

The Central Statistical Office (CBS), the Central Planning Bureau (SCP) and the Netherlands Institute of Care and Welfare (NIZW) 'make' information; i.e. on account of their roles as service providers they need figures and data for their advice, statistics, research etc. Finally, the Association of Dutch Municipalities (VNG), the Inter Provincial Consultative agency (IPO) and the Association of Enterprises in the Subsidised Sector (VOG) need information to promote the interests of their members and to support them individually or collectively.

In short, there is a major shared interest for adequate arrangements for information provision in the welfare sector; even if the various positions of the participants lead to differences in the need for information.

In order to make the information available to all parties in the welfare sector, it seemed necessary to maintain a national consultative body of broad composition. The information from the institutions must be usable on a national level and the national statistics must be relevant to the institutions. For that reason the Platform Welfare Informationprovision (PWI) was created. The PWI is formed by the:

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Central Planning Bureau (SCP)
Association of Dutch Municipalities (VNG)
Inter Provincial Consultative agency (IPO)
Association of Enterprises in the Subsidised Sector (VOG)
Netherlands Institute of Care and Welfare (NIZW)

The forum is chaired by an independent chair and the author of this article is the salaried secretary.

The PWI is working on the structuring of the information provision; at an organisational level as well as with regard to the contents. To that effect it is working towards: the standardisation of what is being registered and the development of national intermediary centres where data must converge so it is possible to supply the information needs of the national organisations. These subjects are detailed below.

In order to understand the Dutch approach it is important to distinguish between the various kinds of information. So far PWI has mainly focused on data on institutions and their activities and on the subsidies by municipal (and provincial) governments. This is called source information. In the *Eerste structuurschets welzijn* (First Structure Outline Welfare) (March 1993) we expressly opted for this and it is up to the management of the institutions to provide the requested data for the national surveys. A direct link to client registration systems is not necessary. This paper is restricted to the question of how this source information can be made available as policy information according to the national model, by means of data dictionaries (GFOs) and intermediary centres.

Unity of terminology

Data dictionaries (GFOs)

The gathering and exchange of information is conditional upon agreement on the concepts that are being used. In order to achieve this 'unity of language' in 1994 the PWI drew up a Gemeenschappelijk Functioneel Ontwerp (Joint Functional Design), het Eerste Kern-GFO Welzijn (First Core Data Dictionary Welfare). In this definitions are given of the relevant data. It contains the data groups:

| | |
|-----------------------|-----------------|
| Institution | Address |
| Personnel composition | Customer/client |
| Funding | Ethnicity |

These data groups comprise a large amount of hard data.

With regard to the data laid down in the Core Data Dictionaries (GFO's), PWI has agreed that these are to be included in the sub-sector data dictionaries. We distinguish the following sub-sectors:

Social Cultural Work / Welfare Elderly (SCW/WE);
Youth Care;
Social Shelter;
Children's Day Care Provision;
General Social Work (GSW);
Welfare Work (migrants, handicapped people, etc.).

In addition to the data from the Core Data Dictionaries, the sub-sector modules contain data specific to that sector for the functions, products, target groups, etc. of that sub-

sector. Already data dictionary modules have been created for Social Cultural Work/Welfare Elderly and General Social Work. Children's Day Care, Social Shelter and Youth Care modules are in preparation. The data group 'activity' from the Social Cultural Work/Welfare Elderly data dictionary for example consists of the following:

| | |
|-------------------------|----------------------------------|
| number of participants, | co-operation with third parties, |
| target group, | waiting list, |
| frequency, | etc. |

Based on the data dictionaries, registration systems for the institutions are being developed by the sub-sectors. At present registration systems from which national data is being collected are available to General Social Work, Social Shelter and Child Care. Plans are being prepared for the sub-sectors, Children's Day Care and Social Cultural Work/Welfare Elderly.

The development of data dictionaries is beginning to pay off. In particular the new data dictionary for Social Cultural Work/Welfare Elderly has received a lot of attention. In various Dutch towns presentations were made by the Association of Dutch Municipalities (VNG) and the Association of Enterprises in the Subsidised sector (VOG) that drew hundreds of people. In addition, courses were held on the data dictionaries, and especially for the sector a general course 'Information Policy for Institutions' was developed. In General Social Work, which also uses a data dictionary based registration system this was not necessary, as a national registration system had existed for a very long time. It received a GFO-basis in 1991, when national agreements on the definitions between institutions and funders were made.

Function codes Collective Agreement Welfare Work

For unequivocal registration of the personnel composition of institutions the VOG attributed a unique code to each function in the Collective Agreement Welfare. A survey of these codes is included in the 'CAO Welzijnswerk Functiecodes per 1 januari 1995' (Collective Agreement Welfare Function Codes 1 January 1995). The primary purpose of this survey is to simplify the communication between the institution and the salaries administration. In the case of additions or changes all that has to be done is to use the code. Modifications of the code are registered by VOG and passed on to the known salaries administration offices, that were also consulted in the drawing up of the codes.

The VOG also want to use the codes to request (anonymous) personnel data from the institutions. The purpose is to be able to collect national data on personnel in the welfare sector. Currently the VOG is working on an information statute which will lay down the purposes for which the information to be collected may be used.

Users test registration packages Social Cultural Work (SCW)

Commissioned by the VOG, section Social Cultural Work, a users' test of software packages for social cultural work was carried out. This test provides institutions in this sector with the opportunity to choose with care when purchasing a package. They focused on software packages which can handle systematic registration of activities and participants and these packages were described and assessed according to set criteria. For the national functions of the registration packages it is essential to test that links or extensions are possible with financial administration systems, and whether the Core Data Dictionaries were adopted.

GFO SCW/WE - more than just a dictionary

The most recent data dictionary is the GFO Social Cultural Work/Welfare Elderly. It is evident from the text and the introduction by VNG and VOG that the data dictionary is a child of its time. It is more than a dictionary, it is a reflection of thought about, and view of, the sector, and fits entirely with the striving for efficient and professional functioning.

The institution must repeatedly ask itself what it wants and needs to know for information provision and for strategic and efficient policy making. This having been determined it must assess how to measure what it wants to know. Not all information is available ready-made. Information on the functioning of individual organisations has to be established by the management. Even if in doing so they make use of ready-made registration packages, it is still essential to add elements of their own. Furthermore, it appears that it is not easy to introduce registration in professional organisations, employees will soon see this as a means of control.

It is necessary to describe carefully the subjects and index numbers for registration of the information that is needed. Agreement with employees will have to be achieved on this issue. What information is needed? What exactly must be registered? How will the organisation ensure that employees will use the definitions and rules and continue to do so? These are all issues which must be explored.

It appears then that the nationally developed GFO provides a logical framework, which however does not release the user from the obligation of describing their own specific products, activities and target groups. The experiences with the courses on GFO/SCW/WE organised for managers appears to show great interest in the subject. The sector needs systematisation of the information provision. In addition to its relevance for relationships with funders there is also the wish for better control of the institution's work processes by making use of the conceptual framework presented in GFO.

This internal function of GFO acquires an even more specific management function in the form of a so-called 'branch mirror'. This is now available for social work (Potting, 1996). In this 'branch mirror' the institution provides the requested data nationally and receives in return an individual report annually. In this, the data of the institution is compared with the average national scores of institutions for generic social work. The more institutions participate, the greater the relevance of the figures. Furthermore, is it the intention to concentrate on comparisons with institutions as to size, functions, etc. but also with the characteristics of the field of work, the target groups, etc. Thus, after a few years, an interesting body of index numbers and indicators will be created, that can steer and support policy decisions.

This also indicates the importance of the GFO for the implementation of the relationship between the funder and the institution. When contracts on the institution's activities have to be signed in the context of the budget-subsidising by the municipalities, it is evident that there needs to be agreement with the municipality on the description of these. The data dictionaries for General Social Work and Social Cultural Work and Welfare Elderly provide the basis for this, because they have been determined in consultation with their respective national organisations VNG and VOG.

On a national level it is important that use of the definitions provided by GFO, by all those concerned, results in insight into what is going on in the welfare sector as a whole. This is important for VNG's and VOG's own policies with regard to promoting the interests and support of their members, for instance in collective agreement negotiations of VOG with the unions, and for support of the local councils and institutions in quality policy in Children's Day Care. It is important to the Ministry of VWS (Public Health, Welfare and Sports) because of tasks laid down in the Welfare Act. After all, although local government is responsible for subsidising the institutions, nationally we are talking about a total of 635 million guilders, more than half of which is spent on activities such as boarding schools for shipmaster's children, refugees' work and interpreter centres. The rest goes to all sorts of projects in the area of prevention, research, promotion of quality, voluntary work, etc. The Ministry of VWS must also report to Parliament every four years, and is responsible for identifying social and cultural developments and making these the subject of political discussion, with a focus on the socially underprivileged, and formulating preconditions concerning accessibility, quality and efficiency of the provisions.

Gearing GFOs

The problem with the GFO approach is that individual institutions are increasingly operating across sub-sectors. Until recently the sub-sector approach was useful, but the creation of multi-functional institutions leads to the

circumstance that the management of these institutions will have to increasingly deal with different systems that have not been sufficiently geared to each other. The development of root organisations and broad-range institutions for local welfare has certainly not come to an end. In order to respond to this PWI deems it necessary to create unequivocal information provision by gearing the various data dictionaries to each other, as much as possible. Effective co-operation between the intermediary centres existing at present is necessary too.

As a result of the drawing up of the Eerste Kern GFO Welfare (First Core Data Dictionary Welfare) and of the GFO Social Cultural Work/Welfare Elderly, and in order to achieve maximum gearing between the data dictionaries, PWI has agreed the following policy line:

1. The minimum set of data groups as defined in the Eerste Kern GFO Welfare is to be included as a whole in each sub-sector data dictionary (if they are relevant to the sub-sector, also the so-called optional data groups);
2. It is checked what data from other sub-sector GFOs is also relevant to the specific sub-sector. This data and corresponding definitions are adopted. In fact, such data is given a special status, as it is sub-sector transcendent but not generic. Such data could be included in a supplement to the Eerste Kern GFO Welfare;
3. It is checked which data should be registered specifically for the sub-sector. For this data only the sub-sector itself determines the definitions.

PWI emphasises that it is important that a GFO is determined by the nationally responsible authorities of municipalities and institutions. It advises them to create a steering committee that is responsible for this. Its composition ultimately depends on the specific situation with regard to policy responsibility and desired information provision in the sub-sector.

For example in Children's Day Care and Youth Care it is obvious that the ministries and provinces involved are represented on such a steering committee. Based on experiences so far, PWI considers it useful that a GFO project group is created by the steering committee for the organisation of the development or maintenance of a data dictionary. In addition experts on the subject are also included in the project group as is the Association of Dutch Municipalities (VNG) to monitor the entire GFO structure, as well as the Central Statistical Office (CBS) because of its responsibility for national statistics. If an intermediary centre is in operation already (see following section) one of its people should participate in the project group, too. Thus, all expertise and responsibility are brought together. The actual work, namely collecting data that has to be defined, comparing them with concepts from

adjacent sectors and GFOs already in existence, and formulating data definitions can be assigned to a specialised agency.

As described before, the ultimate assessment of a data dictionary is the responsibility of a steering committee from the sub-sector. If in the process PWI's policy line is adopted, data definition from the Eerste Kern GFO-Welfare (First Core Data Dictionary Welfare) to the sub-sector modules is guaranteed. The gearing of new definitions between the various GFO routes however, is not yet in place. Therefore PWI has proposed setting up a regular gearing consultation, with representatives from each current GFO route and in any case representatives from VNG and VOG for the necessary co-ordination towards their members. In this consultation the state of affairs of the various routes will be reported, and where necessary, action will be undertaken to gear the definition of data.

Intermediary centres

An indispensable part of the structuring of the information provision is the establishment of so-called intermediary centres. These are national centres where the data of the individual institutions and municipalities is collected. These are necessary to enable the production of national figures, indicators and 'branch mirrors'. As an increasing number of institutions are active in several sub-sectors it is essential the intermediary centres, both existing and to be created, co-operate satisfactorily, and where possible gearing and/or integration are achieved. PWI will investigate the possibilities for this in 1996 and will take the initiative for talks between intermediary centres in operation and in the process of being created, and/or the steering committees working on that.

A National Information Model

In order to supply the needs for information of the national parties, PWI decided to develop a National Information Model on which agreements can be made on national data collection and information exchange. It must be made clear what information the PWI partners wish to have at their disposal on behalf of their own functions and tasks on a national level. Based on a description of this their needs for information were assessed. These can be subdivided into information on:

- social developments
- problems with regard to welfare
- policy formulated on behalf of welfare
- carrying out of welfare work.

From the point of view of policy making this is a logical approach.

The social situation places problem areas (or bottlenecks) on the political agenda. At some time or other this will

lead to explicit policy, goals set and measures taken to promote welfare. Institutions are then given the opportunity to carry out (subsidised) welfare work. Naturally we are curious about the effects of all this so that policy can be adjusted, problems changed or redefined, and perhaps social developments be influenced. As welfare work is the responsibility of local councils a distinction must be made between the national and local level, and the interaction between them.

In addition to insight into needs there is the issue of what data collection is necessary to meet these needs. It is difficult to gain an insight into the existing data collections and the extent to which they are able to meet the formulated needs. An example is the generic population polls carried out by the Central Planning Bureau and the Central Bureau of Statistics. We will have to find out about these and other, possibly interesting, data collections and what kind of information they provide in terms and categories of information needs.

PWI wants to make a start determining the desired information for the provision of welfare institutions in what is called the National Information Model. This model will have to contain the following subjects:

- Nature of the provision
 - target group
 - functions
 - methods
 - innovation
- Size of the provision (capacity)
 - personnel
 - paid/unpaid
 - collective (labour) agreement being valid
 - levels of education
 - finance
 - subsidy
 - own contribution/rent
 - location/accommodation/consultation hours
- Results
 - production (amongst other things)
 - manifest demand
 - products and activities
 - users/customers/client
 - accessibility
 - efficiency
 - consumer's satisfaction
- Quality (of the production process)
 - procedural (in relation to the customer)
 - personnel
 - education policy
 - organisational/co-operation
 - management

The institutions' registrations will have to provide this information, and if necessary they will have to be adjusted. A ramification of this is that the data dictionaries will have to include the data on these subjects. In addition, it will have to be ascertained if collections other than the registrations by the institutions can supply this. Besides the need for information on the institutions' provision, the national organisations and agencies need information on:

- The welfare policy of the local and regional authorities;
- The local/regional problems with regard to the welfare of the population;
- General local social developments.

We have agreed that no new data collections will be organised on this, but that this information will have to be drawn from data collection already in existence, and therefore originally established for other purposes.

Conclusion

Through the described activities a national infrastructure is to be created that will render it possible to make information available for the policy of all organisations and agencies involved in welfare work. The point of departure is registration at the source, in particular the institutions carrying out welfare work. General Social Work is a good example of the approach propagated by PWI. For other sub-sectors, too, the commitment of institutions will be decisive, as will the availability of a national system. This national system begins with agreement on the definitions of the concepts to be used. This is a difficult task as the sector is under great stress and is changing drastically because of decentralisation to local councils, cuts and the introduction of a functional approach. This calls for consultations, gearing and agreement. Only then will it be possible to make use of the increasing possibilities of new technologies.

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The Language of the Personal Social Services

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Introduction

The development of electronic facilities for recording and sharing information has brought to the forefront the issue of the language used in information systems and communications. So far in the UK this matter has been tackled much more extensively in health than the personal social services, but interest and activity in the latter are growing¹.

In the UK National Health Service (NHS) responsibility for information development, management, communication and use lies with the NHS Executive's Information Management Group (IMG). The national agenda is to develop and maintain the 'language of health' in relation to person-based clinical information systems which do/will provide all the data needed for direct and indirect patient care and the data needed by NHS managers at both local and national levels. The language of health is made up of Read Coded clinical terms, classifications (ICD-10 and OPCS-4), and groupings (Healthcare Resource Groups and Health Benefit Groups). Each of these language tools has a specific purpose, complements the other and allows clinical data to be expressed at different levels of detail. Within the IMG responsibility for terms and classifications development, including cross mapping with ICD-10 and OPCS-4, rests with the National Centre for Coding and Classification (NCCC) and responsibility for groupings with the National Casemix Office (NCMO). Of central importance to the development of the language of the personal social services are the NCCC and the Read Coded terms.

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The Read Codes (named after the current Director of the NCCC and pioneer of terms development, Dr. James Read) 'were originally developed in the early 1980s to enable electronic patient records in general practice to hold clinical concepts in a concise, compact and unambiguous manner' (NHS Centre for Coding and Classification, 1996) and by 1993 were being used in the majority of computerised records in primary care. Development of terms for general practice led to the development of terms for medical specialisms outside general practice, as well as for non-medical disciplines (nursing and professions allied to medicine). The terms are contained within the Read Thesaurus which has an attached alphanumeric coding framework (the Read Codes). The research and development methodology of the NCCC has been to build up its Thesaurus from terms as they are used in clinical practice. Synonyms, local variants and composite terms are fully recognised, and an archive is maintained of terms which may no longer be in use, but may be found in older records.

By the incorporation of nursing and professions allied to medicine terms, a small number of terms used in the personal social services were inevitably included in the Read Thesaurus, though it does not follow that, for example, nurses and occupational therapists, will use them in the same way and with the same definitions as social workers. Such was the starting point for the next stage of Thesaurus development in May 1995 when a six month scoping project to examine the interest in and potential for adding a more substantial range of social terms to the Read Thesaurus was set up (Spackman, Gilbert, Glastonbury, 1995).

Why develop the language of the Personal Social Services?

The gathering, utilisation and management of relevant accurate information is an increasingly important task in the personal social services. Information forms the evidential basis for many decisions and actions, including service and resource planning, budget allocations, the processes of commissioning, purchasing and providing services, internal and inter-agency teamwork, and direct work with or managing the care of service users.

Within the personal social services it is important to have sets of widely understood and agreed terms for all core activities. In the broader context of inter-agency teamwork, for example between social and health services, the development of a mixed economy of welfare and the consequent growth of an independent sector, there are substantial areas in which there is a comparable need to be able to share the use of terms, and feel secure that they are appropriately understood.

Of the utmost importance is that the development of the language of the personal social services would benefit service users, potentially offering them a better informed and co-ordinated range of provisions.

Despite the strength of need, the development of terms does not as yet feature much in UK personal social services. Where terms have been brought together in the personal social services it has been as needed for locally based information systems, primarily for service user records. There has not to date been a national initiative, with the result that computerised information systems, for instance in social services departments (SSDs) span from minimal to highly sophisticated, with very little cohesion between agencies.

Terms which have found their way into UK information systems are likely to have originated from one or more of three sources:

1. National publications such as laws, regulations, ministerial guidelines, and occasionally commercial publications. Some aspects of the personal social services, such as child protection and adoption, are extensively covered by national sources.
2. The language of professional groups, in particular social workers and probation officers, though often partially derived from sociology and psychology.
3. Local argot, or terms (often with specific local definitions) developed for local use.

The scoping project found a great deal of support for the development of social terms as part of the Read Thesaurus. A number of potential benefits were identified and these are now presented.

Working with health services

The implementation of community care policies and an emphasis on seamless care in the 1990s have spotlighted the need for health and personal social services agencies to work closely together. The White Paper, *Caring for People* (Secretaries of State, 1989)² clearly indicated a recognition that 'further efforts are needed to improve co-ordination between health and social services'. More recently, medium term priority E of *Priorities and Planning Guidance for the NHS: 1996/97* has highlighted the need to 'Ensure collaboration with local authorities and other organisations, that integrated services are in place to meet needs for continuing health care and to allow elderly, disabled and vulnerable people to be supported in the community' (NHS Executive, 1995).

One of the keys to effective collaborative working lies in the sharing of information within and between agencies, at both strategic and operational levels. This has been clearly stated in the health and personal social services arena. For example, the NHS Training Directorate in *Training Managers for Community Care - Inter-Agency Development* (NHS Training Directorate, 1994) states that 'One of the challenges for managers will be to design and establish necessary systems and procedures for joint working in areas such as liaison and information sharing'. Similarly, the Social Services Inspectorate of the Department of Health (SSI) has identified as one of its four core standards '....appropriate information exchange, whether paper or IT-based (with) health agencies, both purchasers and providers, including GPs' (SSI Information Strategies and Systems).

The achievement of information sharing between agencies is, however, a complex and challenging goal. Many barriers exist and central among these is the absence of a common language between different health and social care professionals. In other words, the absence of shared terms.

Sharing information across the personal social services

If the aim of a seamless service is to be realised then information has to be shared efficiently and effectively both between agencies and within them. The social terms scoping project found that a central benefit to the personal social services of the inclusion of social terms in the Read Thesaurus was the development of a common language, as it was widely agreed that the language of the personal social services tends to be colloquial, localised and imprecise. Benefits emanating from a common language of terms tended to centre around greater efficiency. There was consensus that agreed terms contributed to improved communication and fewer misunderstandings and led to better information input and retrieval and more efficient filing systems. It was also apparent that agreed terms could aid the care management process, clarify definitions of need and lead to more appropriate resource allocation.

Improving the quality and accuracy of agency information

The lack of a consistent understanding and use of language in personal social services records has been identified as one of the factors affecting the quality and accuracy of data stores whether at the point of data entry into an electronic record, or when the record is being read by a service professional (Barnes, 1993). The quality of much existing information is limited by the fact that it can only be fully understood by those who authored it, and perhaps others in close proximity. The moment such information is transported to another setting, to be used by a different staff group, it is open to misinterpretation as a result of the lack of clarity and agreement on terms. Some terms, such as *anxiety* or *support*, are very difficult to interpret with any precision without additional elucidation, clarification and definition.

National aggregation

Current experience shows that analysis of data provided through local authority annual statistical returns to the Department of Health in England is made difficult by the wide range in variation of definitions and processes used by local authorities. The annual returns are used to support service and budget planning and national financial allocations and are therefore of vital importance. If a set of common social terms were developed and successfully implemented which could be used as the framework for annual returns analysis then national decision making would be conducted from a more accurate base. The Department of Health Statistics Division has recently commissioned a study to examine the feasibility of developing a national framework for annual returns analysis in respect of referrals, assessments and packages of care in adult personal social services. (Spackman, Gilbert, Glastonbury, 1996).

Issues in Developing and Implementing Personal Social Services Terms

In the course of work on the scoping project it was made clear that while strong support existed for the principle of a personal social services thesaurus and codes, there were both conceptual and practical issues which would require addressing, and the main ones are considered here:

Defining the interface with health services

A major issue to emerge from the social terms scoping project was the need to clearly define the health and personal social services interface. Three models were identified:

1. At its narrowest the interface can be viewed as the points at which there is joint working, and where there are multi-disciplinary teams of health and personal social services staff, possibly staff from other sectors as well. Examples are child protection panels,

community mental health and learning disability teams, and joint planning / finance groups. Here a shared language will develop as a result of daily 'custom and practice'.

2. A broader definition takes in areas of joint health / personal social services responsibility for service users, but where there may be agreed or implicit task divisions as an alternative to shared teamwork. This approach gets close to being service user-led, in the sense that it recognises the need for co-ordination and collaboration in settings where the service user experiences a need for both health and social care. There is no joint staff team in this context to foster a language for communication, so a developmental process is needed.
3. A still wider definition covers areas which are outside shared teamwork or responsibility, but where there is a need to know and understand the terms in order to keep well informed. Examples would include relevant legal terms, as well as terms which would allow generic staff in health and the personal social services to understand matters in housing, education, social security and so forth. This scenario opens up a much wider challenge to effective communication.

Relevance

There was agreement among those interviewed for the social terms scoping project that a thesaurus and any electronic system into which its terms were incorporated must be relevant to day-to-day practice in the personal social services and inter-agency work, and not the outcome of what was somewhat dismissively labelled 'an academic exercise'. They also stressed the importance of 'ownership' of the terms by potential terms users. Consultation from the outset was seen as a key and it was suggested that practitioners supportive of the development should be identified early on so that they could play a role in persuading colleagues of the benefits of a thesaurus. It was also suggested that various professional organisations of which practitioners were members had a role to play in promoting the work. There was a strong view overall that it was very important for front line staff, both professional and clerical, to be encouraged to take part in developing the thesaurus because they were the people who were going to be the end users of it.

Previous experience at the NCCC with terms development has also shown the value of partnership sites in fostering a feeling of ownership. These sites work with the NCCC to implement the Thesaurus and Codes and to provide detailed feedback. Also of value are CD-ROM demonstrators of the codes which are available from the NCCC.

A major challenge to the development of a thesaurus of social terms is the speed at which terms will change as a

result of legislation and policy. A recent example of such change has been the emergence of care management as a result of the 1990 NHS and Community Care Act. With care management has come a range of new terms which do not appear in, for example, traditional social work literature, particularly around levels of assessment (simple, limited, specialist, comprehensive, financial), and packages of care.

In addition to change resulting from legislation and policy, terms also vary as a result of changes in colloquial language or the presence of strong sub-cultures such as ethnic minority groups. Clearly, certain areas within the personal social services, like substance abuse, have extensive jargon which will need to be incorporated into the Thesaurus, as well as fluctuations determined by current fashion.

A further important consideration is that not only do terms need to reflect the language used by professionals, but also of service users. This may refer to specific groups of users. For example, people from ethnic minorities, as a result of culture and language, might well use different terminology. Another service user group which should be considered in such a context is older people who might still be using terms that are generally considered redundant. However, there is a more fundamental point about service users as a whole, and the principle that they should be able to understand what is being recorded about them, and not bemused, deceived or left uncomprehending by the use of unclear language.

An important consideration both in the initial development of the thesaurus and its subsequent up-dating is who decides which terms go in and which come out. Procedures currently exist at the NCCC for dealing with this and include working groups made up of people from relevant professions and the previously mentioned partnership sites. The NCCC in consultation therefore 'polices' the terms. As far as personal social services terms are concerned, however, the question must be asked whether the NCCC, which is a health service organisation, can or should similarly have a policing role.

Fragmentation

Viewed from the NHS perspective, the personal social services sector is both more fragmented and less able to co-ordinate terms development. At central government level two ministries are closely involved, the Department of Health (re. SSDs) and the Home Office (re. Probation), while for some specific projects or agencies in the independent sector other ministries may take a lead (Environment, Social Security, Education and Employment especially). Several large private companies operate, usually in specialist areas (such as residential care for elderly people), and there are important national voluntary organisations (such as the National Society for the Protection of Children). Local authorities have an

important role in running SSDs and Probation, as well as providing funds for a myriad of voluntary groups.

There is no equivalent in the personal social services of the IMG, or of the NCCC, with a national role in the development of tools of communication. The most important individual player is the Social Service Inspectorate (SSI), which has a central developmental and quality enhancing role in relation to SSDs (particularly active in such areas as community care), but whose budget is tiny compared to the IMG. The Association of Directors of Social Services has extensive membership and sub-groups with interests in terms (particularly the Information Management Working Group), but overall it is a loose-knit association with no developmental budget.

Current Government policy for the personal social services is to promote diversification into the independent sector, which has the effect of increasing fragmentation. Local government reorganisation into a larger number of smaller units is having the same impact.

Fragmentation is also apparent at the operational level in the personal social services. Agencies tend to work autonomously from one another and there is likely to be some resistance to what might be perceived as 'standardisation'. Many personal social services agencies appear to favour the notion of a degree of national conformity of language, but have deeply ingrained practices and attitudes which might add difficulty to the task of getting shared terms accepted into regular usage.

Potential loss of meaning

Although there was overall support for a thesaurus of social terms in the scoping study, there was also anxiety about the possible loss of richness of language and the meaning it conveys. This focused primarily on what was viewed as a threat to free text, in the face of continuing moves towards computerised lists and categories. Free text is widely used in recording service user circumstances and service plans, and some personal social services respondents were concerned that a thesaurus would increase dependency on classifications at the expense of a more flexible approach. Some questioned how accurate and realistic computer representations of real world situations can be, seeming to argue that greater effectiveness would be achieved by viewing client records as works of literature, rather than compilations of computer codes.

Privacy and confidentiality

The records of personal social services agencies contain much information about service users that is confidential and of a highly personal nature. Staff are therefore concerned that because common terms open up increased potential for information sharing they will lose control over such information. Respondents in the scoping study,

for example, were clearly anxious about the ethical and data protection issues surrounding information sharing, and this view also came across strongly from many sectors of health service staff.

Basically the arena of data protection stretched well beyond the fields of health and social services, into commerce, industry and government for example. If there is a solution to the seemingly contradictory demands of wider communication and the protection of privacy then it will need to arise in the wider context, and perhaps be supported both by revised legislation and stronger efforts at enforcement.

Conclusions

If service users (which in the longer term probably means most of us!) are to endure the loss of personal privacy as far as electronically stored information is concerned, then those of us working within health and social care have a responsibility to make certain that the ensuing benefits offer adequate compensation. Perhaps the concept of 'seamless care' is a mirage, but the aim of a more coherent and co-ordinated framework for our health and welfare is a reasonable expectation. Of course such an achievement involves a genuine commitment, from policy makers through to front line service providers, if it is to succeed. Neither technology nor a detailed thesaurus will have value unless there is determination to make them work. Nevertheless, our newly emerging potential to share and use information in a way that has a real impact on the quality of services poses a number of challenges. One of them is to identify and implement a language which allows staff from a range of health and social care professions, and service users from a variety of cultural, economic and educational backgrounds, to enter into meaningful communication.

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¹ 'Personal social services' is defined widely to include social services departments, the Probation Service, and a growing and diverse independent sector (voluntary, non-profit and for-profit groups).

² This government document set out the proposed new framework for community care arrangements in the UK ahead of the 1990 NHS and Community Care Act.

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PIE (Person-In-Environment) - a system for describing and classifying the common problems of the clients of social workers

K E Wandrei & M Karls, Person-in-Environment Project

Introduction

PIE is the acronym for Person-In-Environment. It is a system for describing, classifying and coding the problems of social functioning of the adult clients of social workers. Developed under a grant from the National Association of Social Workers (NASW), in the USA, it uses the organising construct of “person-in-environment” to provide a system of brief uniform descriptions of a client’s inter-personal, environmental, mental and physical health problems. It also includes an assessment of the client’s ability to deal with these problems. Its coding system facilitates the recording of findings and the collection of data for research and administration. It is intended for use in all current fields of social work practice and by practitioners of varying theoretical orientations. While PIE was originally developed by and for social workers in the United States, it has already been translated into French (Karls & Wandrei, 1996) and a translation into Japanese is being undertaken. PIE is being used by social workers in many countries, among them Canada, Australia, the Netherlands, the Philippines, Belgium, Japan, Finland, South Africa, and Italy. While PIE was developed to give a language for social workers, it is also a system that resonates among other human service practitioners who view individuals from a more comprehensive perspective.

PIE is constructed to help demonstrate the unique way social workers go about their work, by providing uniform descriptions of the common problems of social work’s clientele, in their interactions with others and with the social institutions in their communities. PIE provides a mechanism for communicating complex case phenomena in terms clients, other social work practitioners, and other human service professionals can understand. It also serves as a means for planning and testing social work interventions.

The PIE system provides:

- a common language for all social work practitioners in all settings for describing their client’s problems in social functioning
- a common capsulated description of social phenomena that could facilitate treatment or amelioration of the problems presented by clients
- a basis for gathering data required to measure the need for services and to design human services programmes and evaluate effectiveness
- a mechanism for clearer communication among social work practitioners and between practitioners and both administrators and researchers
- a basis for clarifying the domain of social work in the human service field

A Brief History of the Development of PIE

A more comprehensive description of the rationale and development of the PIE system can be found in Karls & Wandrei (1994a). It has long been acknowledged that the development of a language of its own is an important hallmark of a profession. Within psychiatry there is a rich history of systems developed to classify psychiatric problems, culminating in the Diagnostic and

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Statistical Manual of Mental Disorders (DSM-IV) (American Psychiatric Association, 1994). Starting with Mary Richmond (1917) there have been multiple efforts to develop client classification systems within social work and other human service fields.

Efforts to develop what is now known as PIE started in the 1980s through the California Chapter of NASW, whose president at the time was James Karls. PIE was conceived in part as a reaction to DSM-III (American Psychiatric Association, 1980) and its perceived limitations for use with social work practice and in part as a response to trends and new developments in social work practice and theory. The original system was developed by a California-based task force of practitioners and academics. The basic system was established in 1983 and has had minor modifications many times in response to peer review, feedback from workshop attendees, feedback from users, and pilot reliability and validity studies. PIE can be seen as an on-going work in progress.

Overview of the Structure of PIE

PIE is a four factor system. Each factor describes a feature of the client’s problem situation:

Factor I identifies and describes the client’s problems in social functioning. It describes what the problems are, their severity, their duration, and an assessment of the client’s ability to cope with these problems.

Factor II describes problems emanating from the environment that effect the client’s social role functioning. It describes the environmental problem as well as its severity and duration.

Factor I and Factor II together constitute the core area of social work practice, but two other factors are needed to complete the description of the problem complex:

Factor III describes the mental health problems the client may be experiencing.

Factor IV provides a statement of the client’s physical health problems.

Factor I

Factor I describes problems in social role functioning; defined as the performance of activities of daily living, required by the individual’s culture or their community, that are appropriate for the individual’s age or stage of life. Social role problems are grouped into four categories: family, other interpersonal, occupational, and special life situation roles. Within each category are specific roles. For example, the student role is under occupational roles. Each role is defined in the manual and includes several examples. For example,

| Problem | Code |
|--------------------------|----------|
| Familial | 1000.xxx |
| Parent | 1100.xxx |
| Spouse | 1200.xxx |
| Child | 1300.xxx |
| Sibling | 1400.xxx |
| Other family | 1500.xxx |
| Significant other | 1600.xxx |
| Other interpersonal | 2000.xxx |
| Lover | 2100.xxx |
| Friend | 2200.xxx |
| Neighbour | 2300.xxx |
| Member | 2400.xxx |
| Other (specify) | 2500.xxx |
| Occupational | 3000.xxx |
| Worker (paid economy) | 3100.xxx |
| Worker (home) | 3200.xxx |
| Worker (voluntary) | 3300.xxx |
| Student | 3400.xxx |
| Other (specify) | 3500.xxx |
| Special life situation | 4000.xxx |
| Consumer | 4100.xxx |
| Inpatient/client | 4200.xxx |
| Outpatient/client | 4300.xxx |
| Probationer/parolee | 4400.xxx |
| Prisoner | 4500.xxx |
| Immigrant (legal) | 4600.xxx |
| Immigrant (undocumented) | 4700.xxx |
| Immigrant (refugee) | 4800.xxx |
| Other (specify) | 4900.xxx |

Table 1 A listing of Factor I roles

Student Role. The primary function of the Student Role is acquiring and assimilating knowledge and skills. The nature and complexity of the material the person studies and the method of acquisition help determine the responsibilities and expectations of the role. A person can assume the Student Role at any age.

The following are examples of Student Role Problems:

- A college student who fails all their classes
- A woman who has been accepted to medical school but is unsure if she can handle the workload
- A 65 year old woman who feels out of place returning to the university to complete her education (Karls & Wandrei, 1994b, p.13).

Each social role problem is further classified by the use of one of nine types (see Table 2). Each of these types is defined in the manual and includes a case example. For example,
Victimisation Type
 Intimidation is the fear of anticipated harm. Victimisation is turning this fear into a behavioural pattern in which a person gives in to fears, giving up his or her power to deal with the intimidator or victimiser.

Relationships that result in a person feeling intimidated or victimised may bring about serious role functioning problems. Drastic changes in a person's social or occupational performance may cause the individual to feel powerless, alienated, personally deficient, and without the ability to control or influence the situation. Perceived threats, whether real or not, can be very stressful, leading to feelings of helplessness and anticipation of further harm.

Case Example A 35 year old nurse has had a secure job at a county hospital for eight years and was planning to make her career within the system. There have been serious funding cutbacks, for the past four years, which have directly affected the resources available to do her job; and this has increased her frustration with the level of patient care that is possible. Her supervisor has not been supportive, telling her that she will just have to make do. When she last complained, her supervisor told her that she would be fired if she complained anymore. Because she cannot afford to lose her job, the nurse has resigned herself to doing what she can and has abdicated her feeling of personal responsibility for the outcome (Karls & Wandrei, 1994b, p.21).

Types of Social Role Problems

| <u>Problem</u> | <u>Code</u> |
|-----------------|-------------|
| Power | xx10.xxx |
| Ambivalence | xx20.xxx |
| Responsibility | xx30.xxx |
| Dependence | xx40.xxx |
| Loss | xx50.xxx |
| Isolation | xx60.xxx |
| Victimization | xx70.xxx |
| Mixed | xx80.xxx |
| Other (specify) | xx90.xxx |

Table 2 Types of Social Role Problems

After a social role problem is defined and typed, the practitioner uses the Severity (see Table 3), Duration (see Table 4), and Coping (see Table 5) Indexes to amplify the assessment of the client's social role functioning as recorded on Factor I. Each of these indexes is a six-point scale with each point defined.

Severity of Social Role and Environmental Problems

| <u>Severity</u> | <u>Code</u> |
|-----------------|-------------|
| Catastrophic | 5 |
| Very high | 4 |
| High | 3 |
| Moderate | 2 |
| Low | 1 |
| No problem | 0 |

Table 3 Severity Index

For example, from the Severity Index:
Very high severity = 4

The problem is characterised by changes in key or multiple areas of social role functioning or in the environment. Immediate intervention is probably necessary. Examples include the death of a spouse, serious illness, or rape (Karls & Wandrei, 1994b, p.36).

Duration of Social Role and Environmental Problems

| <u>Time Since Onset</u> | <u>Code</u> |
|-------------------------|-------------|
| 2 weeks or less | 5 |
| 2-4 weeks | 4 |
| 1-6 months | 3 |
| 6 months to 1 year | 2 |
| 1-5 years | 1 |
| More than 5 years | 0 |

Table 4 Duration Index

On the Duration Index:
two to four weeks = 4 (Karls & Wandrei, 1994b, p.36)
On the Coping Index:
Somewhat inadequate coping skills = 3

The client has fair problem-solving ability but has major difficulties solving the presenting problems, acting independently, and using ego strength, insight, or intellectual ability.

Coping Skills for Social Role Problems

| <u>Coping Skills Level</u> | <u>Code</u> |
|----------------------------|-------------|
| No coping skills | 5 |
| Inadequate | 4 |
| Somewhat inadequate | 3 |
| Adequate | 2 |
| Above average | 1 |
| Outstanding | 0 |

Table 5 Coping Index

In summary, the classification of a problem on Factor I involves the following steps:

1. Selection of a social role problem
2. Selection of a type of social role problem
3. Indicating severity
4. Indicating duration
5. Indicating client's coping ability
6. Repeat for additional social role problems, listing problems in orders of importance

Factor II

Factor II describes the problems in the client's environment as they effect the client's social functioning. In PIE the environment includes both the physical and social context in which people live. This factor identifies problems in the social institutions existing in most communities that are intended to facilitate the individual's well being, growth and development. It also notes the absence of necessary institutions.

Based on an adaptation of Warren (1963), there are six subsystems within the community in which environmental problems have been identified. These include the economic/basic needs system, the education and training system, the judicial and legal system, the health, safety and social services system, the voluntary association system, and the affectional support system.

Within each subsystem exist categories and within each category exist specific problems (see Table 6). For example, under the Health, Safety, and Social Services System, there is a category called Health/Mental Health. Within this category, there is a problem called 'inaccessibility of mental health services' and the example given is the community mental health clinic is 100 miles away (Karls & Wandrei, 1994b, p.30).

Environmental Problems Categories

| Problem* | Code |
|--|----------|
| Economic/basic needs system | 5000.xx |
| Food/nutrition | 5100.xx |
| Shelter | 5200.xx |
| Employment | 5300.xx |
| Economic resources | 5400.xx |
| Transportation | 5500.xx |
| Discrimination | 5600.xx |
| Education/training system | 6000.xx |
| Education/training | 6100.xx |
| Discrimination | 6200.xx |
| Judicial/legal system | 7000.xx |
| Justice | 7100.xx |
| Discrimination | 7200.xx |
| Health, safety & social services system | 8000.xx |
| Health/mental health | 8100.xx |
| Safety | 8200.xx |
| Social services | 8300.xx |
| Discrimination | 8400.xx |
| Voluntary association system | 9000.xx |
| Religion | 9100.xx |
| Community groups | 9200.xx |
| Discrimination | 9300.xx |
| Affectional support system | 10000.xx |
| Affectional support | 10100.xx |
| Discrimination | 10200.xx |

*Each type of environmental problem contains three to eleven sub-types.

After an environmental problem is selected, the practitioner uses the Severity and Duration Indexes to amplify the assessment.

In summary, the classification of a problem on Factor II involves the following steps:

1. Selection of an environmental problem
2. Indicating severity
3. Indicating duration
4. Repeat for additional environmental problems, listing problems in orders of importance

Factor III

Factor III records any current mental disorder or condition that is potentially relevant to understanding the client's problems. Such conditions are listed on Axes I and II of DSM-IV (American Psychiatric). Axes I and II diagnoses and codes are recorded under Factor III using the terminology and codes in DSM-IV.

Factor IV

Factor IV records any current physical disorder or condition that is potentially relevant to understanding or managing the client's problems. Ideally, the social worker should use the terminology and coding contained in the International Classification of Diseases-9-CM (US. Department of Health and Human Services, 1991). If CD-9-CM is unavailable, the practitioner may describe the physical disorder in lay language.

Development of an Intervention Plan

Using PIE also facilitates the development of an intervention plan. Once a problem is listed using the PIE system the logical next step is to develop appropriate interventions for each of the identified problems. Use of the PIE system is particularly helpful with clients who present with a myriad of complex problems. It forces the social worker to separate out problems, to prioritise them, and to focus on developing different intervention plans for each problem rather than assume one intervention will be sufficient.

A case example indicates how PIE can help in the development of an appropriate intervention plan.

A 77 year old woman, widowed 2 years ago, is referred to the senior services centre by her physician who has been treating her for severe arthritis. She is very depressed, cries frequently, seems unable to leave her house, and has withdrawn from her former activities and associations. Her children all live out of the area and her only close friend died five weeks ago.

The social worker at the centre has learned that state funding for the centre is about to be drastically cut and that services for this kind of client are to be eliminated.

A PIE statement on this client along with some possible interventions would be written as follows:

Table 6 Factor II Problems in the Environment

Sample PIE Statement

| Assessment Findings | Recommended Interventions |
|---|--|
| Factor I | |
| 1250.424 Spousal role problem, loss type; high severity one to five years duration; somewhat inadequate coping skills | Psychotherapy; widows support group |
| 250.444 Friend role problem, loss type; high severity; one to six months duration; somewhat inadequate coping skills | Psychotherapy |
| Factor II | |
| 8305.45 Health, safety and social services system: Other social service problem (threatened elimination of services); high severity; two weeks to one months duration | Political organizing |
| Factor III | |
| Axis I: 296.22 Major Depression, single episode, moderate severity | Psychotherapy; Medication referral |
| Axis II: V71.09 no diagnosis | |
| Factor IV | |
| Arthritis (by client report) | Consultation with physician; arthritis support group |

Table 7 Sample PIE Statement

Coding

A coding system has been developed for recording PIE statements and is described in detail in the PIE Manual. This aims to provide a process of succinct and easy communication among and between practitioners, researchers and administrators, (Karls & Wandrei, 1994b). For Factor I a seven digit code is utilised. For example,

1130.213 = Parent Role Problem, Responsibility Performance Expectation Type, Moderate Severity, 1-5 years Duration, Somewhat Inadequate Coping Skills.

For Factor II a six digit code is utilised. For example,

5401.21 = Economic/Basic Need System Problem, Insufficient Financial Resources to Provide Sustenance, Moderate Severity, 1-5 years duration.

While use of the coding system is optional it provides a shorthand method of recording the results of the PIE assessment. It also facilitates the collection of data for the researcher or program planner.

There is no need to memorise numerical codes or the structure of the coding system because each listing in PIE includes its code. A numerical code tabulation device called "Mini-PIE" has been developed that allows for the social worker who is trained in the use of PIE to quickly check off applicable categories and write in code numbers without having to look them up in the manual (Karls & Wandrei, 1994).

Computerisation

The ease of using the system will be increased even more with the computerised version of PIE which is currently in development. The social worker will be able to quickly generate a PIE report by selecting from a menu of choices or by typing in information. Additions and changes to a client's problem statement as the interventions occur can be made in minutes. The computerised system can fit into existing management information system and allows for data collection that can help with funding problems, personnel use, allocation of resources and the myriad of management and planning issues that are the administrator's task.

For example, an administrator in a community mental health clinic could determine that the most prevalent environmental problem the clinic's clients are experiencing is 'Absence of shelter in a community on a regular basis' which is a problem in the economic/basic needs system, shelter category. The administrator could use this information in a grant application to fund a housing agency, to advocate with the county administration to develop more low-income housing for the clients, and to monitor the performance of an employee whom he suspects is not designing appropriate intervention strategies because, unlike other employees, this employee has very few clients whose PIE statements indicate that housing is a problem.

Validity and Reliability

Important steps in establishing the usefulness of a classification system include the systematic assessment of its acceptability, feasibility, coverage, reliability, and validity. Acceptability concerns whether users agree that the categories and their definitions have face validity, that is, they encompass the language and ideas of the profession. Feasibility indicates whether the system is understandable and easily applied. Coverage is achieved to the extent that there is a goodness of fit of the system in practice, and that not many clients fall within the residual categories, that is those designated 'unspecified' or 'other'. The reliability of a system indicates how well practitioners

using the system can agree with each other on the identification of the categories. The validity of a system is a measure of its usefulness, and reflects how well it measures what it is supposed to measure.

In 1984 there was a review of the earliest version of the PIE system by 16 eminent social workers throughout the country. Of these experts most (N=14) responded favourably to the system. Additional feedback (and suggestions for revisions) was obtained from twelve years of the co-authors presenting workshops on the system to several thousand social workers in the United States and in other countries. Responses from participants at these workshops have been overwhelmingly positive, with many expressing their belief that the PIE project is an important one "whose time has come".

In 1984 a nation-wide pilot test of the initial version of PIE was conducted. Two chapters from each of nine NASW regions were selected and five members from each chapter representing differing theoretical orientations, direct practice settings, and length of time in practice were asked to apply the system with two clients and then complete a questionnaire about their experience. 62 social workers responded to the questionnaire. Feedback on the use of the system was generally positive. Most who responded to the questionnaire indicated that they were able to use the system with a minimum of difficulty to describe their clients. 76% of the respondents stated they thought the manual was clear and that it described the client's situation clearly and concisely. 82% agreed that it helped identify when social work interventions were needed. 65% said it would help them communicate with other practitioners and that it provided a basis for gathering data useful in measuring the need for services.

A pilot reliability study funded by NASW was conducted in 1991 at four sites: United Charities of Chicago, the Los Angeles-University of Southern California County General Hospital, the Social Work Department of the New York State Psychiatric Institute, and the Massachusetts Department of Mental Health (Williams, 1994). Using video-taped case material in these tests a total of 197 ratings were made across 16 videotapes, with from 4 to 30 raters per tape. While the size of this study did not give enough ratings across the range of PIE categories to make definitive statements about their reliability, the findings were generally positive (i.e., there was a high degree of agreement among the social workers using the system on the identification of the PIE categories in the types of problems tested). Further evidence of the impact of the PIE system is found in a proposal for inclusion of some of its features in DSM IV's Axis IV which focuses on social supports and environmental resources.

This informal and formal utilisation and pilot testing suggests that the PIE system has likely acceptability and feasibility in practice, and likely reliability.

Applications in practice, teaching, research, and administration

With publication of the PIE Manual (Karls & Wandrei, 1989) several journal articles on PIE (Williams, Karls, & Wandrei, 1989; Karls & Wandrei, 1992a; 1992b), an international interest has developed. Informal uses of PIE have occurred in the Netherlands (Hoekstra, 1994), Japan (Mandiberg and Miyaoka, 1994), Canada (Walsh and Ramsey, 1994), Australia, Italy, Belgium, the Philippines, and other countries (anecdotal reports to the authors) with positive responses from users in those countries. Social workers in the province of Quebec in Canada have translated PIE into French (Karls & Wandrei, 1996) and have adopted PIE as their classification scheme.

The book on PIE (Karls & Wandrei, 1994a) explores PIE's current and potential use in a variety of settings including outpatient mental health (Turnbull and Cahalane, 1994; Walsh and Ramsey, 1994), family service agencies (Kestnbaum and Wahl, 1994), medical social work (Adkins, 1994), employee assistance programs and managed behavioural care (Saxton, 1994), welfare departments (Simmons, 1994), with mentally ill people in recovery from addiction (Irvin and Peck, 1994), and to teach social work students in Japan (Mandiberg and Miyaoka, 1994) and in the United States (Delewski, 1994).

In practice PIE serves to sort out the often complex array of problems that the client brings to the social work practitioner. It permits a non-judgmental description of the problems the client is experiencing. With a uniform method of describing client problems social work actions and interventions can be planned more conscientiously than is currently done in most practice settings. Instead of social work assessment following the methodological expertise of the practitioner it is possible, by using PIE, for a social worker in a family service agency to describe a client's problems in a way that will be understood by a colleague in a child welfare or mental health setting. The client should be able to understand the problem assessment and participate more fully in problem resolution or reduction.

As a teaching tool the PIE system is useful in helping the student learning casework to understand the domain of social work practice and to develop an assessment and treatment plan that is clear and understandable (Mandiberg and Miyaoka, 1994; Delewski, 1994). Since this system is essentially atheoretical it permits the teacher to utilise whatever casework model or behaviour theory has been adopted and apply it to the individual case.

For the researcher and the administrator PIE also serves as a data base to facilitate the collection, classification and analysis of social conditions and social interactional problems in which social workers intervene (Irvin and Peck, 1994). It could be used to routinely collect data on client problems and community conditions. Such data

could facilitate both social program and social policy development

The Future of PIE

If social work is ever to gain parity with the major 'person' professions (medicine/psychiatry, law, the ministry) it will need to adopt and utilise a nomenclature system for identifying its area of expertise. The future of PIE is linked to the readiness and willingness of social work practitioners, administrators and educators to take the difficult step of learning and implementing a new or unfamiliar way of identifying client problems. Inherent in the development of a new system is the risk of intra-profession conflicts between the old timers, who are content with the state of things or at least not open to radical change, and the newcomers who seek to upgrade the field. And there is a risk in the promulgation of PIE that splits in the profession could occur. Making a change is a calculated risk that could both increase the professional status of social work and meet the ideals and values of social work by improving the quality of care provided to its clientele.

PIE helps unravel the problem complex brought to the social worker and leads to better intervention planning. It provides the bridge between person and environment that allows for an holistic approach in social work practice. As it is now being used in practice it allows the social worker to clearly and succinctly describe the client's problem complex. It serves as a tool for developing interventions that can be utilised by client and social worker in bringing about reduction or resolution of the client's distress. PIE can be the first step in developing a universal language for social work practitioners. By unravelling the client's problem complex it can help social work fulfil its mission of reducing the common problems clients bring to social workers.

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Reviews

Key literature

As this is a special issue on *coding and classification* the book and software reviews are omitted and replaced by references and abstracts of literature on the subject of this journal issue. It is not our aim to duplicate the references that can be found in the individual contributions, but rather to add publications (both new and old) that help the reader to explore further the different dimensions of coding and classification in human services. The next journal issue will again carry book and software reviews.

Burgess, E., (1928), What social case records should contain to be useful for sociological interpretation, *Social forces*, 6(4), pp. 524-531

Swift, L., (1928), Can the sociologist and social worker agree on the content of case records ?, *Social forces*, 6(4), pp. 535-538

Not the most recent publications on the subject, but two well-written articles outlining all the arguments in a debate that still dominates the current developments on client information systems and coding and classification. One might do a search and replace on 'sociologist' with 'manager' or 'policy maker' and end up with articles that would attract a lot of attention if currently published.

NHS-IMG, (1996), *Terms, records and information, an open learning pack*

This package includes introductory information to the Read codes being developed and used by the Information Management Group of the UK National Health Service (see paper by Spackman, Glastonbury and Gilbert in this issue). It contains introductory texts, an interactive Read code demonstrator with a subset of the complete coding system, guidelines for teaching sessions as well as four teaching modules. As the Read code development is currently concentrated on health care including nursing and the professions allied to medicine, this learning pack reflects that. It is still a useful training aid for social workers and other human service professionals.

This package and other information regarding the Read codes can be obtained at little or no cost from the NHS Centre for Coding and Classification, Woodgate, Loughborough, Leicester LE11 2TG, UK, Fax: +44 1509 211611

Kirk S & Kutchins H, (1992), *The selling of DSM, the rhetoric of science in psychiatry*, Hawthorne, Aldine de Gruyter, 270 p.

This book describes the development and implementation of DSM, the well-known coding and classification system on mental health that is now in its fourth edition. It criticises the DSM development for its commercial aspects: more than half a million copies of DSM-III were sold in the USA, and the classification system is used by insurance organisations to reimburse mental health care costs. This book especially focuses on the issues of reliability and validity, arguing that with the introduction of Kappa as a new reliability measure, attention was diverted from validity towards the technical aspects of reliability, thereby saving the scientific esteem of the profession.

OECD, (1994), *Education at a glance, a software package for the international comparison of education systems*, Paris, OECD,

Poullier J-p & Sandier S, (1991), *OECD health data, a software package for the international comparison of health care systems*, Paris, OECD,

Both software packages illustrate how in a specific professional sector data can be structured by applying coding and classification systems, how these can be analysed and how the database as such can be disseminated to a great number of users. The packages contain both a database with data covering OECD member states over a number of years and an analysis tool that enables users to generate statistical analyses and graphical presentations, including maps.

Prince K, (1996), *Boring records? Communication, speech and writing in social work*, London, Jessica Kingsley, 210 p.

For those sharing the feeling that the current debate on coding and classification is disproportionately influenced by the managerial point-of-view, this book is a welcome report on research of the social work record as used by the professional service provider. Although the items 'coding', 'classification' or 'new technology' hardly feature in this research, the implications and conclusions are of utmost relevance to these subjects.

Rosenhan D, (1973), On being sane in insane places, *Science*, 179, pp. 250-258

Spitzer R, (1976) More on pseudo science in science and the case for psychiatric diagnosis, a critique of Rosenhan's "on being sane in insane places", *Archives of General Psychiatry*, 33 (April), pp. 459-470

Though now more than 20 years old, still one of the best and most known publications on the consequences of applying diagnostic labels from coding and classification systems. The research consisted of eight pseudo patients gaining admission in residential mental health care by feigning to 'hear voices'. Once admitted, the pseudo patients stopped acting and requested to be discharged. Both the easiness of admission and the difficulties encountered in being discharged raised a lot of concern about the quality of diagnostic procedures. The research also gave credence to the concept of 'stickiness of psychodiagnostic labels' as all pseudo patients upon discharge were classified as 'schizophrenia in remission'. The article should not be read without some of the other publications reflecting on the findings and the quality of

the research, such as the article by Spitzer (head of DSM-III task force) or the 1975 special issue of the *Journal of Abnormal Psychology*.

Steyaert J, Benbenishty R, & Silon L, (1995), *Developing comparative social welfare statistics*, *EuroSocial Report*, Vienna, European Centre for Social Welfare, 45

This report presents the results of an international expert meeting, held in June 1994 in Flanders, discussing the possibility and the issues in developing international comparative social welfare statistics. Development of such comparative social welfare statistics involves an assessment of the current shortcomings in both client information systems and social reporting. It also needs to take into account the issue of reliability. This report contains the full text of the introductory paper, outlining the aims and issues concerning the topic. It also contains summary reports and reflections on the presentations by the international experts. In the concluding chapter, the main lessons are summarised as well as possible scenarios for future developments.

Announcing a Writing Contest for Social Work Students

The journal *New Technology in the Human Services* is organising a writing contest for social work students. The contest will run in the academic year 1996-1997. The contest is open to students who have not published before in an academic or professional journal.

Social work students around the world are invited to write a paper or essay on the subject of information technology in social work practice, policy or education, describing either a specific application or taking a more general view.

The submissions should be structured according to our 'Guidelines for contributors' which are published on the back cover of the journal. the guidelines may also be found on the journal web site url: <http://www.fz.hse.nl/nths/> or obtained from the editors.

Submissions should be sent in to either of our editorial addresses before 1st of April 1997. The paper should be sent on disk accompanied by two paper copies. The editors of the journal will, in co-operation with the journal's editorial advisors, judge the submissions. The editors' decision will be final and no correspondence will be conducted.

The winner(s) of the writing contest will see their submission published in the journal and be awarded a financial prize of the equivalent of 300 - ECUs as well as a free subscription to the next volume of the journal.