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Elderly Life Sentence Prisoners: Physical and Psychiatric Morbidity, Prison Experiences and Access to Appropriate Healthcare

By

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Abstract

This thesis examines the psychiatric and physical morbidity of elderly life and indeterminate sentence prisoners. It explores contributory factors to their ill health, their prison experiences and access to the provision of current primary and secondary healthcare. A total of 181 prisoners aged 55 years and above were interviewed at two Category B prisons, HMP Kingston and HMP Albany. Prisoners' physical health was assessed by self-report and from the prison medical record. Three reliable and validated screening instruments were used to assess their cognitive status and functional ability, and in a small subset, (N=121) depressive symptoms were recorded. Current healthcare delivery is assessed using the principles and standards as defined in the National Service Framework for Older People, together with the efficacy of Clinical Governance. Qualitative data gathered at interview details prisoners' views on their overall experiences of health at different stages of sentencing, including access to and the provision of healthcare.

Changes in criminal justice policy over the last decade have resulted in a significant increase in the number of elderly life/indeterminate sentence prisoners in England and Wales whilst the proposed partnership between the Prison Service and National Health Service (NHS) was to be fully operational from April 2006. Contemporary studies of elderly prisoners and their health care needs are limited in number and since psychiatric and physical morbidity regardless of type or origin is usually more common with increasing age, an ageing prison population should demonstrate a high incidence of multiple-pathology and morbidity.

The results clearly indicate that elderly lifers demonstrate high levels of multiple physical health pathology and high rates of depressive illness although cognitive function is similar to age matched controls. Length of prison sentence, as a proxy for exposure to the prison environment, does not appear to relate to the burden of ill health. Ill health appears to be a characteristic of this population's demographics.

As the Prison Service now embarks upon un-chartered territory having reached maximum population capacity policymakers will have to address the specific needs of those prisoners who will spend the remainder of their lives in prison as well as those who will be released in old age.

Dedication

To my wife Christine and our children Oliver, Tristam, and Naomi for their consistent and tireless support

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By the Author

Original paintings by the author have been used as illustrations in the text.

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Chapter 1

General Introduction and Background

Chapter 1 outlines the scope of the thesis. It presents an historical and current overview of the prison estate including prisons and prisoner populations, prison turnover and the extent of overcrowding. Prisoner demographics and criminogenics are discussed. Sentencing rules and current legislation are examined in particular life and indeterminate sentences, together with the tariff, its consequences, and issues surrounding parole. Ageing prisoners and their typology are explored in addition to their vulnerability and adaptation to prison life. Prison healthcare its origins and development is reviewed with existing medical arrangements and clinical provision, including the newly agreed partnership between the Prison Service and the National Health Service.

1.1 The Scope of the Thesis

Picture 1-1 Depiction of the gates of a typical Victorian Prison

Nicholas Murdoch (2006)

This thesis examines the psychiatric and physical morbidity of elderly life and indeterminate sentenced prisoners. It explores contributory factors to their ill health, assesses their access to and the delivery of current primary and secondary healthcare together with their prison experiences.

A total of 181 prisoners aged 55 years and above were interviewed at two Category B prisons, HMP Kingston at Portsmouth and HMP Albany on the Isle of Wight. Prisoners' physical health was assessed by self-report and from the prison medical record. Three reliable and validated screening instruments were used to assess their

cognitive status and functional ability, and in a small subset, (N=121) depressive symptoms.

The provision of current healthcare is assessed using the principles and standards as defined in the National Service Framework for Older People (DoH, 2001) together with the efficacy of Clinical Governance and adopted models of Clinical Supervision within a custodial setting. Qualitative information gathered at interview details a range of prisoners' views on their overall experiences at different stages of sentencing, including previous, present and predicted health status, together with access to and current standard of primary and secondary healthcare. The views of prison healthcare staff on the provision of health care and their attitude towards ageing life sentence prisoners are explored in face to face semi-structured interviews. Ecological analysis determines the social and cultural consequences of imprisonment and relationships, and to what extent prisoners are influenced by their environment.

The thesis took in excess of four years to complete with data collection just over three years.

Historically, prison health care practice has been founded on tradition, assumption, and precedent. It was predominantly based upon an archaic sick call system originally conceived to treat common, minor illnesses (influenza, coughs and other ailments), whereby inadequately trained staff determined whether referral to the medical officer was warranted. It was not designed to serve the increasing number of prisoners who may be acutely, chronically, or terminally ill, and there are persistently increasing signs that the system is overloaded, failing, ineffective and inefficient. Whilst penal reform and values have, to some extent, undergone important

transformations over the last decade, Garland (1997; 1990) maintains that the realm of both practices and relations in prisons is under-explored, this despite its emergence in penology as a crucial site for both research and analysis. The majority of research has, furthermore, predominantly been directed towards the identification of prisoner coping skills; adaptation models, and the deprivations of confinement (Bolton et al. 1976; Gunn et al. 1978; Richards, 1978; Thornton, 1987; Neeley, Addison & Moreland-Craig, 1997; Lawson, Segrin & Ward, 1996; Dugger, 1990; Gallagher, 1990; Moore, 1989). The Government meanwhile has acknowledged the need to improve health care for all prisoners and as a result responsibility for prison health was transferred to the National Health Service (NHS) as from April 2006, with the aim to give them access to the same quality and range of health care services as the general population receives from the NHS.

Physical and psychiatric morbidity is known to increase in later life and have pervasive effects on older persons (DoH, 2000a). In view of their long-term exposure to known custodial risk factors, and advancing age, there are good reasons to suspect that elderly life/indeterminate sentence prisoners may demonstrate a higher incidence of chronic ill health, cognitive impairment and depressive illness with length of sentence served.

The overall clinical management of older people with chronic health disorders has metamorphosed during the last two decades into person-centred approaches to care practices (Kitwood & Loveday, 1998) with the advent of multidisciplinary teamwork and subsequent move away from incarceration to socialisation (Phillipson & Biggs, 1999).

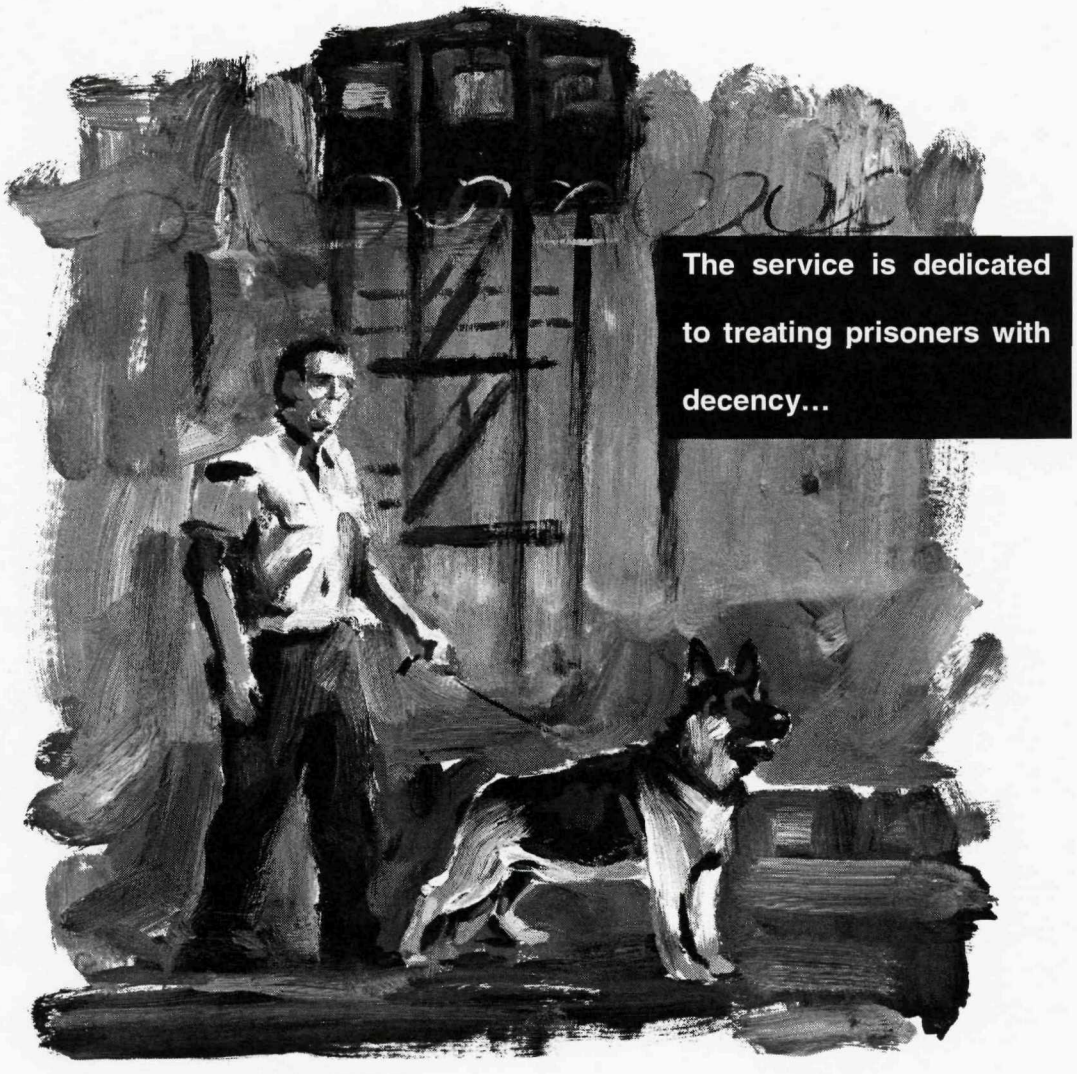
Although evidence confirms that the number of elderly prisoners is increasing, contemporary commentators (Wahidin & Cain, 2005; Cullen & Minchin, 2000; Cully, La Voie & Gefeller, 2000; Duguid, 200; Kratcoski, 2000; Rimmer, 2000; Cavan, 1987) continue to argue the requirement to identify the older prisoner as a distinct category within the overall prisoner population and the consequential formulation of a national strategy. In an effort to increase understanding, Nurse, Woodcock and Ormsby, (2003) conducted a qualitative study comprising focus groups of prisoners and staff in four local prisons in order to best identify assessment of health needs within the prison environment with a view to developing a local health improvement programme.

However, the 'elderly' debate has, over recent years, become more pressing especially in view of record prisoner population numbers and a report by the Prison Reform Trust and Centre for Policy on Ageing (Howse, 2003), concluding that the health and social care of older prisoners are not being satisfactorily met, this despite previous reassurances and recommendations contained within The Future Organization of Prison Health Care (HMP/NHSE, 1999). At the time of writing, the Prison Service has yet to publish a clearly defined strategy for this clinically demanding and growing cohort of prisoners and there are no other 'lifer specific' studies using age-specific psychometric instruments in clinical interviews to determine psychiatric and physical morbidity together with contributory factors hence larger studies using standardised, validated diagnostic screening tools are needed.

This combined quantitative and qualitative research in a population-based sample of elderly life sentence prisoners aged 55 years and above, at two Category B training prisons, HM Prisons Kingston and Albany, comprises three elements. Three

quantitative studies report chronic physical disease (N=181); cognitive impairment (N=181), and the prevalence of depressive illness (N=121). A qualitative study explores prisoners' views of their health experience in prison, including access to healthcare at different stages of their sentences. A combined qualitative and quantitative study examines the provision of current healthcare delivery using the principles and standards as defined in the National Service Framework for Older People (DoH, 2001a). It is hoped that findings from the research will generate debate and inform the prison health research development agenda by raising awareness of existing practices including both clinical and administrative approaches; have significant practical value for the prison health service, in particular the establishment of prisoner baseline results, and assist in the development of a more age-specific and clinically informed model of care for older prisoners especially pertinent in this new era of NHS responsibility.

1.1.1 Prisons and Imprisonment



Picture 1-2 Inside the grounds of HM Prison Albany

Nicholas Murdoch (2006)

1.1.2 Prison Service Statement of Purpose

"*The Service is dedicated to treating prisoners with decency in a caring and secure environment.....obtain best value from the resources available using research to ensure effective correctional practice*"

The etymology of the word 'prison' derives from the Latin word meaning 'to seize' and the national prison system in England and Wales, dates from the Prison Act 1877 (Hughes, 1987). Prisons fulfil a symbolic role in the individual unconscious, acting as a mechanism to keep people within the norms of society whilst reflecting the desire of both the state and public to express their collective disapproval of crime (Ignatieff, 1978). Between construction of Newgate Prison in the 1770s and Pentonville in 1840 the nature and character of prisons changed significantly, during which period the prison regime was described as being based on the principal of "less eligibility", whereby the condition of the prisoner should be less eligible (inferior) than that of the poor, honest citizen (Brodie & Davis, 1995).

The first half of the nineteenth century subsequently represented a watershed in the history of state punishment and prison health reform (McConville, 1998). Central to the prison regime was religion, although geographical and symbolic isolation were generally the shared political, social, and philosophical motives analogous to both prisons and the large, public asylums (Maguire, Morgan & Reiner, 1997). Throughout the course of the twentieth century the concept of the separation of the prisoner from external influences gradually became less congruent with society's views (Lacey, 1988). Prisons were silhouetted and 'screened' from public view under a cloak of protective legislation originally designed to safeguard national security (Cavadino & Dignan, 2002; Bottoms, Hay & Sparks, 1990; Maguire, Vagg & Morgan,

1985). Essential to the strategy of exercising power and control within the system had been a culture of secrecy with prison rules and the inhibiting effect of the Official Secrets Act combining to create an impermeable barrier to any oppositional voice. As a result prisoners themselves were invariably denied access to even the most basic information relating to both their continuing detention, estimated date of release together with their rights, and in many instances appropriate healthcare provision (Loucks, 2000; Plotnikoff, 1986).

The genesis of the modern prison was part of a much broader movement in which institutions of various kinds were adopted as the solution to a wide range of social problems whereby people were exiled from their communities. Pratt et al. (2005), proposed that current penal policy is returning us to a Victorian model of punishment, whereby the bureaucratic and technical requirements of the institution are again overshadowing the needs and rights of the individual prisoner.

Of all the punishments inflicted within the English penal system, imprisonment is the most problematic in terms of its impact on the overall criminal justice system, and is, by all accounts, a deeply unpleasant experience (Steele, 2002; Cooper & Berwick, 2001; van Zyl Smit & Dunkel, 2001; Hoskison, 1998; Livinstone, 1994; Young, 1987; Boyle, 1984; Fitzgerald & Sim, 1979; Cohen & Taylor, 1978). The existence of prisons and the use of imprisonment are almost universal, raising issues far beyond the buildings and populations they accommodate (Morgan, 1997), and include concerns regarding the nature and integrity of both the state and society on whose behalf they purport to act (Cavadino, 1994). Historically it was founded on punishing those who wronged society and was based upon a concept of solitude and separatism, (Pugh,1968) as demonstrated throughout the eighteenth century when,

during exercise periods, prisoners wore face masks which did not allow vision or communication (Picture 1.3.).

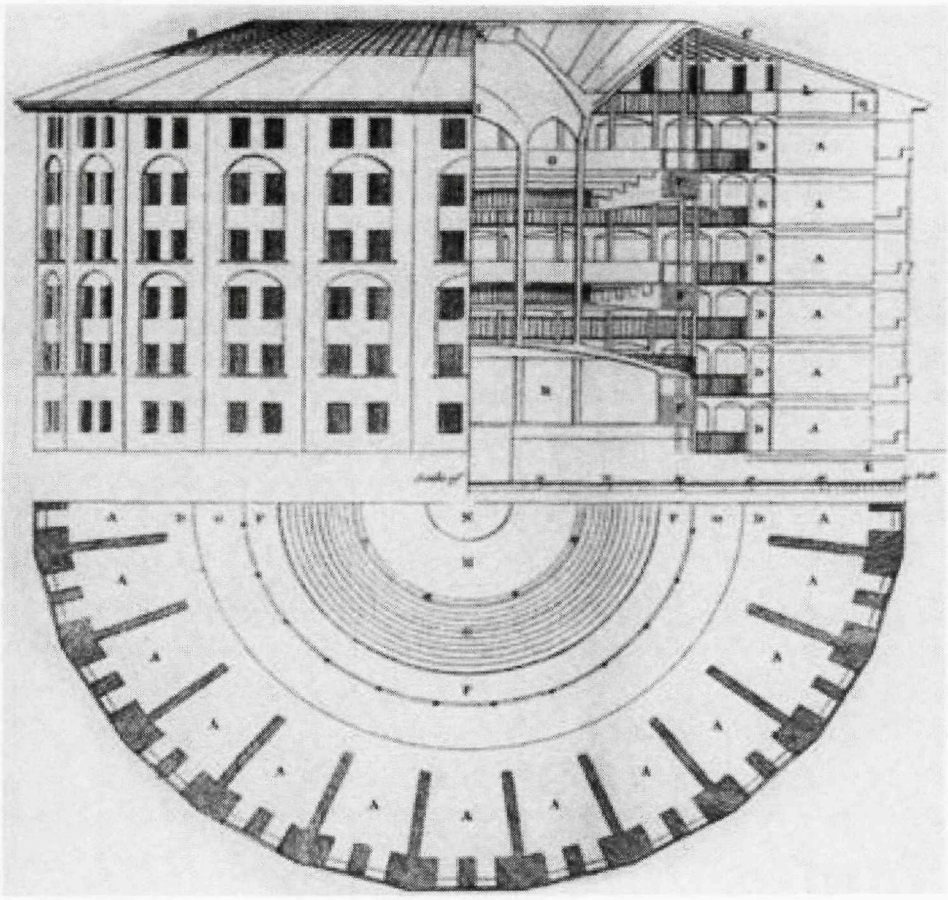
CONVICTS EXERCISING IN PENTONVILLE PRISON.

Picture 1-3 Exercising in Pentonville Prison (1840)

Its dominance within our penal tradition has been further reinforced by a tendency to conceptualize all non-custodial penalties as 'alternatives to imprisonment' as opposed to sanctions in their own right. Both the concept and practices are controversial and deeply politicised issues; the entire prison experience with its symbolic mechanisms of justice that encompass every lock, piece of 'dannet wire', thick walls, perpetual supervision, absence of choice, segregation, solitude, boredom, and minimalist lifestyles, all key elements in re-enforcing the deprivations of prison life.

Whilst the public endorses the use of imprisonment in order to protect society from dangerous offenders (Rose, 2002) there has, in recent years, according to Roberts, and Hough, (2005); Tuddenham, (2000); Blom-Cooper, (1988), been a gradual erosion in the belief regarding its other functions with Michael Howard's mantra in October 1993 at the Conservative Party Conference (when he was then Home Secretary), that 'prison works' and prison regimes should be 'austere', now viewed with considerable scepticism (O'Grady, 2002; MORI, 2000). As a result the Woolf reformist agenda (Woolf Report, 1991) was effectively dislodged, the prison population rose steeply and continues to do so, and Woolf's emphasis on justice in prisons was no longer mentioned. Discussions regarding prisoners' rights gradually gave way to a focus on incentives and privileges (Player & Jenkins, 1994), with the Woodcock, (1994) and Learmont, (1995) recommendations legitimated on security grounds, with a resulting more punitive and restrictive climate in prisons.

In 1791 Bentham designed the "panopticon", (Picture 1.4.) with prison wings radiating from a central position thereby allowing a centrally placed observer to survey all inmates. The panopticon subsequently became the model for prison building throughout the next half century, and in 1799 the Penitentiary Act specified that gaols should be built for one inmate per cell and be operated on a silent system with continuous labour (McConville, 1981).



Picture 1-4 Bentham's Panopticon Prison Building (1791)

In the United Kingdom, similar to many other western prisons, accommodation for prisoners is divided into wings that are usually identified by either a letter or number, rarely by name. The wings are further sub-divided into landings that are essentially "floors", typically containing approximately 28-30 cells; there are generally 4 floors, commonly referred to as the 'fours'. Cells are the smallest unit of accommodation for prisoners, holding either one or two individuals, with the exception of life sentence and vulnerable prisoners, who are housed in single cell accommodation. On average cells are between six and eight square metres with just enough room for a single bed, a small table and chair, and either a small cupboard or wardrobe.

The traditional goals of the prison have been built around its power to combine punishment, deterrence, prevention, incapacitation and rehabilitation (Ruggles-Brise,

1921; Ruck, 1951), and although criminal justice systems and processes may differ, the ultimate sanction imposed for offending still remains deprivation of liberty through imprisonment (Nellis, 1997). Modern prisons are complicated, multi-layered institutions with contrasting and competing pressures and are primarily dynamic locations in which the most important elements are those people who inhabit and work within them (King & McDermott, 1995; Mathiesen, 1990). They represent financially burdensome institutions (Home Office, 2001a) with the annual medical expenditure for aged prisoners three times that of the younger offender, are overcrowded (despite a significant prison building programme), a constant management challenge (Solomon, 2004), a conspicuous failure in terms of recidivism (Sabol, 1990), and are deceptively difficult environments in which to maintain a positive regime momentum (Laming Report, 2000). They accommodate clearly different communities to those outside (Liebling, 2004), and yet there is, at the time of writing, no overall national prison service strategy for housing older and/or less able prisoners, whilst local initiatives have been thwarted by limited resources, under-funding and a lack of consensus over clinical criteria thresholds.

1.2 Prison Overview

On 31st July 2007, the prison population in England and Wales numbered 80,803, including 318 prisoners held in police cells under operation safeguard (NOMS, 2007). The average age of prisoners sentenced to custody was 27 years, with a quarter aged <21yrs (Home Office, 2007). The total male prisoner population aged >50yrs was 6,517, of whom 4,338 (66.6%) were aged 50-59yrs, 1,774 (27.2%) 60-69yrs, and 406 (6.2%) aged 70yrs and over (Table 1-1).

Table 1-1 Population of prisoners aged >50 yrs, by age group and sex, England and Wales, 31st July 2007

	Males	Females	Total
All	6,517	302	6,819
50-59yrs	4,338	242	4,579
60-69yrs	1,774	53	1,827
70yrs+	406	7	412

Of the male population born in England and Wales in 1953, (now aged 54yrs) a total of 7.5% had been given at least one custodial sentence before the age of 46 years, with 33% of males born in 1953 having at last one conviction for a 'standard lost' offence before the age of 46 years (Home Office, 2001).

1.3 The Prison Estate

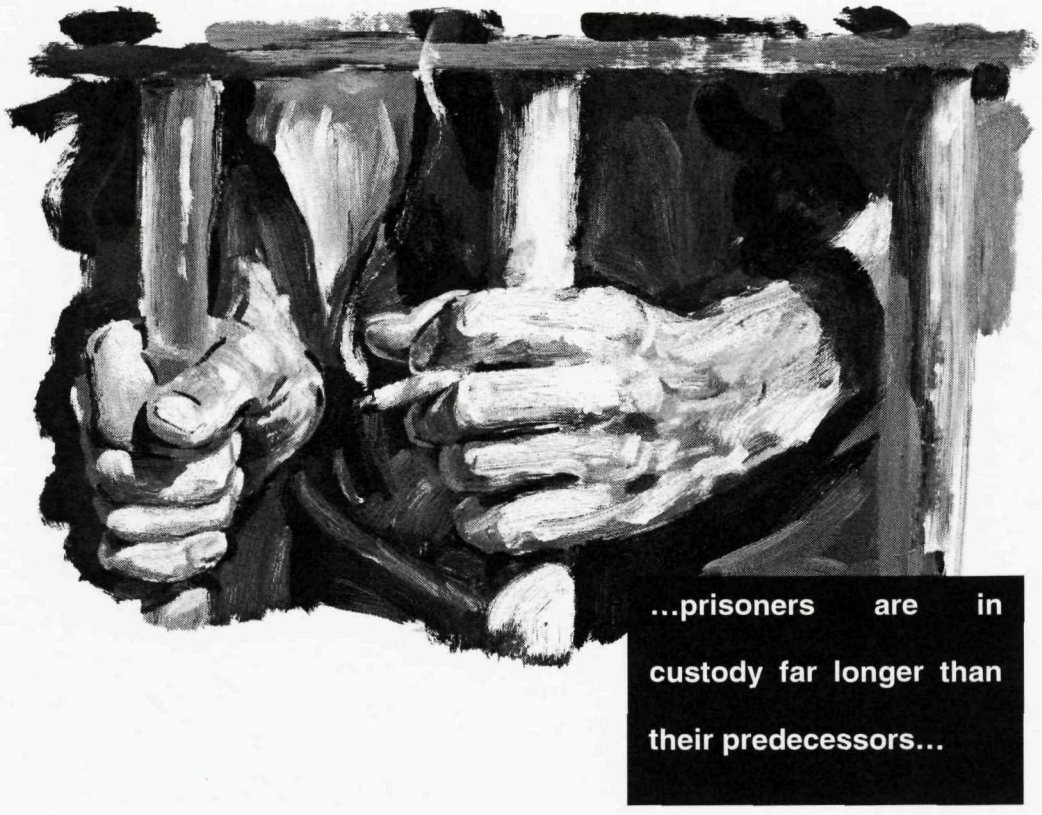
As closed societies with hierarchical structures, in which prisoners have little control over their own lives, prisons are, in the main, generally designed and built for the young able-bodied. Prisons vary in prisoner type and are classified into Local, Training, and High Security establishments, housing prisoners at different stages of their sentences (Table 1-2).

Table 1-2 Prison Types in England and Wales

Local Prisons	Holds prisoners who are first sentenced. A number of local prisons are also remand centres. Sentenced prisoners are transferred to training prisons unless their sentences are very short. The combination of remand prisoners and short sentences result in local prisoners having a very high turnover.
Training Prisons	Where the majority of prisoners will serve their sentences. Closed prisons take those prisoners in Category B and C. Open prisons take those prisoners who are predominantly Category D.
High Security Prisons	Hold mostly Category A prisoners and those serving long sentences. For security reasons prisoners are usually rotated between high secure prisons, hence the term Dispersal prison.

The 'modern day' prison estate is diverse comprising small and large establishments, each serving different roles, and widely distributed geographically. Operational services consist of units grouped into operational formations by function and/or geography. Establishments are categorized by degree of security, with prisoners segregated by gender and category of risk (Mountbatten Report, 1966). Despite significant improvements in existing regimes, safe-keeping generally comprises:- keeping inmates locked in cells; being counted and controlled, with the provision of occasional welfare activities to satisfy needs through recreation, education, and work (Bryans & Jones, 2001; Stern, 1993). There are at present 146 prisons (ranging in size from 94 to 1510 prisoners), all of which are currently operating at almost full capacity (Home Office, 2004a). When the national prison estate is under pressure from an ever increasing population, increasing numbers of prisoners are transferred (from one prison to another) for the purpose of balancing capacity (Evans, 1980), which in turn further increases turnover in individual prisons with a resulting deficit between the supply and demand of approved staffing levels, healthcare provision and additional logistical requirements (Coyle, 2002).

1.4 Prison population



Picture 1-5 An older prisoner during evening association

Nicholas Murdoch (2006)

Most contemporary prisoners are in custody for far longer than their predecessors, with the growth in their numbers not being matched by an expansion in available prison places. The proportionate use of imprisonment gradually declined until the 1980s (Hudson, 1984), increased markedly during the early 1990s (Hucklesby, 1994) and has doubled in the last decade, this despite there being no increase in the numbers of offenders dealt with by the courts but an increase in recorded crime. Social and economic groupings in society are not evenly represented in prison populations. The prisoner population is overwhelmingly male (95%), far from homogenous, has an age-sex distribution distinct from that of the general population

(79% aged 15-39yrs compared to 35% in the general population), has a very high turnover, with different groups of prisoners having diverse needs.

At the end of July 2007, there were 5, 815 prisoners aged >50 years in England and Wales. Just under two thirds (66.5%) were aged 50-59 years, over one quarter (27.9%) were aged 60-69 years, with six and a half per cent aged 70 years and over.

1.4.1 Custody Rates

In 2001, custody rates for almost all categories of offence were higher in comparison to ten years previously (1991), and between 1989 and 1999 they rose from 17 to 25% (Penal Affairs Consortium, 1999) with an accompanying dramatic increase in the number of prisoners awarded very long sentences (Hough, Jacobson & Millie, 2003). Contemporaneously long-term inmates as a group are increasing both in number and average age, and are considerably older at the point of conviction in view of existing harsher sentencing measures. In 2002 following the perceived shift in societal responses to sex offending and related crimes, about half of older male prisoners (48%) under sentence were sex offenders (Home Office, 2003a), with the steep rise witnessed over the last decade projected to continue during the next five years (2005-2010). Garland, (2002) and Ashworth (2000; 2003) both maintain that such population growth can be viewed as an integral feature of the 'late modern' penal scene in the majority of countries. This population surge has not, however, been a consequence of a rise in the crime rate, which when measured by official statistics or victimization surveys, has fallen, year on year since 1995 (Bottoms, Rex, & Robinson, 2004).

1.4.2 Turnover

In general terms the prison population is characterised by a high turnover, with the overall number of new receptions approximately four times greater than the average daily population. In England and Wales, over 200,000 people flow in and out of prison each year, many staying only a few months. The turnover is relatively high in both local and remand prisons and low in training and high security establishments and is both crucial in terms of the assessment and planning of health care service delivery.

1.4.3 Imprisonment Rate

England and Wales now has one of the highest imprisonment rates in Western Europe at 141 per 100,000 of the population (a rise over the last six years (since 1999) from 125 per 100,000); 44% higher than Germany (98 per 100,000), and 52% higher than France (93 per 100,000) (Prison Reform Trust 2005). The United Kingdom is deemed to be the most punitive nation in Western Europe followed by France and Germany whilst in the developed world New Zealand has the 2nd highest population per capita, 169 prisoners per 100,000 population (second only to the United States). At the time of writing the number of people in penal custody is currently 76,179 (Table. 1-3), representing an increase of 2389 (3.2%) over the past year with a prisoner/staff ratio of 3:1 (Home Office, 2005).

1.4.4 Overcrowding

The prison system has been overcrowded in every year since 1994 (Home Office, 1999), although none during the 1950s. However, regardless of any endeavour to limit the prison population growth, overcrowding remains a uniquely British phenomenon (Cavadino & Dignan, 2002; Levenson, 2002; Prison Reform Trust,

1999; Penal Affairs Consortium, 1995; Scraton, Sim & Skidmore, 1991; NACRO, 1991; Humphry & May, 1977), and at the end of 2002, approximately 16 prisons were overcrowded by a little in excess of 30% (Prison Reform Trust 2003a). By the end of the decade Home Office projections predict a prison population of between 91,400 and 109,600, (White, Woodbridge & Flack, 1999) in marked contrast to 1946 when there were 40 prisons, approximately 15,000 prisoners and 2,000 staff with a prisoner staff ratio of 7.5:1 (Home Office, 1947). The annual average cost per prisoner in 2003-2004 was £37,305 (Home Affairs Select Committee, 2005), increasing to £40,992 in 2007 (Hansard, 2007), and since 1995, over 15,200 additional prison places have been provided at a cost of more than £2 billion (Hansard, 2003).

Table 1-3 Prison Population in England and Wales

Total Prison Population	76,179
Total Baseline CNA	71,798
Total In-Use CNA	68,880
Total Operational Capacity	78,987

- Certified Normal Accommodation (CNA) - Prison Service own measure of un-crowded capacity;
- Baseline CNA - The total of all certified accommodation in an establishment except, normally, cells in punishment or segregation units and healthcare cells that are not routinely used to accommodate long-stay patients;

- In-use CNA - This is baseline CNA less those places not available for immediate use, for example, cells affected by building works or damaged cells;
- Operational Capacity - Total number of prisoners an establishment can hold taking into account control, security and appropriate operation of the planned regime. It is determined by area mangers on the basis of operational judgement and experience and is often greater than CNA.

1.4.5 Demographics

Prison is a demographically unrepresentative environment, (Fig. 1-1) having a predominantly young, male population with a little under one third aged between 16-30yrs and nearly half the population unemployed prior to imprisonment (Simon, 2000), with 70% having no employment or placement in training on release (Prison Reform Trust, 2006). Remand prisoners represent approximately one fifth of the population. The average time spent in custody for untried prisoners in 1997 was 51 days for males, but there were 200 untried prisoners who had been in prison for more than one year in 2003 (RDS,2003).

- 20% of prison population is on remand
- 5% of population is female
- 60% of prisoners are between 16 and 30 years of age
- 14% of population is from a minority ethnic group
- 50% have no educational qualifications
- 49% were unemployed prior to entering prison

Figure 1-1 Characteristics of Overall Prison Population

1.4.6 Criminogenics

Prisoners are a particularly socially excluded group, are overwhelmingly in their twenties, (the modal age of male prisoners received under sentence is 28yrs), male, disadvantaged, repetitive property offenders and are drawn disproportionately from groups that are socially and economically marginal to life in the community, (Simon, 1999) although it is unclear to what extent their marginality preceded or followed their typically repeated convictions. Less than one third were homeless prior to imprisonment (Home Office, 2001), whilst a similar proportion will be on release (Niven, & Stewart, 2005). A survey of prisoners conducted in 1991 revealed 83% belonged to manual, partly skilled or unskilled groups (compared to 55% of the population generally), and exhibited telling indicators of social stress, with 23% having been in local authority care below the age of sixteen (compared to 2% of the general population). In society as a whole less than 9% of the population is from an ethnic minority group (ONS, 2001a) whereas 19% of male prisoners are members of ethnic minorities with two-thirds Afro-Caribbean (Creighton, & King, 1996) and an additional 11%, nationals from other countries.

1.5 Sentencing, Life and Indeterminate Sentences

"*No one can waste so much of the past and forfeit so much of the future as I have without thinking deeply about the reasons for what is on anyone's count a travesty of a life. Prison yesterday, last week, last month, last year; prison tomorrow, next week, next month, next year.*"

John McVicar (1974). pp. 211.

Sentencing is an arcane, flexible and indefinable craft (Stone, 2000) hence it not unexpected that judges and magistrates often demonstrate a significant

misunderstanding of sentencing principles (Magistrates' Association, 2003; Henham, 1990), and are frequently influenced by situational factors, predominantly political and media contexts, both of which have been relentlessly punitive (Gibson, 2004; Clarkson & Morgan, 1995). The events of recent years have served to sharpen interest in examining the justification for sentencing in general and for particular sentencing policies (Vaughan, 2002; Von Hirsch & Ashworth, 1998), with the selection of a sentencing framework for any given jurisdiction being a complex issue, in part dependent on the overall constitutional arrangements in the host country and partly on normative choices (Bottoms, 1995; Pease, 1994). The courtroom is, according to Rumgay (1995), a poor environment for effective information processing, prompting simplifications and short cuts in reasoning and until recently the considerable discretionary powers of sentencers were largely exercised in a policy vacuum, with alleged inconsistencies in sentencing, according to Tonry and Hatlestad, (1997), frequently giving cause for concern. Paradoxically the courts hear only a small percentage of cases and the offences for which the courts have to pass sentence are both quantitatively and qualitatively different from what can be described as the social reality of crime.

1.5.1 Sentencing Rules

The basic rules of custodial sentencing in England and Wales are currently to be found in Sections 79 and 80 of the Powers of Criminal Courts (Sentencing) Act 2000, a codification of earlier legislation, although the proportionate use of custody during 2001/2002 was higher for almost all categories of offence in comparison to ten years earlier (Shapland et al. 2004; Simon & Feeley, 2003) following the introduction of mandatory sentences in the Crime (Sentences) Act, 1997 which marked the culmination of a trend towards the increased politicization of sentencing policy. Two

major policy reviews: the Halliday Report (2001) - a review of sentencing, and the Auld Report (2001) - a review of criminal courts, both represented part of New Labour's Modernising Government projects, the leading principle of which still is that custodial sentences should be commensurate with the seriousness of the offence, which to date have resulted in increasing both the size and nature of the prison population.

1.5.2 Custody Rates

In 2003/2004 the custody rate rose from 5% to 15% in the magistrates' courts and from 45% to 63% in the Crown Court. In a recently published report, Carter (2003) concluded that the increased sentencing rate/severity was attributable to the interaction between legislative and sentencing guideline changes, reduced sentencer confidence in fines, and the relationship between public perception, media, politicians, and sentencers, although these 'principles' were subject to a number of exceptions. Likewise, maximum sentences are regularly adjusted by Parliament, almost always in an upward direction. The courts have the power to pass 'extended sentences' on sex offenders with the net effect being to lengthen the period of time during which the offender remains on licence, under supervision and 'at risk', for a period of up to ten years and more recently beyond (Prins, 2002). Prisoners who are recalled during this period are eligible to be considered by the Parole Board for re-release on licence and may have their cases considered on an annual basis (Crime and Disorder Act, 1998). The licence may last until the very end of the sentence.

1.5.3 Life Sentences

During the period between 1900 and 1945, a total of 15 lifers served less than one year, 53 served one to three years, with only one lifer serving 22 years (Padfield, 2002; McGeorge, 1995). In 1945 approximately 80% of offenders sentenced to immediate imprisonment were serving six months or less, life sentences were rare, and prisoners serving determinate sentences of 10 years and over almost unknown (Padfield, Liebling & Arnold, 2003). By 1953, it was exceptional for anyone to serve more than 15 years and sentences were usually much shorter. When capital punishment was finally abolished in 1965, it was intended that a strong, rigorous alternative was required, hence the formulation of the life sentence.

Cullen and Newell, (1999) in their book 'Murderers and Life Imprisonment' summarize the scale of and record increases in the levels of lifer imprisonment and the response of successive governments to these events. The book is predominantly descriptive, examines a wide range of effects of life imprisonment for both mandatory and discretionary lifers and explores beyond the current dynamics to the wider questions of the ethics of life imprisonment as punishment. The authors conclude by highlighting issues such as containment, treatment, public safety and risk whilst suggesting that the time is right to re-assess our dependence on such a sentence in which their lies a fundamental dichotomy that of creating maximum dependence in a group that is being assessed for their ability to survive in independent freedom.

1.5.4 The Death Penalty

Following abolition of the death penalty the number of convictions for murder increased considerably. Under Section 1 of the Murder (Abolition of Death Penalty)

Act (1965) having convicted a person for the offence of murder, a court must sentence the offender to life imprisonment. The court has no discretion in this case, as it is a mandatory penalty. In the first 12 months (1965/66), 88 prisoners were committed to prison with sentences in excess of 10 years, including life: 862 such prisoners were received in the year 2000 (Home Office, 2001b; NACRO, 1995; Padfield, 1993). With the exception of Portugal where life imprisonment is specifically outlawed by the constitution (Van Zyl Smit, 2001; Van Zyl Smit & Dunkel, 2001), industrialised nations have experienced rapid almost exponential growth in lifer prison populations during the last two decades, (Cullen & Newell, 1999), with the United Kingdom having more life-sentenced prisoners in absolute figures (as opposed to per head of population) than the whole of the remainder of Western Europe combined (Stone, 1997).

1.5.5 Life Sentence Plan

Life sentences are for life, the first part served in prison, the second part, which lasts for the remainder of the person's natural life, served under supervised licence in the community ('Zeno', 1968; Van Zyl Smit, 2002). All lifers in England and Wales have a Life Sentence Plan. Life sentence prisoners are categorised and allocated to an establishment within 28 days of sentencing (Stone, 1997). Thereafter they are prepared for progressive moves through various stages of their sentence, (Fig. 1-2. - Carlisle, 1988) to be served at designated prisons; Main centre, Category B, Category C, (both closed) prior to release, if felt appropriate on life licence in the community. Life sentence prisoners are not transferred from closed to semi-open conditions (Category D prisons) unless work on offending behaviour has been completed (Home Office, 1988).

Typical Male Lifer

- Local Prison (High Security, Category B)
- First Stage (Dispersal, Category B)
- Second Stage (Dispersal, Category B & C)
- Release (Category D/Open)
- Life Licence (Community)

Figure 1-2 Stages of a Life Sentence - Carlisle (1988).

1.5.6 *Category of Offence*

Almost 90 per cent of all lifers have been found guilty of murder or manslaughter, with the next highest life sentence category rape and serious sexual crimes. Life imprisonment is the mandatory sentence for murder committed by someone aged >21 years; a discretionary maximum sentence is given for a number of other serious offences including manslaughter, robbery, arson, rape, and kidnapping and for certain offences under the 'two strikes' provisions of the Crimes (Sentences) Act 1997 (Justice, 1996; Fig. 1-3). At the point of sentence the trial judge sets the tariff, a period that the offender must serve in prison as the punitive part of the sentence.

Mandatory

The only possible sentence if convicted of murder

Age related variants

Adults over 21yrs	Imprisonment for life
18 to 21yrs	Custody for life
Under 18yrs	HMP - Detention during Her Majesty's Pleasure

Discretionary

Given when the risk of re-offending is so grave that the judge decides only a life sentence is appropriate

Age related variants

Adults over 21yr	Imprisonment for life
18 – 21yrs	Custody for life
Under 18yrs	Detention for life

Automatic

Under Section (2) of the Criminal Justice Act (1997), a life sentence may be imposed automatically upon a second conviction for a serious violent or sexual offence

Offender must

Be over 18yrs of age

Have committed a second offence after October 1997

Figure 1-3 Types of Life Sentence

Figure 1-3 has been adapted from Sentenced for Life: Reform of the Law and Procedure for Those Sentenced to Life Imprisonment (Justice, 1996).

1.5.7 Lifer and Indeterminate Population

From 1987 to 1997, there was a 58% increase in male lifers and an 85% increase in female lifers in England and Wales (Home Office, 1998). In 1997, released mandatory lifers in England and Wales had served on average 14.4 years, discretionary lifers 13.3 years with a total of 296 prisoners remaining in custody having then served in excess of 20 years (HMIPP, 1999). A review by the Inspectorate of Prisons and Probation in 1996/97 revealed a substantial rise in the intake of lifers, from 253 per annum over the previous 9 years, to 384; of particular

concern were the 60% of life sentence prisoners who had passed their tariff (minimum term served to act as a deterrent) by more than one year. However, as well as an increase in numbers, there has been a constant rise in the length of time these prisoners have to serve before being conditionally released. In 2006, a total of 30 prisoners in England and Wales were serving a 'whole life tariff' (Home Office, 2006).

Table 1-4 Population of male prisoners > 50 years, by age group, sentence length and offence group, England and Wales, 31st July 2007.

	Less than or equal to 6 months	6 months less than 12 months	12 months less than 4 years	4 years less than life	Life	Total	%
Total 50+	**176**	**78**	**1,018**	**3,021**	**1,523**	**5815**	
Violence against the person	36	8	130	257	1,054	1,486	*26%*
Sexual offences	6	6	370	1,5825	346	2,309	*40%*
Robbery	1	-	8	76	28	112	*2%*
Burglary	4	2	54	57	6	122	*2%*
Theft and handling	25	8	52	29	-	114	*2%*
Fraud and forgery	9	8	76	86	-	178	*3%*
Drug offences	3	5	130	773	1	911	*16%*
Motoring offences	42	11	10	3	-	65	*1%*
Other offences	51	31	181	147	85	494	*9%*
Offence not recorded	1	-	6	12	3	22	*0%*
50-59	**142**	**53**	**677**	**1,921**	**1,017**	**3,811**	
Violence against the person	32	8	103	209	723	1,076	*28%*
Sexual offences	4	4	179	799	203	1,188	*31%*
Robbery	1	-	6	68	23	98	*3%*
Burglary	4	2	48	50	6	110	*3%*
Theft and handling	19	6	43	23	-	91	*2%*
Fraud and forgery	8	5	56	65	-	133	*3%*
Drug offences	3	5	102	586	1	698	*18%*
Motoring offences	34	9	6	3	-	52	*1%*
Other offences	37	15	129	107	59	346	*9%*
Offence not recorded	1	-	4	10	3	18	*0%*
60-69	**30**	**23**	**272**	**884**	**411**	**1,620**	
Violence against the person	4	-	24	42	277	347	*21%*
Sexual offences	2	2	140	597	108	848	*52%*
Robbery	-	-	1	4	4	9	*1%*
Burglary	-	-	6	6	-	12	*1%*
Theft and handling	6	2	9	5	-	22	*1%*
Fraud and forgery	1	3	16	21	-	41	*3%*
Drug offences	-	-	25	173	-	199	*12%*
Motoring offences	7	2	4	-	-	13	*1%*
Other offences	10	14	45	33	22	124	*8%*
Offence not recorded	-	-	2	2	-	4	*0%*
70+	**4**	**2**	**68**	**215**	**95**	**384**	
Violence against the person	-	-	3	5	55	63	*16%*
Sexual offences	-	-	51	187	35	273	*71%*
Robbery	-	-	1	3	1	5	*1%*
Theft and handling	-	-	-	1	-	1	*0%*
Fraud and forgery	-	-	5	-	-	4	*1%*
Drug offences	-	-	2	13	-	15	*4%*
Other offences	4	2	7	6	5	24	*6%*

At the end of July 2007 across the prison estate 1523 male prisoners aged 50 years and over were serving life sentences, representing 26% of overall prisoner population aged >50 years (5815) and an overall 2.9% annual increase reflected in specific index offences since 2006 (Table 1.4 - Dept. of Justice). Just over one quarter (26%) were aged between 50-59 years, 25% aged 60-69 years and 24% aged 70 years and over. A total of 1,056 prisoners serving life sentences were aged 50-59 years, of whom 203 (19%) were sex offenders with 757 (72%) having committed violence against the person. One prisoner was serving life for drug offences. The number of sex offenders serving life sentences reduced in absolute terms with increasing age but increased proportionally to a maximum of 37% in prisoners aged 70 years and over. Violence against the person proportionally reduced with ageing (72% aged 50-59yrs; 68% aged 60-69yrs; 58% aged >70yrs). A total of 2,603 prisoners on life or indeterminate sentences were in local prisons with the majority waiting for transfer to first stage lifer prisons (Hansard, 2007).

In April 2007 the number of prisoners serving indeterminate sentences for public protection was 2,547 (Hansard, 2007), an increase of 1,000 since October 2006 when the number stood at 1,575 following their introduction in 2005. The average tariff length was approximately 30 months (NOMS, 2007). There were 8,997 people serving indefinite sentences at the end of March 2007, a rise of 31% on the year previously (NOMS, 2007).

1.5.8 Sentence Length

All bands of sentence lengths increased between December 2003 and December 2004 with the exception of less than or equal to the six months band which has fallen by 2% (NOMS, 2005). Those on sentences of greater than six months to less than 12 months and life sentence prisoners showed the largest increases, (both up by

5%) when compared to the same period a year earlier. This continuing trend reflects generally harsher sentencing policies in relation to indeterminate/mandatory life sentences and sex offenders, in turn leading to the accumulation of ageing offenders with these profiles (CJS, 2001; Green, 1998). There were 5,758 life sentence prisoners at the end of December 2004, an increase of 5% since December 2003, with the total of male and female life sentence prisoners having increased by five per cent and two per cent respectively (NOMS, 2005) (Table 1-5).

Table 1-5 Life sentence prisoners by custody type - NOMS (2005)

Gender	Adults				All Lifers
	Life/Detained for Life S.53(2)	Custody for Life	HMP S.53(1)	Total	
Males	4320	280	160	4750	4900
Females	140	6	4	150	164
Total	4460	286	160	4900	5758

S. 53 (1) refers to inmates detained 'during Her Majesty's pleasure under Section 53 of the Children and Young Persons Act (1933).

S. 53 (2) denotes inmates sentenced to 'Detention for life' under Section 53 of the same Act.

'Custody for Life' is passed on any person aged over 18yrs, but <21yrs convicted of murder or any other offence for which an adult would receive a life sentence.

In 1990, lifers serving sentences in custody in the United Kingdom numbered 3,054 compared with 2,688 in other Western European jurisdictions (McGeorge, 1990). From 1987 to 1997, there was a 58% increase in male lifers and an 85% increase in female lifers in England and Wales (Home Office, 1997), and at the end of February 2005, at total of 5,758 prisoners were serving life sentences (Male 98%; Female 2%) of whom 32 are serving natural/whole life. This compares with an increase of 5% since February 2004, fewer than 4,000 in 1998, and 3,000 in 1992. Of those, serving life sentences 70% were convicted of murder, 13% (the next largest group) serving

sentences for manslaughter and other offences of violence against the person, and a further 10% serving sentences for rape or other sexual offences. If current trends continue, by the year 2007, the number of Section 2 lifers (second serious offence) would reach over 6,000 (Councell & Simes, 2002). Whilst only a small number are serving 'natural/whole life' sentences, a substantial minority will enter advanced old age in prison and several will die before completion of their sentences.

Data from the Offenders and Correction Unit (HMP/RDS, 2003 - Table 1-6) on the overall number of prisoners serving life sentence by age group reveal there to be 855 aged 55 years and over in the total lifer population of (5758), of whom 24.3% are aged between 61-70 years, 5.4% aged between 71-80 years, 0.5% aged between 81-83 years, with the oldest being 84 years. This inexorable rise poses a serious logistical problem for the Prison Service, and according to Narey, (2001; 2002) a more proactive approach to addressing the matter is warranted with a view to deciding upon more effective long-term solutions.

Table 1-6 HMP - RDS (2003) Lifers - Age Range

Overall number of prisoners currently serving life sentence by age group:	
Between the ages of:-	
41 and 54yrs	1245
55 and 60yrs	597
61 and 70yrs	208
71 and 80yrs	46
81yrs+	4

1.5.9 Release

Until 1948, life sentence prisoners could be, and were, released under the royal prerogative with release appearing to have been exercised generously, but the absence of a cohesive policy for lifers within the prison system had resulted in a lack

of strategic planning although the principles governing their overall management (HMIPP, 1999) were designed in order to strike an appropriate balance between risk, dangerousness and offending behaviour (Table 1-7). At present, critics of the judicial system remain cynical about releasing lifers, questioning both the potential consequences and whether the strategy is in the public's best interest. Before 1965, less than 20 life sentence prisoners had been released on licence in any given year, contrasting sharply with 1982, when the figure had risen to over one hundred (Coker & Martin, 1985). A combination of presumed gravity and risk together with apparent difficulties in identifying appropriate resettlement opportunities has resulted in extending the length of time actually served.

Table 1-7 Principles for Management of Lifers

- Keeping them in custody and ensuring the safety and protection of the public
- Assessing potential risk of re-offending and monitoring this throughout their sentence
- Allocating them to prisons whose regimes best meet individual needs
- Assisting them to identify, address and modify their behavioural problems and attitudes
- Assisting them come to terms with their offence
- Ensuring that their suitability for release is objectively assessed by staff in a range of settings

Home Office (1999)

1.5.10 Problems in Sentencing

Equally, life sentences present distinctive problems for sentencers, the penal system, and, not least the prisoners, the latter who bear the uncertainties and unique dependence of this sentence (Bottoms & Light, 1987). Issues of determinacy, risk assessment, and the tariff ultimately result in the dilemma of indeterminacy although

this has not inhibited the United Kingdom from steadily increasing resort to life imprisonment. It now appears that the paradox posed by life imprisonment is best described as it being neither a sentence for life nor a genuinely indeterminate sentence.

1.6 The Tariff

The courts may be said to operate a kind of 'tariff' when calculating the length of custodial sentences, generally developed over many years, shaped and assisted by judgements of the Court of Appeal. At the point of sentence the trial judge sets the tariff, a period that the offender must serve in prison as the punitive part of the sentence, hence the number of mandatory lifers significantly exceeds the number of discretionary lifers.

In June 2000 there were 4,540 prisoners serving life sentences in prisons (Home Office, 2001c), since when the number has continued to rise partly due to the increasing numbers of convicted murderers (all of whom are given a mandatory life sentence) and to the increasing number of discretionary and automatic life sentences. Not only has there been this large rise in the total population, but the amount of time prisoners have been serving in prison on a life sentence has also been rising, although one would expect that the number of people released on life licence since 1967 would grow as the population as a whole as grown.

All life sentences are indeterminate with time in custody depending on the tariff (the minimum time in custody required to meet the needs of retribution and deterrence) and risk (the degree of risk the offender may pose to the public) (Table 1-8). The sentence differs from others by there being a minimum time to be served in custody

set; there is no specified release date or maximum time a person may spend in custody; if released the person will be subject to licence conditions for the remainder of their life (Hood, 1974). Behaviour is monitored whilst in custody, with the consequences of any actions having considerable impact upon progression through the system. The tariff setting system came into effect in 1983 when Leon Brittan, the then Home Secretary, proposed using his discretion to ensure murders of police officers, terrorist murders, sexual or sadistic murders of children and murders by firearm in the course of a robbery, attracted tariffs of at least 20 years.

Table 1-8 Relationship of Tariff to Risk

Low Risk-Low Tariff	**Low Risk-High Tariff**
Single domestic murder under mitigating circumstances	Horrific offence triggered by unique catastrophic events or stress factors
Criminally unsophisticated	Very situational and unlikely to occur
Good chance of rehabilitation	A management problem-coming to terms with both the offence and the length of time in custody
Fast streamer, unlikely to present management problems	
	Long-term imprisonment as an excessively long sentence could significantly change the individual if good behaviour is not recognised by some form of rewards system
Stable personality	
High Risk-Low Tariff	**High Risk-High Tariff**
Repeated relatively minor offences, compared to murder	A recidivist re-commits a serious offence
High risk due to criminal lifestyle, and/or personality disorder	Personality problems
May be socially inadequate and likely to deteriorate	Rehabilitation chances poor
Becomes a control problem if expectation of early release is not fulfilled	May become subversive. Unlikely to to co-operate with treatment in early years of sentence
Nothing to lose case	

Table 1-8 has been adapted from: A companion guide to Life Sentences (Stone, 1997).

1.6.1 Setting the Tariff

Setting the tariff (Table 1-9) therefore signifies the gravity of the offence, and is necessary to satisfy the demands of retribution and deterrence. The tariff is recommended by the trial judge and referred to the Lord Chief Justice who makes the final decision (Padfield, 1997). Life sentence prisoners will not be released until the parole board has decided that risk to the public is significantly reduced, and in

the case murderers, Home Office approval has been granted. The concept of the 'whole life' sentence, never to be released, is becoming increasingly difficult to justify, as refusal of parole must now be based only on continuing risk to the public. There are currently in excess of 22 'whole life' prisoners, although according to Samuels (2003) a challenge in the European Court of Human Rights seems inevitable.

Table 1-9 Setting the Tariff

Mandatory
• The trial judge writes a report of the trial and makes a recommendation for tariff
• The Lord Chief Justice and a panel of judges consider judicial recommendations and any representations by the prisoner, prior to making the final decision on the tariff
Discretionary & Automatic
• Set by the trial judge
• Sets tariff in open court at time of conviction
• May take remand time into consideration
Her Majesty's Pleasure (HMP) lifers
• The tariff is set by the judiciary

Table 1-9 has been adapted from: Fixing the Tariff and Length of Her Majesty's Pleasure (Padfield, 1997).

1.7 Contemporary Legislation

In May (2003), in the biggest overhaul of murder law for nearly 40 years, the Home Secretary announced a landmark change to the way in which murderers would be sentenced in England and Wales, as distinct from Scotland and Northern Ireland. He re-affirmed that life would mean life for the most serious offenders and detailed the principles underpinning sentences for murderers that more effectively reflected the

seriousness of the crime. The principles confirmed that anyone who abducted and murdered a child should never be released from prison. Whole life terms would also be imposed for terrorism, murder, and multiple murders that were premeditated, sexual or sadistic. The aim of the principles (that would ultimately be enshrined within the Criminal Justice Bill - Home Office/House of Commons, 2003) was to provide clarity, consistency and confidence in the sentencing of murderers whilst ensuring that Parliament retained a key role (Fig. 1-4).

Whole life will be the proposed starting point for adult murderers in respect of:

- Multiple murders (two or more) that show a high degree of premeditation, and involve abduction of the victim prior to the killing and are either sexual or sadistic
- Murder of a child following abduction or that involving sexual or sadistic conduct
- Terrorist murder
- The offender has previously been convicted of murder

Second level attracting a starting point of 30yrs:

- Murders of police and prison officers during course of duty
- Murder involving the use of firearms or explosives
- Killing done for gain (burglary, robbery etc includes professional contract killing)
- Killing intended to defeat ends of justice (killing witness)
- Race/religion/sexual orientation motivated
- Single sadistic or sexual murder of an adult
- Multiple murders (excluding those above)

Any other murders will have a 15yr starting point on which judges can build as necessary to ensure the appropriate sentence

Figure 1-4 Principles proposed within the Criminal Justice Bill

1.8 Ageing Prisoners

Picture 1-6 A prisoner seated in his cell at HM Prison Kingston

Nicholas Murdoch (2006)

If society has little place for older people in general, it has even less place for the older prisoner (Morton, 1992; Douglass, 1991; Brahce & Bachand, 1989). The age at which a prisoner is deemed to be old is, in fact arbitrary (Krebs, 2000), although the contemporary definition for old age has been used for social purposes, in particular allowances, retirement and pensionable rights. Adopting a chronological age is qually hazardous and possibly flawed in view of individual specificity and general health functioning. The prison population has an age distribution significantly different from that of the general population being relatively young, with 79% aged

between 15-39 years compared to 35% in the general population (Home Office, 2003c). The number of older people under sentence has risen more than twofold over the last decade with the 60 years and over population growing at a more rapid rate than the 50-59 years old (Brogden, & Nijhar, 2000). Nonetheless, prisons and their regimes are, not unsurprisingly, managed around the needs of the majority.

1.9 Long-termers

Problems emerge when determining 'long-termers' as there is no uniform agreement as to what constitutes the minimum term served in order to satisfy the criteria. According to Silverman and Vega (1996), the threshold lies between five to 10 years, and as a group, albeit diverse, older prisoners are growing older in view of the increase in age at the point of sentencing. By July 2006, the overall prison population in England and Wales had exceeded 79,000 as previously indicated, with Home Office predictions suggesting a rise both in the general population and concomitant disproportionate rise in the number of older prisoners by the end of the decade and beyond.

1.9.1 Typology

Although there is sufficient diversity among older prisoners to undermine the theory that there is any such thing as a 'typical' older prisoner with fairly predictable needs, the older general population is in many ways less hetereogeneous than the older prison population (Jacoby, 1997). Traditionally, two types of elderly prisoners have been recognised: first time or new elderly offenders (neophytes), and recidivists (those with multiple prison sentences), often referred to as either life-long offenders or career criminals. Offences committed by the former group are generally sexual

and/or violent and for the latter repetitive crimes mirrored throughout their adolescent/adult lives (Friendship & Thornton, 2001). However, Goetting (1984) has further extended this typology to include short-term first offenders who were received into prison during their early/middle aged years and were aged 55 years at the probable mid-term of their sentence, and a final group who in serving life/indeterminate sentence have grown old whilst in prison, frequently referred to as 'old timers' (Table 1-10).

Table 1-10 Older Prisoner Typology, (Goetting, 1984)

• Chronic Offender	Multiple recidivist
• Elderly Neophyte	First time offender
• Life Sentence	Grown old in prison
• Short first-time offender	Sentenced in middle years

1.9.2 De facto Life Sentences

A combination of increased life expectancy and number of post-war baby boomers (Aday, 2003) now reaching aged 55 years and over is likely to result in increasing numbers of first time offenders. As a result, older men are to some extent therefore 'captured' by both the punitive and the risk-management narratives of contemporary penality. A five year sentence to an advanced age offender may, according to Sherwin, (1990) and Alston, (1986), be the equivalent of a life sentence, whilst the judge, in State v .Waldrip, reduced a 67-year old defendant's sentence for voluntary manslaughter from five years to life to five to 10 years, arguing that even the minimum term of five years could in effect be a life sentence in view of the defendant's age (James, 1992).

1.9.3 Long-term Trends

The prison population is ageing with the long term-trend substantially reversed in the 1990s resulting in a reduction in the number of very young prisoners and growth in the number of middle aged and elderly prisoners. In 1993 there were 450 prisoners aged 60 years and over, and since 1995 statistics illustrate a considerable increase in the number of male prisoners aged 55 years and above, which cannot be explained solely by demographic change (Home Office, 2002). In 2003 this number had increased to 1440 (20% aged >70 years) with 22% of deaths from natural causes in prisoners aged 60 years and above (Hansard, 2004), and in the year 2000 the oldest prisoner was aged 88 years. Although numbers are relatively small in comparison to the United States, neither demographic projections nor sentencing trends, according to Crawley and Sparks, (2005), herald any swift reductions in these numbers. This, it could be argued, is an unintended but in-principle foreseeable consequence of judicial and political decisions that mandate more people are committed to prison for a certain range of offences and that a proportion remain there for substantially longer periods.

1.9.4 Criminal Justice Policy

Equally, the escalating number of elderly life/indeterminate sentence prisoners in England and Wales signifies a change in criminal justice policy albeit in the absence of any significant upward drift in the gravity of their offences. As a group, elderly 'lifers' form a numerically small (approximately 7%) but clinically a distinct minority in terms of their multiple pathologies, consequential health care concerns, and consumption of a disproportionately high amount of health expenditure. In his thematic review of prisons and probation, (HMIPP,1999) the Chief Inspector of

Prisons was especially concerned about a growing cohort of lifers who were unlikely to achieve release because of their high risk of re-offending and who therefore may be retained in custody for the rest of their lives.

1.9.5 Parole

A little over 1300 lifers had not had their case reviewed by the Parole Board at the same time of the expiry of their minimum period (Padfield, Liebling & Arnold, 2000). The emergence of this explicit group poses considerable problems both for the individuals concerned and the prison management system. For those who in time may ultimately lose the capacity to re-offend through physical frailty or ill-health, compassionate release might become a possibility if an alternative form of residential care could be identified within the community. However, there remains an absence of central strategy and any initiative is therefore likely to be reliant upon local measures driven by prison healthcare staff.

1.10 Adapting to Prison Life

The overall received wisdom from the 'effects literature' concludes that imprisonment is detrimental to physical health and deleterious to overall psychological well-being (Liebling, Elliot & Arnold, 2001; Zamble & Porporino, 1992; 1988). Beginning with reception procedures, prisoners are subjected to processes of control which represent tangible sources of suffering and may threaten physical, mental and emotional health (Smith, 1999). Levels of anxiety and depression are much higher in prisoners than the general population (Cooper & Livingstone, 1991), the incidence of deliberate self-harm and para-suicide in male prisoners is disproportionately high (Ivanoff & Jong,1992; Pattinson & Kahan, 1983), and the prison suicide rate is

generally believed to be higher in comparison to the outside community (Towl, 2002; Howard League, 1996).

1.10.1 Vulnerability

There is also evidence of increasing vulnerability (O'Donnell & Edgar, 1996;1998), together with cognitive decline and depression amongst 'long-termers', (Cullen & Newell, 1999) who in addition demonstrate an appreciably higher risk of suicide especially during the early stages of their sentences (Towl, Snow & McHugh, 2000; Prison Reform Trust, 1997b; Lapornik et al. 1996). Within the prison environment, however, diagnostic indicators may initially be disguised and under-recognized in view of 'prison milieu', (situation, and context), and the cumulative effects of ageing in a restricted socio-cultural setting.

1.10.2 Aims of Imprisonment

The main aims of imprisonment are not primarily concerned with health promotion, autonomy, self-esteem, and empowerment (King, 1985), and as Sim (2002) noted, liberal approaches to the prison are founded upon a number of competing and contradictory goals: rehabilitation, general prevention, punishment and individual and collective deterrence. To the extent that prisons exhibit a specific culture has been an enduring debate as to whether it is of primarily indigenous or imported in origin. The importance of successful adaptation to imprisonment has, however, long been recognised (Crawley, 2004; Matthews, 1999; Coid, 1984; Cohen & Taylor, 1972; Sykes & Messenger, 1960; Sykes, 1958). Clemmer (1940), the first modern author to examine the prison experience, posited the existence of 'prisonization', the gradual destructive socialisation of prisoners into the norms of prison life that deepened their predilection to criminality.

Sykes, (1958) characterised the pains of imprisonment as being extreme material deprivation, together with the loss of personal security and autonomy. Goffman (1961) later described the mortification processes and the reorganisation to which the 'self' was subjected. He argued that the response to the assaults on self were varied, but frequently resulted in either psychological/emotional withdrawal or intransigence, both of which can only be temporarily successful. Sensitivities surrounding potential physical deterioration and symptoms of illness, in particular pain, were therefore both exaggerated by the feeling of deprivation and psychological anguish.

Similarly Foucalt, (1977), suggested that these and other affects were intrinsic to the very notion of punishment in what he described as complete and austere institutions, whilst Gresham (1971) maintained that the deprivation of an individual's liberty was a fitting punishment for crime. This depriving experience can, however, lead to a heightened awareness in the detainee, with the boredom of everyday life, the absence of choice and of freedom to seek privacy key elements to the pains of being in custody. Both Gibbs, (1991) and Biggam and Power, (1997) maintain that coping in a closed, crowded and potentially aggressive environment is therefore determined by one's ability to interact successfully, form alliances, establish allegiances, develop social networks, and acquire acceptance. Lack of purposeful activity may eventually result in poor health, especially poor mental health (Banerjee et al. 1995), and a subsequent diminution in motivation.

Serge (1970) described the 'present' in prison as being 'heavy with torpor'. Time, he maintained differed conceptually from time outside, with 'association' and the regularity of imposed timetables establishing the rhythms and cycles of repetition; as

a result, days and months lost their meaning as units of time, did not pass at their conventional rate with a resulting tendency to count in years. The publication of John Dilulio's Governing Prisons (1987) in which he identified particular aspects of prison social life, including routines and staff-prisoner relationships as being central to the maintenance of everyday social order by making prisons safer and the creation of a more humane environment, can now be seen in retrospect as a new model of the relationship between expert knowledge, management and the social order within a custodial environment.

1.10.3 Diversity

The problems that currently beset the prison system can best be described in terms of a set of interlocking crises over security, numbers, overcrowding and healthcare provision. Germane to specific problems is the range of different needs presented by quite diverse populations across the age range and index offence, thus 'prison austerity' and fear has become a significant feature of custodial life (O'Donnell & Edgar, 1998; King & McDermott 1989), although some believe that prison itself should not induce stress amongst its inmates (Biggam & Power, 1997). Violence is a routine occurrence in many establishments with elevated risks in terms of health problems, assault, sexual assault, homicide, self-harm and suicide to which many prisoners are exposed (Prison Service, 2003; Jewkes, 2002; Sparks, Bottoms & Hay, 1996; Liebling, 1992; King, 1985). In comparison to the general population, prisoners who commit suicide are less likely to have had a history of psychiatric illness or treatment (Teplin, 1990; Liebling, 1995).

1.10.4 Key Performance Indicators

The introduction in 1999-2000 of the 14 Key Performance Indicators, (Table 1-11 - HM Prison Service, 2003) reinforced by 45 key actions and outcomes (promised for prisons in Labour's 1998/99 manifesto) as quantitative measures of performance against laid down 'agreed' targets were subsequently adopted as management determinants, but critics maintain they have encouraged a 'tick-in-box' response whilst achieving little to indicate the quality of performance (Sinclair, 2002). Their credibility, some argue, has been further eroded especially when the level of performance required was either set too low, or unrealistic and hence unachievable when the level was set too high.

Table 1-11 Key Performance Indicators - HM Prison Service

- Number of escapes from prisons
- Number of serious assaults
- Numbers undergoing Mandatory Drug Testing
- Number of doubling (sharing) cells
- Number of self inflicted deaths
- Availability and attendance numbers at purposeful activity
- Numbers attending and type of Offending Behaviour Programmes
- Numbers attending Sex Offenders Treatment Programme
- Annual cost per prison place
- Annual cost per Prisoner
- Staff sickness rate
- Race Equality
- Key Work Skills
- Resettlement

1.10.5 Prison Rating Scale

All prisons are rated on a 1 to 4 performance scale. Level 4 is awarded to excellent establishments that are delivering exceptionally high performance. Level 1 indicates a poor performer. The performance rating of each public prison will be used in part to inform which of the three strands of Benchmarking improvement programme that particular prison will adopt and follow. The rating is a professional judgement based upon:- Cost performance and output data from the Weighter Scorecard, showing performance against KPIs; Compliance with Prison Service Standards; The views of the Prison Service Area Managers and the Prison Service Management Board, allowing for assessment of more subjective factors such as decency and the prison's commitment to delivering change. All public sectors prisons are to be benchmarked over the next seven years, with estimated completion date 2012.

1.11 Prison Healthcare

The stated objective of the health care standard is:

"*To give prisoners access to the same quality and range of health care services as the general public receives from the National Health Service (NHS).*"

In the mid 1850's the spread of typhus (prison fever) from several jails throughout England and Wales prompted concerns about the health of prisoners. Following the introduction of the Prison Commission, the prison medical service, which predates the National Health Service by more than a century, was introduced later on in 1877, making it the oldest civilian medical service (Martin, 1989; McDonald, 1999). Historical concerns regarding prison health services have, over several decades, prompted various official examinations including an intensive enquiry by Social

Services Committee (House of Commons, 1986), a Royal College of Physicians Working Party Report in 1989 (Home Office and Department of Health, 1990), and detailed reviews by the Chief Inspector of Prisons (Home Office, 1996) and a comprehensive year's programme of semi-structured interviews examining the quality of prison healthcare (Reed & Lyne, 1997).

1.11.1 Prison Governors

Traditionally prison governors had considerable discretion in managing their establishments, but are now required to assist in the implementation of equivalent health care including psychiatric care, although their response to healthcare provision has a different resonance to that of NHS managers (Bryans & Wilson, 2000; Chiswick, 1992). All prison healthcare centres offer a range of primary medical services together with specialist input provided either in-house or by contractual arrangement (Vaughan, 1998). Each centre is categorised according to the levels of care they are able to provide (Table.1-12).

Table 1-12 HM Prison Healthcare Centre Categories

Type	Description
1	Operational (Monday to Friday) from 9.00am until 5.00pm with a medical officer (MO.) available, usually a GP who attends on a part-time basis. The MO. provides an on-call service. The service is reduced at the weekends.
2	Operational (Monday to Friday) over a 12-hour period - typically 9.00am until 9.00pm. MO. as for type (1) attends on a part-time basis and also provides an on-call service. The service is reduced at weekends.
3	Operational as a hospital with beds on a 24-hr basis, 7 days per week, with a permanent, on call MO.
4	Operational as a hospital with beds plus a specialist medical function, which may serve as a resource for other prisons. Permanent, on call MO.

1.11.2 Bed Numbers

Occasionally, a type 2 healthcare centre may have beds for prisoners who require either additional care or observation, but it will not constitute a hospital facility. Moreover the number of beds in each centre is not specifically nominated for psychiatric admissions. Some centres allocate beds as needed, whereas others assign a proportion of beds for prisoners with mental health problems. HMP Winchester for example, has two beds in the healthcare centre but not specifically designated for mental health care.

1.11.3 Mentally Disordered Offenders

Within the prison healthcare system the policy on mentally disordered offenders has its origins in "Better Services for the Mentally Ill", (DoH, 1975) that detailed the policy and service implications of locally based provision previously announced by Enoch Powell when Minister of Health in 1961. The Reed Report (DoH/Home Office, 1992) subsequently provided the guiding principles for a clear ethical framework within which services should develop, resources permitting, but was primarily concerned with the allocation and distribution of medium secure beds and those providing low levels of security. Both the Department of Health and the Home Office accepted the report's overall recommendations.

In response to recommendations contained in the Prison Medical Service Report (Home Office, 1990) the standing Health Advisory Committee (1997) highlighted the un-coordinated manner in which mental healthcare to prisoners was formulated and delivered. The subsequent joint thematic review by Her Majesty's Chief Inspectorate of Prisons and Probation of literature into the mental health of lifers (HMP, 1998a) that had its genesis in shared concerns created by the increase in the number of life

sentenced prisoners, confirmed particular anxieties relating to both the treatment and conditions of this rowing cohort. The report identified issues surrounding proposed release, in particular the protection of the public, but recognised the growing financial burden arising from the continuing detention of lifers for longer than was deemed necessary.

1.11.4 Medical provision

Standards of prison health care have been repeatedly criticised (Birmingham, 2004). In his discussion paper 'Patient or Prisoner' (Home Office 1996) the Chief Inspectorate of Prisons acknowledged a shortfall in overall medical provision and an unacceptably low standard of in-patient care, both of which failed to satisfy the provisions of the Patients Charter (DoH, 1991). Despite substantial expectations among prison clinical staff following publication of the health policy statement, only limited improvements have been achieved. A combination of inadequate staffing provision and lack of multi-disciplinary input were viewed as being primary causative factors together with an increasing prison population. The paper concluded by proposing that the National Health Service should assume responsibility for health care in the Prison Service. Prior to the last election, when many healthcare sectors within the United Kingdom were burdened with multiple problems in relation to morale, recruitment, under-resourcing and increasing expectations regarding quality assurance, politicians of all parties consistently overlooked the healthcare of prisoners.

1.11.5 Proposed Partnership with the NHS

In April 2003 funding responsibility for prison healthcare was transferred from the Home Office to the Department of Health, a first step in an identified five year

completion process. The proposed partnership between the Prison Service and National Health Service (NHS) was expected to be fully operational from April 2006 with further resources allocated by the Department of Health rising to an additional £46 million per annum by 2005-2006 (Birmingham 2003). A central principle of prison health services must therefore be to ensure that prisoners are not excluded from receiving the same standard of care that the general public accesses.

1.11.6 Local Partnerships

All prisons were tasked with developing needs based health services in partnership with local PCTs and other NHS agencies in order to deliver effective evidence-based care to both individual prisoners and the prison population as a whole. At the time of writing, prison healthcare staff and Governors at both prisons are working in collaboration with Primary Care Trusts (PCT) and Health Authorities (Hampshire & Isle of Wight PCT) to jointly provide health services of an equivalent standard. As part of the Prison Health Development Network, the prisons and PCT intend building on existing partnerships using the opportunity to further develop and formalise arrangements for clinical governance, monitoring, commissioning, staff development and service planning.

1.11.7 NHS Performance Indicators

In order to provide prisoners with access to the same range and quality of services as the general public receives from the NHS, performance indicators (applicable in all establishments) with required outcomes must include:

- Service Planning and Development.
- Local approved policies and procedures.

- A clear and concise ethos of care practice.
- Professional Practice guidelines for all clinical personnel.
- Appropriate use and protection of patient information.
- Health assessment at first reception.
- Suicide and self-harm management.
- Transfer and release protocols.
- Appropriate mental health services.
- In-patient care in establishments with appropriate accommodation communicable disease prevention and control measures.
- Clinical services for substance abuse.
- Primary care pharmacy-based services.
- Dental services.
- Health promotion.
- Consent to treatment in accordance with professional standards of practice Development of Clinical Governance arrangements.

For elderly prisoners, this entails working towards meeting the standards set out in the National Service Framework for Older People, with the role of primary care staff in prisons summarised as follows:

- Supporting the governor and other staff to develop an environment that supports health and well being.
- Identifying prisoners with multiple pathologies and emerging chronic health disorders.
- Managing prisoners with common health disorders.

- Referring appropriately for assessment, advice and/or treatment.
- Working with diverse groups of patients from different cultures.
- Providing appropriate information and guidance for those responsible for the provision of care.
- Effectively contributing to multidisciplinary teamwork.

National Service Framework for Older People must therefore include services for this group. The quality of mental health care is critical on diagnostic ability, disease recognition and early identification, ultimately dependent on the skills of health care staff, with any changes in services or policy implicit upon appropriate training.

Chapter 2

Health, Ageing and Illness

Chapter 2 defines the concept of health, what is meant by being healthy, and details demographic trends and diagnostic challenges associated with ill-health and ageing. Determinants of well-being are discussed together with expectations associated with ageing. A more detailed examination of physical health and ageing is provided including morbidity and mortality rates. Ageing theories are discussed with variations in health status as measured by occupation including health in older and life sentence prisoners and the ageing process in prison. Cognition, mild cognitive impairment and dementia are reviewed, known associated risk factors and causative mechanisms including a review of the more recent research. Depression and its characterisation, aetiology, symptomatology and prognosis in older people are examined. Relationships between physical health, cognitive impairment and depression are explored. The principles and best practices in healthcare are summarised and the implementation of clinical governance. The chapter concludes by viewing older peoples' needs through the lens of the National Service Framework for older people.

2.1 Health and Ageing

".....health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity"

World Health Organization (1948)

Ageing is a process of gradual and spontaneous change resulting in maturation through childhood, puberty, and young adulthood followed by decline through middle and late age with a resulting accumulation of defects (Canbaz et al. 2002). Health is multidimensional, and in order to develop more effective chronic disease prevention strategies in older adults, it is important to identify major causes of morbidity and mortality and ascertain those factors associated with remaining healthy (Bernard & Phillips, 2000). Hence the relationship between lifestyles and morbidity /mortality as defined by the Medical Research Council (Brayne et al. 2001), should be viewed as dynamic as opposed to static (Table 2-1).

Table 2-1 Ageing - Medical Research Council (2001)

- Ageing of the population is associated with marked increase in morbidity
- Few individuals aged 64yrs and above report no physical disorder
- Time spent with impairment in two out of three dimensions (physical, functional, & cognitive impairment) is constant, but rises as a proportion of life remaining
- Increasing active healthy life expectancy in old age will depend on approaches which are effective across all three dimensions
- It is important to recognize the heterogeneity among older people, particularly the differences that exist between different ages.

2.1.1 Definitions

Concepts and definitions of health, disease, old age and a healthy lifestyle are difficult to articulate but defining old age should not rest solely on chronological age, as oldness at 50 years or 60 years can be attributable to chronic health conditions. Equally, the lowest socioeconomic stratum manifests a prevalence of chronic conditions at ages 45-55 years, which is seldom seen in the highest socioeconomic stratum until after the age of 75 years (Wenger, 1989). Altered signs and symptoms frequently present in older people, and it is often difficult to differentiate between normal ageing and the disease process.

There is also a value judgement in the term 'elderly' (Yorston & Taylor, 2006) and when a person should be considered 'older' is arguably one of a subjective classification. According to Wolfgang, (1964) it is not easy to define at what chronological age one becomes 'older' and adoption of chronological age cut-offs gives little indication of service need. In the general population there is no definite threshold for old age. The National Service Framework (NSF) for Older People (DoH, 2001), is one of the few policy documents in the United Kingdom (UK) to refer to older male prisoners and, in line with the UK pension age of 65 years, it uses 65 years as the starting point for the planning for the older age services. However, it is notable that in the UK Age Concern works with people aged over 55 years and older people forums begin at 50 years.

For offender groups, difficulties in definition of 'elderly' and 'older' are considerable. Findings from a number of studies report older prisoners as having a 'biological age' approximately 10 years in advance of their age peers (Loeb & Steffensmeier, 2006; Aday 1999; Rosefield, 1995a & b; McShane & Williams, 1990; Fattah & Sacco,

1989), whilst Kratcoski and Pownall, (1989) and Faiver, (1998) similarly reported a 10-year differential in physiological characteristics between typical older inmates and their equivalent counterparts in the community. The literature on older offenders indicates that there is no agreement among researchers, biologists and epidemiologists on when a person should be considered 'older' or even 'aging' (Forsyth & Gramling, 1988; Newman et al. 1984).

In the UK the Prison Service defines older prisoners as those aged over 60 years, on the principle that it is post retirement age and it is the logical point at which to say there could be a change. In accord with this Fazel et al. (2001) adopted 60 years of age in their comprehensive study of sex and non-sex offenders.

The majority of studies, both in the United Kingdom and United States of America, have, however, used a lower age limit of 55 years and on this basis the cut off at 55 years was adopted for this thesis (Harrison & Beck, 2004; James, 2004) but there remains considerable disagreement with some researchers considering older offenders as those aged >50 years; others using 55 years and 60 years, while others consider 65 years as the threshold (Toch, 1977; Aday, 1984; Rubenstein, 1984; McCarthy & Langworthy, 1988; Morton, 1992; Aday, 2003; Fazel et al. 2001; Jones et al. 2001; Mara, 2002).

In a notable US study, the Criminal Justice Institute, (2001) asked representatives of state correctional agencies whether they had a specific definition for when inmates in prison are considered to be elderly. Of the 49 respondents, 22 did not have a definition but of those that did, the median first qualifying age was 55 years. One defined elderly as 52 years, eight as 55 years, seven as 50 years, four as 60 years,

and two defined elderly as 65 years. These inconsistencies in the definition of elderly necessarily lead to confusion, and an inability to compare research findings.

2.1.2 Diagnostic Challenges

However, whilst there are many diagnostic challenges, such as a change in reference values, it is generally acknowledged that most measures of morbidity increase with age, with chronic diseases linked to 'normal' ageing, and typically conditions of middle and later life (Aday, 2003). Nevertheless they vary with factors such as education and social class together with ethnicity (House, Kessler & Herzog, 1990; Katz & Kessler, 1997). Whereas the number of people with high levels of sickness and disability (which is more the consequence than the cause of poor health) will rise because the population is ageing, prevalence rates increase very sharply in the 'oldest' groups, although existing epidemiological evidence suggests that the majority of people who survive into 'older-old' age do so in reasonable health and functioning (McGee & Brayne, 2001; Hollowell, 1997; Barefoot & Schroll, 1996).

2.1.3 Demographic Trends

Both Europe and the United Kingdom have experienced a demographic transition to more aged populations throughout the last century, although optimism about longer life expectations has recently been moderated by concerns that extended periods of later life may be spent with severe disability. In 2002 there were 19.8 million people aged 50 years and over in the United Kingdom representing a 24% increase over four decades, (from 16.0 million in 1961), the number of those aged 50-59 years fell, (from 13.2 to 12.7%), whilst those aged 85 years and over increased from 0.7 to 1.9% (Colhoun & Prescott-Clarke, 1996). In 2002 life expectancy had increased to 76 years for males as opposed to 45 years in 1901, and men aged 65 years could

expect to live to the age of 81 years, which might suggest that the health status of older population is improving. For men aged 50 years life expectancy has increased by four and a half years, for those aged 65 years and above a little over two years, with those aged between 70 and 80 years an additional three years. However, as Gruenberg, (1977) noted it is one of the 'failures of success' that, while medical research has reduced the mortality of disease, it has concurrently extended life expectancy and increased the proportion of people with chronic pathologies.

2.1.4 Mortality

Ebersole and Hess, (1998) have similarly challenged the use of mortality as a measure of health status in old age as many of the most common diseases of later life, such as arthritis, are not according to Roos and Havers, (1991) directly life threatening, but nevertheless result in pain, depression, immobility, with functional and self-concept disturbances. Equally, reports from a number of positive ageing studies e.g. Jerram and Coleman, (1999); Smith, (1998); Lyons et al. (1994) all suggest there can be a positive and profoundly meaningful dimension to experiences of disease in old age.

2.1.5 Choosing Health

The recent government White Paper, Choosing Health (DoH, 2004) placed well-being centre stage, with a subsequent review of the publication (NIMHE, 2005) clearly indicating that well-being is believed to be more than the acquisition of happiness. Meyers and Diener, (1995) define well-being as having a sense of purpose, meaning and fulfilment in one's life, linking it to improved health chances across the age spectrum, thus it is not surprising that levels of well-being within a prison setting are generally low (Liebling & Maruna 2005). They further maintained

that respect for others, treating them as 'ends' as opposed to 'means' was a universal guide to moral conduct. Phillipson, (1982) argues that the purpose of life in old age is often unclear in modern society, with old age seen as a 'problem' and the elderly viewed as dependants; worse still often described as a 'non-productive burden upon the economy'.

2.1.6 Disparities in Health

Apart from anxiety and depression, psychosocial factors are among the most likely explanations for disparities in health among different socioeconomic level groups whilst social contacts and community networks have been shown to substantially lower the rates of mortality when compared to individuals who lack both. Two other non-health factors shown to have a significant influence on individual well-being are diet and nutritional management. The major determinants of health are cultural, social and economic factors at both individual and population levels, (Woods et al. 2003) factors which are independent of access to medical care, hence societies that enjoy a high level and relatively equitable distribution of wealth at a population level enjoy a higher level of health status and well-being.

2.1.7 Health Status and Well-being

At an individual level health status and well-being is determined by the social and economic environment and the way in which this environment interacts with individual psychological resources and coping skills (Beaglehole, 2002). There is a wealth of data indicating that engagement in meaningful and productive activities, within the context of socially supportive networks, can have a protective effect on morbidity and mortality from many causes in later life (Berkman, 2000a & 2000b; Rowe & Kahn, 1997). It is therefore not unexpected that older people are likely to

experience isolation and alienation when they are denied access to the sources of both social and economic meaning valued by the society in which they live (Powell & Biggs, 2000; Jordan, 1996; Turner, 1989).

2.1.8 Expectations

Attributing health problems to old age was shown 20 years ago to increase the risk of mortality. Older adults who have low expectations for ageing are more likely to state that it is not important to seek health care for a number of modifiable conditions (Sarkisian et al. 2002). Research conducted by the MAYO clinic, Minnesota has found that an optimistic or positive outlook is associated with longevity, whilst findings from the Nun study, although data is limited, have appeared to confirm this association (Snowdon, 2002). This suggests that health and well-being is influenced by considerably more than just access to and receipt of medical care.

2.2 Physical Health

'.....in virtually no society is old age defined as one of the most desirable parts of life'

Fry, and McIntyre (1996)

Picture 2-1 An ageing man

Nicholas Murdoch (2006)

Age related bodily changes are not indicative of decline unless we choose to interpret them as such, although various intrinsic ageing changes contribute to the impairment which renders older people susceptible to this loss of reserve. Older peoples' reports of chronic illnesses and limitations are better explained by complex

multi-domain models as opposed to simple disease-orientated constructs. With ageing there is an increasing tendency to develop multiple pathologies first slowly and then escalating rapidly from age 45 years, subsequently accelerating in later life, with the main contributory factors to the development of disease including:

- An age-related increase in the incidence of common disorders, including hypertension, osteo-arthritis, osteoporosis, diabetes-mellitus, cerebro-vascular disease, and coronary heart disease.
- Disturbance of the immune system, resulting in increased risks of carcinoma and hypothyroidism.
- Increased potential of illness affecting one system leading to disorders in another, e.g. respiratory infection leading to development of atrial fibrillation and heart failure.
- Vascular diseases which may develop insidiously and during the latent acute process may be superimposed at any time.
- Immobility associated with various neurological or musculoskeletal disorders leading to an elevated risk of developing complications such as falls, urinary incontinence, infections, deep vein thrombosis and pulmonary embolism.

2.2.1 Health Care Provision

Old age is an unpreventable physiological state, thus elderly people access health care provision more so than younger adults, thereby creating further economic complications (Binstock, 2000). The state of being old is constantly being re-adjusted upwards as we age. Older people may mistakenly attribute non-specific signs and symptoms to old age, whilst minor symptomatology may accumulate eventually

resulting in a cascade of events that in turn can have serious clinical outcomes. Many diagnostic challenges present in old age, such as genetic and lifestyle variability, atypical signs and symptoms, and whilst preventative public health measures highlight avoidable risk factors, treatments are not predicated on affecting the underlying ageing process. A pathological process does not lead to abnormality of one or more organs, but a cumulative burden of multi-pathology particularly circulatory and musculoskeletal disorders, with substantial contributions from other domains resulting in psychological, functional, and social problems. The only prediction that can be made with confidence is that the experience of future older populations will vary considerably from that of contemporary cohorts.

2.2.2 Factors Influencing Disease

Diseases in older people are considered to be the result of environmental factors such as accidents, infection, carcinogens, whilst genetic and lifestyle differences contribute to the considerable variability observed between individuals (Ruse & Parker, 2001). Equally, age-related increased incidence of cardiovascular disease, cancers, certain infections and arthritis suggest that ageing may be a contributory factor in their development (Fig. 2-2). Older people experience fewer acute illnesses in comparison to younger adults, but are more likely to develop chronic conditions that are long-term, progressive, and typically incurable.

A model depicting the sequence of events resulting in ageing-dependent disorders is shown in Figure 2-1.

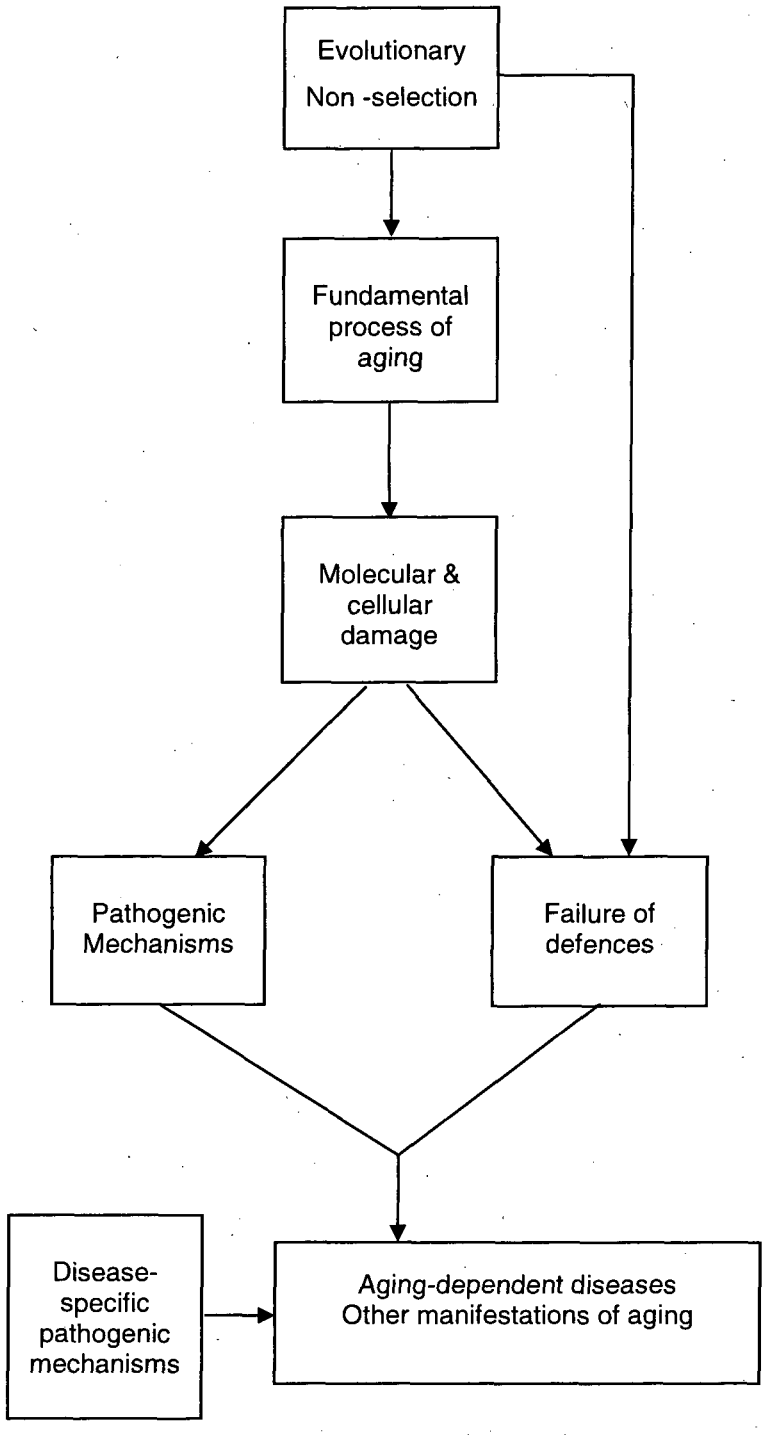


Figure 2-1 Ageing dependent diseases and disorders

Figure 2-1 has been adapted from Solomon, (1999).

2.2.3 Multiple Pathologies

The frequent occurrence of multiple pathologies as we grow older often results in the clinical assessment process uncovering several disease processes, although important diagnoses can be overlooked among conditions irrelevant to the presenting symptomatology (Fairweather & Campbell, 1991). A diagnosis of heart failure in primary care for example is notoriously difficult especially in the early phases and in the presence of chronic obstructive airways disease. Recognition of co-morbid heart failure in patients with COPD is hampered by similarities in signs and symptoms and overlapping risk factors such as smoking. Conversely, a single symptom may have several contributing causes, the phenomenon of single aetiology.

Pathology in older people frequently presents non-specifically (Bair, 2000), and although typical diagnostic features may be obscured they are seldom completely absent thus in clinical practice a diagnosis is rarely made by a single test. Painless myocardial infarction (which is increasingly more common), and covert acute infection are common examples of atypical manifestations of diseases in older people (Andrews, 1999).

2.2.4 Human Life Span

The human life span can be viewed as a series of gene-environment interactions that inevitably lead to late-life deterioration through the acquisition of late-onset diseases and co-morbidity (Mullan, 2000). Most measures of morbidity and mortality increase with age with chronic disease contributing to 80% of deaths after age 65 years whilst prevalence rates of disability rise steeply in the oldest old group, with long-standing illness and associated limitations in activities of daily living common in

older people (Bridgwood et al, 2000). Over the last 30 years death rates for males have fallen, from 8 per 1, 000 aged 50-64 years, to 188 per 1, 000 men aged 85 years and over in 2002 (ONS, 2004) with the most common cause of death for those aged 50-64 years carcinomas, and for those aged 65 years and over circulatory disease, with pneumonia accounting for one in ten deaths among those aged 85 years and over.

2.2.5 Quality of Life

Chronic diseases affect quality of life with all indicators of health particularly those based on measures of functional ability or disability, and also show a marked relationship with age, whilst the many decrements in functioning are reserved for the very late years. In general, the proportion of the population reporting long-term illness or disability increases with age, first slowly and then sharply from age 45 years, further accelerating in later life. Chronic illness and disability is more common in those aged 75 years and over (in comparison to the younger old), with poly-pharmacy increasing the potential of drug specific unwanted effects, together with adverse reactions from medication interactions (Mannesse et al. 2000; Veehof et al. 1999; Hudson & Boyter, 1997; Gurwitz & Avorn, 1991), although the causal pathway leading from these diseases to disability remains unclear but is easier to conceptualize.

2.2.6 Disability

The concept of disability free life expectancy has service implications whilst any measure that extends time spent living with disability will lead to increased demand on services. Thus, reduced mortality from stroke, for example, may paradoxically increase service demands for rehabilitation and long-term care. Long-standing

illness (LSI) and limited long-standing illness (LLSI) associated limitations in activities of daily living (Table 2-2) are common among older people (Ayis et al. 2003; ONS, 2001b), with interventions to prevent, delay the onset and treat the associated decline in functional capability important in reducing the population burden of disability. However, numerous diseases are age related (stroke, and arthritis) with many of the health problems of older people similar to those in other age groups - respiratory conditions, circulatory diseases and cancers.

Table 2-2 LSI and LLSI in older people

- Over 60% of people aged 65yrs and above are affected by long standing illness
- Over 40% are affected by limiting long standing illness
- Those affected were 2-3 times more likely to have circulatory and musculoskeletal problems
- Psychological, social, & environmental factors were independently associated with long standing illness and & limited long standing illness after adjustment was made for common diseases
- Older people's reports of LSI and limitations are better explained by complex multi-domain models than simple disease-orientated ones

Table 2-2 has been adapted from: Findings from the Medical Research Council, (2003).

2.2.7 Morbidity and Mortality

It would be unwise to assume that existing trends in morbidity and mortality will continue, because the health experience of different age groups varies. The current cohort of very elderly people has been affected by two world wars, several recessions and the introduction of the National Health Service and Social Services, increasing attention to preventative medicine and health screening, and changing social factors such as a reduction in cigarette smoking, together with shifting

patterns of physical labour and an alteration in dietary habits. Social deprivation measures furthermore indicate that needs differ quite considerably across population groups and are not evenly distributed geographically. Because of the general increase in life expectancy and the ageing of the 'baby boomer' generation, the number of older people in the United Kingdom is projected to rise substantially, with the oldest groups experiencing the largest relative increase.

The most optimistic view of future morbidity trends was that advanced by Fries (1980), which rested on the concept of the fixed biological limit to the human life span. He argued that changes in health related behaviour would mean that the onset of morbidity was delayed while age of death would remain the same, thus the majority of people would enjoy a vigorous life until about the age of 85 years and then die shortly afterwards following a short period of illness.

This argument, however, has been challenged on methodological and theoretical grounds. Both Guralnick et al. (1989) and Olshansky et al. (1991) maintained that reductions in mortality have been achieved by health care interventions, which simply postpone the sequelae of chronic diseases. Manton and Stallard, (1996) on the other hand offered another perspective referred to as the dynamic equilibrium approach in which they suggested that the effect of health care interventions and other health related changes has been to slow down the rate of certain diseases. Older people might be suffering health impairments for longer than previously but the consequent disability was less serious. Nevertheless, because older people have often been excluded from major epidemiological studies, on the basis of predictable age related physical and psychological changes, it is difficult to make accurate predictions.

2.2.8 Theories of Ageing

Ageing theory highlights the importance of maintenance and repair processes in the pathogenesis of ageing and late-onset disease; activity theory states that lifestyle activities are necessary for successful ageing (Stansfield, 2002; Reed, Foley & White, 1998), whilst the work of Hayflick, (1976) has suggested that the human organism appears less able to maintain its own viability with increasing age. There are substantial variations in reported health status by National Statistics Socio-Economic Classification (NS-SEC), as measured by occupation. People not in employment have far higher levels of a long-term illness or disability than those in employment. Higher educational status and higher income are positively associated with future health, while having a recent change in personal financial status is negatively associated with continued health; never having smoked cigarettes or having previously stopped smoking is associated with a higher likelihood of remaining healthy.

2.3 Cognitive Impairment

Cognition can only be truly assessed accurately through the direct use of objective psychometric tests. Cognitive functions are those aspects of mental activity that underpin the quality with which we are able to conduct activities of daily living. Physiological and psychosocial changes are associated with old age (Blumenthal, 2003) and it is generally assumed that normal brain ageing involves cognitive changes, albeit displaying large inter and intra-individual variability (Christensen, 2001; Shorter, 1997). Although it is difficult to exactly quantify precise normative limits of the normal range, aspects of mental activity subject to change in efficiency include attention, short-term (working) memory, long-term memory, reasoning, co-

ordination of movements, and the planning of tasks (Di Carlo, Baldereschi & Amaducci, 2000).

Besides changes due in part to diurnal rhythms, a wide range of external and internal events can effect the operation of these cognitive functions, including anxiety, fatigue, ageing, trauma, disease, psychiatric illness, drugs, hormones, and cardiac function (Copeland et al. 1999). Cognitive impairment is not universal nor are all the aspects of intellectual functioning equally affected, (Schaie, 1997) but it is a major health issue in that it threatens the independent and active life of older persons (Fujiwara et al. 2000) and has been shown to be strongly associated with mortality in the elderly (Leipzig et al. 1999; Gale, Martyn & Cooper, 1996).

2.3.1 Mild Cognitive Impairment

Since Kral's, (1962) 'benign senescent forgetfulness', several concepts have been proposed to understand the shadowy zone between optimal and pathological cognitive ageing (Small, 2002). The emergence of mild cognitive impairment (MCI - Smith, Petersen & Paris, 1996), a term used to define a boundary area between dementia and normal ageing is clearly related to the general phenomenon of population ageing. Although the present definition is not absolute, recent longitudinal studies (Shah, Tangalos & Petersen, 2000; Petersen et al. 1999) have simply defined MCI as cognitive performance below normal in the absence of dementia. Individuals with cognitive deficit that do not meet the generally accepted clinical criteria for Alzheimer's disease (AD), but have a noticeable decrease from prior levels of cognitive performance with problems in new learning may have mild cognitive impairment. Recent studies (Petersen, Doody & Kurz, 2001) show that 80 per cent of these individuals will develop dementia within five years. Whether MCI

and Alzheimer's disease should be viewed as a continuum or as qualitatively different conditions is the subject of continuing debate as the issue could have important implications for approaches to prevention and interventions (Marshall, 1999).

The dementia picture is preceded by a 'preclinical phase' - pathognomonic cerebral lesions coexisting with normal cognition (Salat, Kaye & Janowsky, 1999; Hulette, 1998). According to Hampel and Blennow, (2004), the degenerative process probably starts 20 to 30 years prior to clinical onset, proceeds insidiously from a state of cognitive normalcy to progressively severe stages of global intellectual dysfunction, with a loss of three to four points per year on a standard assessment instrument such as the Mini Mental State Examination (MMSE; Folstein, Folstein & McHugh, 1975). Clinical diagnosis depends on the definition of cognitive deficits and the separation of normal age-related decline from pathological deterioration (Zanetti & Franco, 2003). Typically the first symptom is an inability to learn new information with others including visuo-spatial deficits, depressed verbal fluency and subtle personality changes (Cohen-Mansfield & Billing, 1986). Consensus criteria for diagnostic purposes have been clinically/operationally defined and widely adopted (ICD-10, World Health Organization, 1992; DSM-IVR American Psychiatric Association, 1994), the latter allowing for co-axial diagnosis. The definitions have a number of common elements, including that the disorder should be progressive and have global effects on higher cortical functions.

2.3.2 Dementia

Dementia is a clinical syndrome (Clare, 2002; Clare et al. 2000), 'prima facie' a psychological disorder' (Morris & McKiernan, 1994). It is pathologically distinguished

by neurodegeneration, (Tariot & Blazina, 1993), and is also a generic term that refers to the whole person as opposed to solely the brain (Hart & Semple, 1990). The discourse of the disorder has an extensive history, (Berrios, 1994). Causative factors for dementia vary (Table 2-3). A little in excess of 70 diseases/disorders are associated with progressive loss of memory and intellectual function known as dementia and in the United Kingdom approximately 750,000 people are known to be suffering from the condition, sufficiently severe to interfere with daily functioning. Equally, although rarely a clinical picture resembling dementia may present for attention yet prove to be 'reversible' with treatment (Kerr & Wilson, 2001).

Table 2-3 Causative Factors for Dementia

Progressive Causes
Alzheimer's Disease Vascular dementia Frontotemporal dementia Lewy Body Disease Huntington's Disease Creutzfeldt-Jakob Disease (spongiform encephalopathy) Progressive supranuclear palsy Wilson's Disease;Kuf's Disease;Demyelinating Disease
Dementia Due to Brain Damage
Traumatic brain injury Brain infection (meningitis and encephalitis) Hypoxia and hypoglycaemia Poisoning (lead and other heavy metals) Alcohol misuse
Potentially Reversible Conditions that may present as Dementia
Hypothyroidism and other endocrine disorders Drug toxicity Liver and Kidney failure (chronic) Vitamin deficiencies (particularly B vitamins) Hydrocephalus Severe depression

Table 2-3 has been adapted from: Thomas, and O'Brien, (2001).

2.3.3 Incidence and Prevalence

The incidence and prevalence of dementia is estimated to be approximately 20% at 80yrs (Audit Commission, 2000), rising exponentially to 32.2% in those aged 90-95 years. Community incidence rates in males' aged 65-69 years are currently a little over 1% (Table 2-4), but the burden of care is set to increase substantially, with an estimated twice as many cases within the next 50 years (McKeith, 2002). This is of particular relevance, since this overall age group is the fastest growing segment of our population (Greenwood, Lowenthal & Rose, 2001). There would be immense benefits to public health if ways of reducing the incidence (as well as the prevalence) of dementia and cognitive impairment could be found. Since the rates of dementia

rise exponentially with increasing age the mean age of onset could significantly reduce the prevalence.

Table 2-4 Prevalence Rates of Dementia in the General Population.

Dementia - Prevalence rates in general population		
Between the ages of:-		
	30 and 59yrs	0.1%
	60 and 64yrs	1.0%
	65 and 69yrs	1.4%
	70 and 74yrs	4.1%
	75 and 80+yrs	13.0%

Table 2-4 has been adapted from: Audit Commission, (2000).

2.3.4 Alzheimer's Disease

Alzheimer's disease (AD) is the most frequently diagnosed dementia in the United Kingdom accounting for approximately 60% of those affected (450,000); vascular dementia in the region of 25% (187,000); and 10-5% (90,000) with Lewy bodies (DTB, 2003; Luis et al. 1999; Ballard, 1998), and the mixed dementias identified in 5-20% of cases based on different autopsy series (Phillips & Henry, 2005; Forette et al. 1998; Livingston, Manela & Katona, 1997; Brun & Englund, 1986), resulting in a total annual care cost of £6.1 billion, (2004/2005) of which £3.3 billion represents direct spending on health and social services (DoH, 2005a). On average prognostic indications suggest that people with dementia live for seven or eight years following initial diagnosis, (Coulson, Fenner & Almeida 2002; McCullagh et al. 2001; Molloy & Lubinski, 1995; Cummings & Benson, 1992), although there are wide individual variations ranging from 2 to 20 years (Snowden, Neary & Mann, 2002; Peerson & Skoog, 1996).

2.3.5 Characterisation

The condition is characterized by a decline in cognitive function, loss of intellectual capacity in multiple domains in the absence of clouding of consciousness (Lishman, 1987) and has three primary expressions (Keene et al. 2001) - neuropsychological (amnesia, aphasia, apraxia & agnosia); neuropsychiatric (depression, anxiety, euphoria, lability, paranoid ideation, mis-identification, delusions, hallucinations, aggression, pacing, wandering & falling, agitation), and deficits in activities of daily living (problems with dressing, eating & continence) with assessment in each area therefore essential to assist diagnosis. With the advent of medications that slow cognitive decline the impetus for early detection and intervention has assumed greater prominence, thus accurate diagnosis is becoming increasingly important, but can be obscured by its insidiousness (Hebert, Scherr & McCann, 2001; Howarth, Heath & Snope, 1999; Geldmacher & Whitehouse, 1996) and lack of individual insight.

When considering whether marked cognitive impairment is due to dementia, three major differential diagnoses should be excluded, acute confusion of any cause, chronic focal brain syndromes in particular the amnesic syndrome, and depression, although the latter may be prodromal of a dementing illness (Grober et al. 2000).

2.3.6 Disease Progression

All dementias typically progress in stages, generally termed mild, moderate, and severe, with different varieties manifesting in distinctive ways, both in regard to the differing cognitive functions and the course of their decline. With disease progression most forms eventually impact upon all cognitive functions, but during the early stages different types have different 'signatures' in terms of the pattern of which can

be distinguished from other conditions affecting cognition such as depression, and a little in excess of 60% of all those diagnosed will exhibit both behavioural changes and psychological symptoms (Brodaty, Draper & Lee-Fay, 2003; Lyketsos, Steinberg & Tschanz, 2000; Devanand, 1997; Morris, 1996).

2.3.7 Intervention

Early detection and classification of the disease facilitates appropriate intervention with whatever provision is available (Perry & Miller, 2001; Harwood, Hope & Jacoby, 1997), including pharmacological management, all of which may sustain well-being and later reduce predictable care management challenges (Clare et al. 2000). Three compounds have now been licensed for the treatment of the disease: donepezil, rivastigmine, and galantamine, but costs have rendered prolonged prescribing somewhat prohibitive. Behavioural disturbances similar to discreet psychiatric disorders (affective, anxiety, and psychotic disorders) are common (Tariot & Blazina, 1993), with >90% of those affected manifesting challenging behaviour over the course of their illness (Burgio & Fisher, 2000; George, 1998), referred to as Behavioural and Psychological Symptoms in Dementia (BPSD) by the International Psychogeriatric Association (Finkel et al. 1996). Agitation presents in 25% of cases, poses a significant problem, and is often associated with difficult-to-manage behaviours such as undressing, pacing, wandering, aggression, shouting together with nocturnal disturbance. The management of these symptoms consequently presents a major clinical dilemma when determining the formulation of appropriate care practices.

2.3.8 Risk Factors

A number of genetic and environmental factors (Smith et al. 1998; Small, Ercoli & Silverman, 2000) have been demonstrated to be linked to AD (Table 2-5) but only four risk factors have been confirmed beyond reasonable doubt with the single greatest risk factor ageing, with normal ageing and AD associated with overlapping and increased levels of pathology (Palmer et al. 2003; Keller, 2000).

Table 2-5 Aetiological Factors in Alzheimer's disease

Aetiological Factors for Dementia and Cognitive Decline:

Basic findings of risk factors:

- Established risk factors
  - Age, Family History, Down's syndrome, Apolipoprotein E ε2 allelle
- Probable risk factors
  - Depression, Hypertension, Head Injury
- Possible risk factors
  - Female gender, Low Intelligence/Education, Diabetes' and Smoking

Table 2-5 has been adapted from: Thomas, and O'Brien, (2001).

2.3.9 Causative Mechanisms

AD in the elderly probably has a number of causative mechanisms contributing towards one final shared pathway. Neuro-pathologically, the disease is characterised by degeneration of neurons and their synapses, and the presence of extensive amounts of senile plaques and neurofibrillary tangles populating the cortex, resulting in acetylcholine depletion in key areas of the brain, with consequential memory loss and behavioural changes (Schacter, 2000). Similar diffuse white matter abnormalities in late life depression and AD detected by magnetic resonance

imaging (MRI) suggest that a comparable or identical neurodegenerative process may contribute to the emergence of both disorders in some individuals. The cholinergic hypothesis of AD (Schacter & Davis, 2000; Davies, Mohs & Marin, 1999) has led to the development of a number of strategies to enhance failing cholinergic neurons and thus the neurotransmitter, acetylcholine. AD preferentially occurs in elderly individuals, with the highest incidence immediately at or just beyond the average life span (Kliegel et al. 2005; Kliegel, Moor & Rott, 2004).

2.3.10 Studies and Research

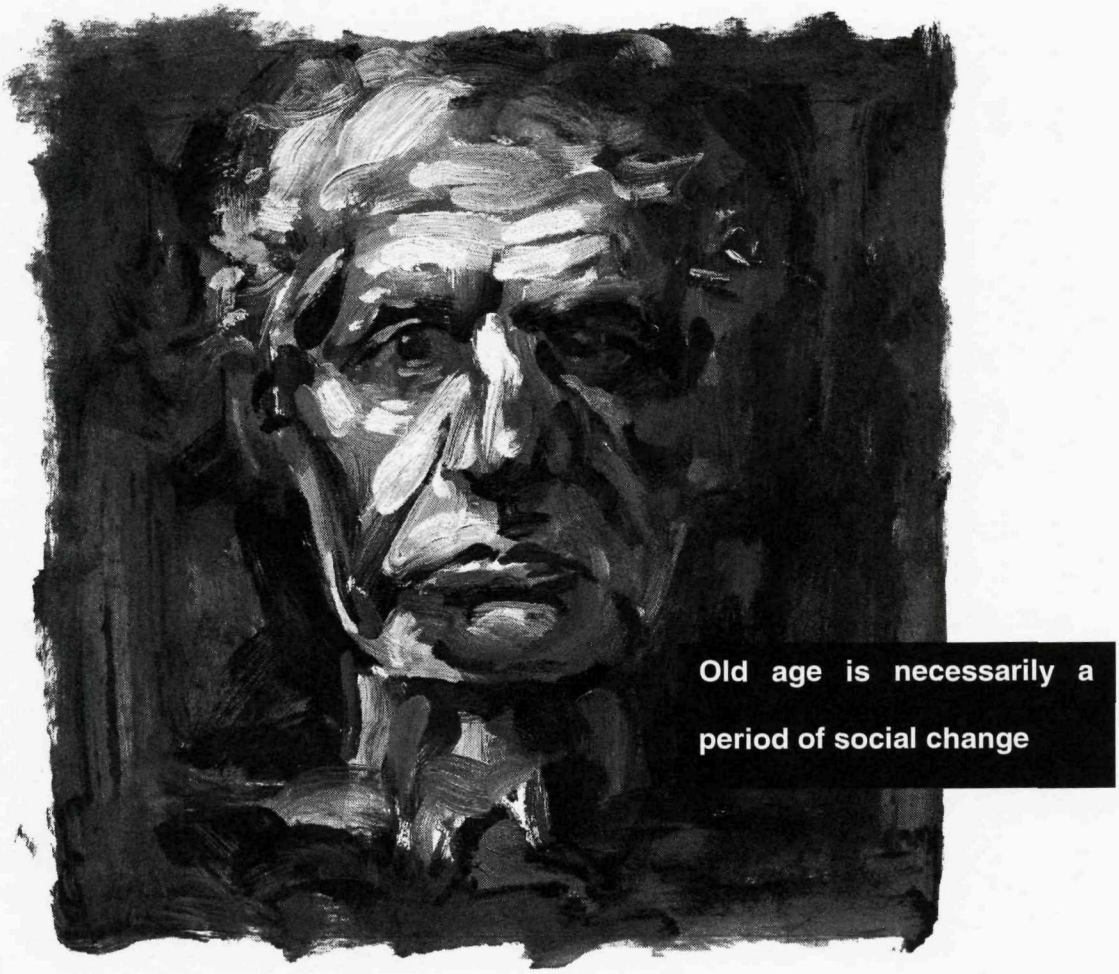
Recent studies suggest that the acceleration of incidence rates for AD slows down in very old age (although there is no evidence of a decline in disease progression with increased survival more directly related to an earlier age of onset, (Welsh et al. 1994) and influenced by factors that are not exclusively genetic (Holmes, 2002). The corollary therefore being that AD is age-related as opposed to age-dependent (Blume, Persily & Mintzer, 1992).

Research into the disease gained momentum during the 1980's, whilst neuropsychological and neuro-imaging now makes it possible to detect dementia at an early stage, creating the opportunity for addressing theoretical questions about brain mechanisms and cognitive processes. There is, furthermore, according to Butler et al. (2004), a developing interest in how environmental factors and behavioural interventions may mediate disease experience (Rowland, 1977) and thereby ameliorate the more distressing features of the condition so allowing functioning at an optimal level despite underlying pathology.

Contemporaneous studies remain immersed within the 'medical model', or the 'standard paradigm' of dementia (Kitwood, 1997). Symptomatology and the loss of

normality in those affected is attributed solely to the individual's neuropathology (Bond, 1992) with a resulting neglect of socio-cultural factors (Galton & Hodges 2003; Evans, 2000; Harding & Palfrey, 1997; Lyman, 1989). Thus responses are dominated by biomedical and psychological approaches that focus upon the individual with little regard to their surroundings (Innes, 2002; Mortimer, 1988), although following increasing criticism of this biomedical model it has been increasingly complemented by a growing awareness of the individuality of those with dementia and their rights as people (Gilleard & Higgs, 2001; Gilleard, 2001; Innes & Capstick, 2001; Cheston, 1998). However, while promising therapeutic strategies are currently being explored, the ability to diagnose dementias early in their evolution still remains poor, and there are problems of case definition with at least some aspects of the disorder appearing to lie on a continuum from good cognitive function to severe impairment (Brayne & Calloway, 1988).

2.4 Depression



Picture 2-2 Depression in old age

Nicholas Murdoch (2006)

Old age is necessarily a period of social change and personal loss, (Baumgarten et al. 2002) with older people becoming increasingly susceptible to depression, multiple-pathology, and cognitive impairment (Schonknecht et al. 2005; Mulsant & Gangli, 1999; Jorm & Jolley, 1998; Lima & Wertheimer, 1998), thus depression and old age are frequently regarded as being inextricably linked.

2.4.1 Depression

Depression is not a unitary clinical entity but a heterogeneous group of disorders with differing severity resulting from psychosocial stress, poly-pathology, and biochemical changes that occur in the aged brain, although it is not age-related hence there is no reason to believe it to be part of normal ageing but older people with major depressive disorder may have a greater risk of recurrence than younger individuals (Kennedy, Kelman & Thomas, 1990; Mueller et al. 2004). It is a pathological process and constitutes a major and growing health problem (Evans & Mottram, 2000); is a significant but inadequately diagnosed mood disorder especially in older people (Harralson & Lawton, 1999; Cohen, Kennard & Pitt,1994), and one of the most common conditions recorded in general practice (Hunkeler et al. 2006; Whooley & Simon, 2000; Morris & Robinson,1990),with major depression more commonly having a chronic course and consequential poor long term prognosis in older people than younger adults, (Reynolds & Kupfer, 1999) although the reasons remain elusive (Mitchell & Subramaniam, 2005).

2.4.2 Characterisation

The depressive disorder is characterised by cognitive impairment, (or may be a psychological reaction to cognitive loss) and is consistently associated with poor or deteriorating levels of ability to perform routine tasks. It can present either as a mild feeling of lowered mood, that is transient and may reflect an individual's response to life circumstances, or as a major illness with biological features. Symptoms of major depression can include: anhedonia (lack of pleasure), anergia, insomnia (sleep disturbance), and feelings of worthlessness, apathy, lack of volition, guilt, psychomotor disturbances, limited concentration abilities, and appetite changes

(Small, Basun & Backman, 1998, 2000; Knauper & Wittchen, 1994). These are inevitably influenced by social factors and will vary according to class, culture, age and gender, differ from individual to individual, and across the lifespan. Studies examining mood disorders in later life have predominantly focused on major depression but most of the depressive symptomatology is, according to Flint, (2002), not captured by this construct because symptoms are either of insufficient number or too intermittent to qualify for the diagnosis. The pathogenesis of the disorder is, furthermore, not well understood, in part attributable to both the inconsistent expression of depressive symptoms and possible temporal patterning during the course of the illness (Henderson, Korten & Jacomb, 1997).

2.4.3 Epidemiological studies

Epidemiological studies have used terms such as "sub-syndromal", "sub-threshold" or "sub-case" to account for depressive states that fall below the threshold for case-level depression, and in a recent review of the literature Lavretsky and Kumar (2002), concluded that clinically significant non-major depression has been under investigated. Sub-syndromal depressions are levels of depressive symptoms that are associated with increased risk of major depression, physical disability, and medical illness but do not meet the DSM-IV criteria for major depression or dysthymia (Judd et al. 1996). Depressive illness tends to be an episodic condition, is prone to under-treatment, relapse, recurrence and chronicity irrespective of age, with a significant minority of elderly depressed not achieving full remission (Robert & Montgomery, 1995). The oldest old population group (that is people aged 66-79yrs and over) is likely to be divorced/widowed/separated and have a history of medical illness, particularly cardiovascular diseases or cancer.

2.4.4 Aetiology

Aetiology is often subdivided into risk factors (vulnerability to depression), precipitation factors, and features that maintain depression (perpetuating factors) the latter more relevant to clinical management (Baldwin & Wild, 2004). (Table 2-6). In a study examining the relationship among stressful life events, gender, social support and severity of depression, Zlotnick et al. (1996) identified no gender differences, but their findings demonstrated that fewer stressful events and the perception of support from family and friends were associated with lower levels of depressive symptoms in both men and women.

2.4.5 Symptomatology

In a Liverpool study using AGECAT, Copeland, Gurland and Dewey, (1987) reported levels of both depressive symptoms and depressive illness to show no consistent positive correlation with levels of social disturbance and deprivation, but reported two thirds of those diagnosed with depression either deceased or psychiatrically 'ill' after thee years. Findings by Myers, Lindenthal and Pepper, (1976) examining psychiatric symptomatology in a large older adult population reported low rates of depression in those who were more 'integrated' than those who reported more depressive symptoms. Integration included characteristics of higher education and income, continuous employment, job satisfaction and marriage. Lorant et al. (2003) in a similar study reported the highest depression scores to be significantly associated with low socioeconomic status, fewer personal, environmental and situational resources and a greater number of loss events. In a research paper questioning prevalence studies of depression in old age, Snowdon, (1997) reaffirmed rates of

depressed mood as being higher amongst those of lower socio-economic status, the unemployed, the divorced and separated.

Table 2-6 Factors influencing Depression in Older People

- Overlapping and merging of physical and somatic psychiatric symptoms
- Minimal expression of sadness
- Somatization or disproportionate complaints associated with physical disorder
- Neurotic symptoms of recent onset
- Deliberate self-harm
- Pseudodementia
- Depression superimposed upon dementia
- Accentuation of abnormal personality traits
- Behavioural disorder

Table 2-6 has been adapted from: Management of depression in later life (Baldwin, & Wild, 2004).

2.4.6 Surveys and Studies

There is an abundance of older people community based surveys and studies reporting prevalence rates, with widely varying results. In a survey of 700 people in Islington, (aged >65yrs) clinical depression was identified in 14% of the sample studied (Livingston, Hawkins & Graham, 1990), whilst prevalence rates were reported to be 31% in a population-based survey of adults (aged >65yrs) in Arbroath, Scotland (Joffe & Lipsey, 1999). A recent systematic review of 34 community based studies found an average prevalence for depressive symptoms of 13.5% in adults aged 55 years and over, although the reported prevalence rate was found to have a wide range between 0.4 and 35% (Allsup & Gosney, 2002), with a prevalence of 10-

15% among the population aged 65 years and over; 30% in GP attendees, compared with 9% in younger adults (Souetre, Thwaites & Yeardley, 1999; ONS, 1994; Katona, 1995;1994), depression is two to three times more common than dementia (but is common in dementia), although several studies have indicated that episodic depressive illness as such does not appear to be associated with an increased risk of intractable/chronic depression (Stoudemire et al. 1993; Baldwin & Jolley, 1986).

2.4.7 Research

However, research into ageing has been slow to acknowledge the heterogeneity of depression from the perspective of aging, gender, class and culture (Atkin, 1998; Hughes, 1995; Arber & Ginn, 1991), and there continues to be a lack of consensus among mental health professionals on diagnostic indicators (Beck & Koenig, 1996; Kathol, 1990; Endicott, 1984). Chronological age by itself is not a risk factor. Predisposing factors include genetic susceptibility which decreases with age (Hopkinson, 1964), gender/status, more common in females of all age groups and in those widowed or divorced, and neurobiological risk factors. Situational and psychological vulnerability factors, and other correlates, (including post-traumatic stress disorder) can further contribute to the multi-factorial aetiology of the disorder.

2.4.8 Diagnosis

Depression in later life is a largely undetected and therefore untreated condition (Andrews, 2001;Thompson, Kinmouth & Stevens, 2000), with a little under 10% of those detected in primary care offered anti-depressant treatment, and less than 1% referred to a psychiatrist (Macdonald, 1986). Determining a more accurate picture is dependent upon diagnostic criteria, methods of measurements, age groups, and

settings. In current old-age psychiatry (both practice and research), two principal approaches define depression: 1st construct - depressive symptoms; 2nd construct - more specific depressive illnesses or disorders defined in terms of duration, number and type of symptoms, with psychiatrists invariably using the second construct, and non-psychiatrists typically regarding depression in terms of the first (Koenig et al. 1997).

The level of detection by non-specialist personnel is correspondingly low, (Mayall et al. 2004), and in the event of being diagnosed there is often inadequate treatment (Coyne & Katz, 2001), despite evidence that older people have similar responses to younger adults to available interventions including anti-depressant medication (Keller et al. 2000), and cognitive behavioural therapy (Harvey, Rudolph & Preskorn, 2000). Before antidepressant treatment was available the average time to spontaneous remission was 12-48 months (Flint & Rifat, 1997), with first episode depression after 60 years of age having a 70% of recurrence within 2 years of remission (Zis et al. 1980). Without treatment, depression in old age eventually becomes a chronic disorder resulting in high levels of morbidity and mortality. Suicidal peak is approximately twelve months following a depressive episode but risk remains elevated for up to four years (Murphy, Smith & Wright, 1988).

Table 2-7 Risk factors for late-onset depression

Medical Illness:-	
Hypothyroidism	(50%)
Myocardial infarction	(45%)
Macular degeneration	(33%)
Diabetes	(8% to 28%)
Cancer	(24%)
Coronary artery disease	(20%)
Medications:-	
Beta-blockers	
Central nervous system disease:-	
Parkinson's disease	(25% to 70%)
Alzheimer's disease	(15% to 57%)
Multiple sclerosis	(27% to 54%)
CVA	(26% to 54%)
Huntington's disease	(9% to 44%)
Micro-vascular ischaemic disease of the brain	(20%)

2.4.9 Risk Factors

Elderly patients with early onset depression are more likely to have had a higher number of previous episodes throughout their adult life, which also influences prognosis compared to elderly depressed patients with late onset of illness. Risk factors for late onset depression have shown a close association with physical ill-health (Table 2-7 - Cole & Bellavance, 1997). Despite strong evidence that depression among older adults responds to treatment (Unutzer et al. 2000; Kliempt, Ruta & McMurdo, 2000; Reynolds, Frank & Dew, 1999; Lebowitz, Pearson & Schneider, 1997) >30% of older community based adults do not seek clinical advice, with barriers to seeking treatment possibly a result of attributing feeling depressed to old age. Thus, in the absence of treatment, depression in old age becomes a chronic disorder that produces high levels of morbidity and mortality together with a

substantial increase in available health care resources. In high-risk populations the use of validated screening instruments can improve levels of detection, with the best purpose instrument probably being the Geriatric Depression Sale (GDS; Yesavage et al. 1983). Several longitudinal studies (Freyne et al. 2005; Barefoot et al. 2001; Beekman et al. 1999; 1997; Callahan et al. 1994) have identified poor outcomes to be associated with scores following assessment with the GDS; the higher the score, the worse the outcome, and although rates of relapse and chronicity vary considerably there is more consistency with mortality rates, approximately 5% year on year (Baldwin, 1997).

2.4.10 Categories

Categorical definitions of types of depression do not fit well when superimposed on the variety of illness seen in clinical practice hence the distinctions between mild, moderate and severe depression tend to be somewhat arbitrary and essentially a quantitative assessment, although aspects of an individual's thought processes and behaviour do appear to be indicative of more severe depression, and in some instances delusions relating to guilt, persecution, and punishment are common. The development of standardised diagnosis using criteria with satisfactory reliability and validity has been an essential step in the definition of depression. The current major classification systems are DSM-IV (American Psychiatric Association 1994), and ICD-10 (World Health Organization 1992). (Table 2-8). Even though they employ different classifications both have moved much closer to agreement concerning the classification of the disorder although a complaint of depression is not a necessary requirement (Baldwin & O'Brien, 2002).

Table 2-8 Classification of Depressive Disorders

ICD 10 System	DSM IV System
Depressive Episode Mild Moderate Severe Severe with psychosis	***Major Depressive Episode*** Mild Moderate Severe Severe with psychosis
Other Depressive Episodes Atypical depression	
Recurrent Depressive Disorders Currently mild Currently moderate Currently severe with psychosis In remission	***Major Depressive Disorder (recurrent)***
Persistent Mood Disorders Cyclothymia Dysthymia	***Dysthymic Disorder***
Other Mood Disorders Recurrent brief depression	***Depressive Disorders not otherwise specified*** Recurrent brief depression

Table 2-8 is taken from Gelder et al. (2001).

2.4.11 Suicide

As the ninth leading cause of death among developed nations, suicide is a major public health problem (Bruce & Pearson, 1999), increasing with age with men outnumbering women suicide completers by a substantial margin. Recent studies of completed suicide have reinforced the close association with major depressive illness, especially in older people (Conwell, Duberstein & Cox, 1996; Barraclough & Hughes, 1987), but whilst there is ample evidence that depression is the major cause of suicide in elderly persons, understanding other factors can make additional contributions toward prevention strategies. Research in recent years has identified a variety of risk factors and correlates of suicide in later life (Conwell, Duberstein &

Caine, 2002; Wilkinson, 1996; Van Egmond & Diekstra, 1989) with a resulting epidemiological notion of 'population-attributable risk' (Bruce & Pearson, 1999).

The typical clinical profile of the older suicide completer is late onset, non-psychotic, uni-polar depression of moderate severity uncomplicated by substance abuse or personality disorder although depression in this group is rarely recognised or treated (Rubenowitz et al. 2001). Minor depression is relevant to the study of suicide in part because psychological autopsy studies report that depression was more often mild or moderate than severe in victims. However, according to Pearson and Conwell, (1995), 15% of those diagnosed with severe depressive disorders in the community commit suicide, and when using validated psychological autopsy methods, Conner, Conwell and Duberstein, (2004) reported higher rates of suicide in depressed individuals aged 50 years and over with histories of aggression.

Table 2-9 Factors associated with a poor prognosis

General:-

- Presence of cerebral organic pathology
- Preceding severe physical health problem
- Supervening health events

Illness-related:-

- Slower recovery
- More severe initial depression
- Duration of symptoms greater than 2 years
- Three or more previous episodes (for recurrence as opposed to chronicity)
- Age of depression onset
- Previous history of dysthymia

Table 2-9 is taken from Baldwin, (1997).

2.4.12 Prognosis

The associations between poor prognosis and age or age of onset are far from clear, (Table 2-9 - Baldwin, 1997), with clarity of symptom delineation and diagnostic criteria confounded by some degree of reference to social factors, characteristics, or behaviours at a definitional level. Further complications can include an increasing range of symptoms, which may or may not be related to the diagnosis (Beekman, Deeg & Tilburg, 1995).

2.5 Physical health, Cognitive impairment and Depression

2.5.1 Physical Health and Cognition

The maintenance of cognitive function in old age is associated with good physical health. Dementia of the Alzheimer's type is the most common form of dementia, with an increasing body of epidemiological evidence suggesting that vascular risk factors such as hypertension, diabetes and hypercholesterolaemia are risk factors not only for the development of vascular dementia but also Alzheimer's disease (AD) (Stewart, 1998a). Individuals with AD also have a high degree of medical co-morbidity (heart disease, diabetes, cancers). According to the Global Burden of Disease estimates for the World Health Report (2003), dementia contributed 11.2% of years lived with disability in people aged 60 years and over; more than stroke (9.5%), musculoskeletal disorders (8.9%), cardiovascular disease (5%), and all forms of cancer (2.4%).

There is also accumulating evidence from epidemiological studies pointing towards a link between cholesterol and AD (Reynish et al. 2001; Wolozin, 2001). Several recent studies (Kilander, Vessby & Lithell, 2002; Engelhart et al. 2002) have

indicated similar links between cholesterol and cognitive decline more generally. The disability weight for dementia, estimated by international and multidisciplinary expert consensus was higher than for almost any other health condition, apart from spinal-cord injury and terminal cancer.

Although people with dementia are heavy consumers of health services, direct costs in the United Kingdom arise mostly from community and residential care. In a number of discussion papers spanning several decades (Ferri et al. 2005; Stewart, 1998b; Kings Fund, 1986) estimated that 224,000 of the 461,000 (49%) of elderly people with cognitive impairment live in institutions at an annual cost of £4.6 billion during 2004, representing 0.6% of the UK gross domestic product.

2.5.2 Physical Health and Depression

Depression and medical illness in late life are linked through complex reciprocal mechanisms in which pathology in one domain can accelerate deterioration in the other (Katz, 2004). The role of the endocrine system in depressive disorders is not fully understood although elevated cortisol levels and impaired thyroid activity have been detected in some individuals with depression. Equally hypothyroidism and Cushing's disease can feature in depression, whilst corticosteroid medication may precipitate depressive illness.

Stressful life events and physical illness retain a substantial causal relationship with the onset of both major depression and depressive symptoms (Minardi & Blanchard, 2004; Blazer, 2003; Kendler & Prescott, 1999; Katona, 1994; Forsell, Joem & Winblad, 1994; Evans & Katona, 1993; Kivela, Pahkala & Laippala, 1991), whilst specific illnesses may have a direct aetiological role either through physiological or cognitive means whilst other may serve as maintaining factors. Co-morbid medical

conditions, the tendency to somatise cognitive deterioration and multiple life events all further complicate the diagnostic process and are acknowledged risk factors for inferior treatment response and poor antidepressant tolerability. Beyond its profound immediate impact on quality of life, depression in older adults is a risk factor for functional disability (Unutzer et al. 2002; Covinsky et al. 1997), which may predict premature mortality (Pennix, Leveille & Ferruci, 1999; Whooley & Browner, 1998).

When using DSM-IV criteria to assess depression in an epidemiologically derived cohort of patients, Greenglass, Fiksenbaum and Eaton, (2006) concluded that healthy older people are at no greater risk of depression, with any apparent age effect being attributable to physical health problems. The frequency of depressive symptoms, according to Gaitz and Scott, (1972) appears to increase with age together with its often chronic concomitant disorders (hypertension, organic brain disease, and osteoporosis), but is often difficult to detect (Cankurtaran et al. 2005).

Depression coexisting with physical illness has been shown to increase levels of functional disability, increase the use of health care resources, and reduce the effectiveness of rehabilitation in patients with stroke, heart and pulmonary disease (Wang & Kessler, 2005; Hickie, Scott & Naismith, 2001; Frisoni, Fratigolini & Fastborn, 2000; Fulmer & Wallace, 2000).

DeJonge et al, (2006), reported pre-morbid depression was associated with poor overall outcomes as sequelae to medical events (myocardial infarction, congestive cardiac failure, cancer) in elderly patients, thus concluding that depressive symptoms may be indicative of psychosocial frailty. de Groot, (2001); Khunti, Goyder and Baker, (1999) confirmed as many as 1 in 3 patients (aged >55yrs) with diabetes develop depression which may impair functioning, glycemic control, and adherence

to treatment, and in a subsequent longitudinal study, examining the severity of depression in community based elderly patients, Raj, (2004) reported similar findings, further maintaining that depression was associated with cognitive impairment as a dysfunction that interferes with coping, adaptation, and resilience.

A wide range of factors may influence depression symptomatology in older people. The absence of social support, socio-economic factors and health locus of control are acknowledged to be important predictors (Quan, Fick & Love, 2002; Caine, Lyness & King, 1994), whilst Bonnet et al. (2005) reported depression to be positively associated with a cluster of unhealthy behaviours including smoking, poor diet and physical inactivity. A strong association between depression and physical ill-health among older people has been consistently reported (Gurland, Copeland & Kuriansky, 1983), and disability associated with illness, rather than illness in isolation, the latter highlighting the importance of focusing on disability prevention in the management of chronic disease. Major depression more frequently has a chronic course in older adults, with diminished social networks, losses associated with aging, and physical illness serving as potentially contributing factors, (Baker, 1996; Banerjee & Macdonald, 1996). Specific illnesses may have a direct aetiological role either through physiological or cognitive means whilst other may serve as maintaining factors.

In a geriatric outpatient setting (N=1255), Cankurtaran et al. (2005) diagnosed depression in 273 (22%) of the sample, comprising 193 (70.7%) females and 80 (29.3%) males. Depression was not unsurprisingly more common among those with physical illnesses, with the correlation between the disorder and concomitant diseases statistically significant, the number and prevalence of which were as

follows: Alzheimer's disease (34; 12.5%), vascular dementia (27; 9.9%), hypertension (211; 77.3%), diabetes mellitus (64; 32.6%), osteoporosis (182; 66.7%), atherosclerotic coronary artery disease (89; 32.6%), cardiac failure (23; 8.5%), bronchial asthma (8; 2.9%) chronic obstructive pulmonary disease (25; 9.2%), and osteoarthritis (133; 48.8%). Chronic insomnia (Rodin, McAvay & Timko, 1988), pain (AGSP, 1998), and incontinence (Roberts et al. 2000; 1997), are common in older adults, frequently precipitate depression, and are often untreated. The incidence of primary insomnia in older adults in the community is reported to between 5-10% (Reynolds et al. 2001), significant pain 25-50% (Luber et al. 2001) and incontinence between 15-30% (Mulsant, Ganglui & Seaberg, 1997).

2.5.3 Depression and Cognition

The association between depression and cognitive impairment has been well established, even though the direction of causality has been disputed (Meyers & Bruce, 1998). Depressive symptoms have been found to precede cognitive decline (Yaffe, Blackwell & Gore, 1999), whilst other studies have shown an association between persistent depressive symptoms and cognitive decline (Paterniti et al. 2002), although the nature of this relationship, according to Jorm, (2000) remains unequivocal, but there is sufficient evidence to take seriously the possibility that depression is a risk factor for dementia and cognitive decline. One view is that mood exerts an effect on cognitive proficiency, (Keefover & Rankin, 1997) but there are contradictory views about which condition should be seen as primary (Newman, 1999). Although some commentators have stated that neither depression, nor the cognitive conditions sometimes associated with depression are age related, others have argued that vulnerability to depression like cognitive impairment increases with age (Riedel, & Jorissen, 1998). Previous studies (Moniz-Cook, Agar & Silver, 1998;

Teri & Gallagher-Thompson, 1991) have reported that depressive symptoms were often seen in the early stages of both AD and vascular dementia that is the often called 'pseudo-depression'. In contrast to earlier research, examining changes in and factors related to older men (Tijhuis et al. 1999) found that late life depression increased the risk of Alzheimer's disease. However, according to Miyoshi, (1992); Morstyn, Hochanadel and Kaplan, (1982), older persons with senile depression tend to exhibit a decline in activities of daily living and in self-rated health which is often referred to as 'depressive pseudo-dementia'.

Further difficulties, unique in older people, can include the atypical presentation of the disorder (more somatic complaints), and the coexistence of depression and cognitive impairment, the latter associated with a poor clinical course or diminished response to treatment. In some instances delusions relating to guilt, persecution and punishment are common, together with perceptual and behavioural disturbances (NCISH, 1999). These symptoms, not necessarily predicted by clinical data or baseline demographics, can often persist after treatment, are frequently drug and cognitive therapy refractory, have been correlated with significant functional impairment and disability (Judd et al. 1996) and with poor long-term outcome (Fava, 1999; Fava et al.1998a & b; Fava & Kellner, 1991).

Persistent depression, as opposed to depressive episodes, is also associated with the additive effects of both cognitive decline and low cognitive functioning in older people (Alexopoulos, Young & Meyers, 1993; Fuhrer et al. 1992), together with high rates of suicide and non-suicide mortality (Platt, Backett & Kreitman, 1988; Kurlowicz & The Niche Faculty, 1997). Although the treatment goal is the resolution of all symptoms, remission is gradual with residual symptoms of suicide ideation and

hypochondriasis often persisting (Cornwall & Scorr, 1997). These 'remission' symptoms together with cognitive impairment are highly prevalent in elderly patients and should not be solely attributed to the intrinsic factors of either the disorder or age, but also to external factors, with significant predictors being subjective continued stress, subjective social support, in combination with the medical burden (Denihan et al. 2000; Ernst, 1997). Late life depression therefore has potentially serious health consequences, including an elevated risk of mortality due to suicide, medical illness and amplification of disability associated with medical and cognitive disorders (Musselman, Evans & Nemeroff, 1998). This, according to Powell and Cook, (2000), clearly reflects a relationship with disability and has important implications for healthcare costs as a result of increased utilization of existing resources (Gasto et al. 2003).

2.6 Health in older and life sentence prisoners

2.6.1 The ageing process in prison

Faiver (1998); Kratcoski and Pownall, (1989) all cite correctional medical experts who estimate (without supporting data) a 10-year differential in physiological characteristics between typical older inmates and community population equivalents. In support of this Aday's, (1999) study found that prison officials commonly agreed that the typical offender in their 50s had the physical appearance of someone at least ten years older.

Prison health professionals also generally agree that the onset of age related health conditions develops at a younger age in prisoners than amongst the general population (Aday, 1999; Aday, 2003; Mara, 2002; Shimkus, 2004; Rosefield, 1995), predominantly attributable to prisoners' poor choices and chaotic lifestyle, the effects

of relative poverty and limited access to healthcare prior to imprisonment (Aday, 2003; Kuhlmann & Ruddell, 2005).

2.6.2 Physical health

2.6.2.1 US literature

In the US few state-level, health-related surveys have been conducted with older inmates, with their health status measured through either self-report or secondary analysis of prison medical records. In a population based survey of older male prisoners aged >50 years (N=119), at seven state prisons in Iowa, Colsher et al. (1992) reported high rates of chronic illness, with most inmates able to perform routine self-care tasks. Of the overall population length of sentence served was >5 years (Mean=5.7yrs; SD=6.7yrs) with a just over one fifth (21%) of participants life sentence prisoners. The overwhelming majority of prisoners (86%) were white. Two thirds of inmates self-reported good health; however, almost half believed that their health had worsened since incarceration. The most commonly reported chronic illnesses were arthritis (45%), hypertension (40%), venereal disease (22%), ulcers (21%), prostate problems (20%), myocardial infarction (19%), and emphysema (19%). Limitations in gross physical functioning were also prevalent. The majority of inmates smoked cigarettes and had a history of alcohol consumption. Rates of illness were typically higher in those aged >60 years as opposed to those aged 50-59 years. However, several limitations should be noted in the findings. First, the cohort is small although it does include most of the older male inmates in Iowa state correctional facilities. Second, some misclassification may have been introduced by the use of self-reported history of chronic conditions. Third, Iowa, (population estimate 3 million with 14.7% aged >65 years compared to 12.4% in the whole of the

USA, and 95% white compared to 80% in the whole of the USA), has lower crime and incarceration rates in comparison to other states (US Census Bureau, 2006), the prisons are relatively small, and inmates may have different levels of access to or use of health care services than inmates in other states.

Merianos et al. (1997) used the National Health Interview Survey (NHIS) to make inferences about the health status of aging inmates. The authors found that men aged >50 years resembled the profile of incarcerated men and reported poorer health than men who did not match this profile. However, they do not provide convincing evidence that NHIS data are a reliable proxy measure for older inmates' health status.

Falter, (1999) in a nationwide study of prisoner health care data examined the relationship between medical encounters and the prevalence of five chronic health care conditions (viz., non-insulin-dependent diabetes, insulin-dependent diabetes, arteriosclerotic heart disease, COPD, hypertension). The author found that hypertension and heart disease explained almost 25% of the variance in total number of medical encounters. However, prison environments may influence health care utilization, a factor for which Falter did not control.

Watson, Stimpson and Hostick, (2004), in a recent review of prison health literature in America, estimated 85% of older inmates have two or more major illnesses.

Loeb and Steffensmeier, (2006) when using the Older Men's Health Programme and Screening Inventory (OMHPSI, Loeb, 2003) in a survey of older male prisoners (N=51; age range 50-80yrs) at a Pennsylvanian prison reported all prisoners to have multiple chronic health conditions ranging from 2 to 13 including high cholesterol levels, hypertension, heart disease, and depression. The majority of prisoners had

entered prison after the age of 40yrs (61%) and had served on average 7.6 years (Mean=5.0yrs) of their current sentence. None were serving life sentences with a disproportionate representation of sex offenders. Whilst findings from the study are informative and have important policy implications, findings could not be generalized to the prison population as a whole in view of it being a convenience sample. Validation of self-reported health status was not confirmed through examination of inmate medical record, and ethnicity was under-represented.

2.6.2.2 UK Literature

In an important empirical study determining the health of elderly sentenced prisoners from 15 prisons in England and Wales, (N=203; 101 sex offenders & 102 non-sex offenders; age range 60-88yrs: M=65.5yrs; SD=4.8), representing 19% of the male prison population aged >60 years, Fazel et al. (2001b) reported 85% of prisoners had a longstanding illness or disability confirmed in their medical records with 83% reporting a chronic illness at interview, significantly higher figures than found in equivalent studies of younger inmates and community-based elderly men (65%). Burvill's et al. (1990) quantification of illness in psychiatric research was used to collect data on self-reported illness. The most commonly reported physical problems were musculoskeletal, cardiovascular or respiratory in nature. Smoking rates were lower in comparison to the younger prisoners (OPCS, 1995) but rates amongst this group (54%) higher than those found among elderly people living at home. An acknowledged limitation of the study was that prisoners' health was assessed exclusively by self-report and reviewing medical notes, although there were similarities between these findings and those in North American prisons. In an editorial Tarbuck (2001), commenting about the health of older prisoners noted that

Fazel' s (2001) study supported the findings of Colsher et al. (1992) and had been instrumental in a significant shift away from anecdotal reporting towards empiricism therefore providing important information for both the planning and improvement of prison healthcare facilities for elderly prisoners.

Fazel et al. (2004), when reviewing the medical records of the same cohort of prisoners (N=203) to determine their unmet treatment needs reported 77% were being prescribed medication predominantly for cardiovascular, musculoskeletal and gastrointestinal systems. The study did not include medical examination/assessment and was therefore unable to assess the full extent of morbidity which is likely to have been higher. Further research was recommended in order to investigate the effectiveness of possible interventions in order to address: the training of prison medical staff, overcrowding; lack of secure psychiatric beds; the reviewing the medical records of prisoners, effectiveness of possible interventions including education at a regional level, audit of local prison health centres and improved health screening.

In a 20-year mortality study investigating the rates for natural causes of death in male prisoners aged 60 years and under, from 1978-1997, Fazel and Benning, (2005) reported 574 male prisoners had died. A total of 178 (31%) of prisoners were aged 50-59 years. Although there was no obvious pattern in the results by age band, in the oldest (>60yrs) where there were 149 natural deaths, the standard mortality ratio was lower in comparison to younger age bands. The most common cause of death was diseases of the circulatory system. The authors acknowledged selection bias arising from compassionate release (raises SMR) and the effects of social class (lowers SMR) together with the possible healthy worker effect. Other methodological challenges included the changing age and prison population structure.

2.6.3 Mental health

Correctional health professionals have often expressed conflicting opinions based on their personal experiences and impressions. Thus, Kelsey, (1986) believes that except for the long-term deterioration that occurs with aging, older inmates demonstrate few mental health problems, but does not provide empirical evidence in support of this statement. Alternatively, Gewerth, (1988) cites evidence that the offences of older persons can often be attributed to age-related changes (e.g., organic brain syndrome).

In one of the first epidemiological surveys of age-related factors among custodially remanded prisoners (N=1241; age range 16-80yrs; Mean=33.5) from Greater London, Taylor and Parrott, (1988) reported older prisoners were more likely to show signs and symptoms of psychiatric or physical illness than their young peers. Treatment efforts were reported to accumulate with age and fewer than 15% of prisoners >65 years had never received any psychiatric treatment in the NHS. Only five prisoners in the 55-64 years age group and four >65 years were first offenders. Despite the high rate of physical and psychiatric morbidity among the more elderly group very few were obviously treated as sick or even in need of social support following their offending. The diagnosis of neurotic disorders was however unrecorded and substantial quantities of historical data were missing hence this data had to be interpreted with caution. In accord with this both Booth, (1989) and Dugger, (1988) stated that older inmates are at high risk for developing depression, especially those who are experiencing ill-health and age-related changes and losses.

Gunn, Maden and Swinton, (1991) in their comprehensive report on mentally disordered prisoners in England and Wales contested that prison was an unsuitable

place in which to manage individuals with serious mental health disorders. Findings revealed 37% of the overall population had mental health disorders of which 20% comprised either substance abuse or alcohol dependency. Their subsequent research in 1994, examining the mental health of life sentence prisoners in custody did not reveal any clear cut findings with the exception of an increase in disturbed behaviours, (25% compared to 16% in non-lifers), predominantly confined to self-harm and acts of aggression, whilst Dooley, (1990) reported murderers as forming 16% of prison suicides between 1972-87 although they formed only 4% of the entire prison population.

In the previously mentioned US study by Colsher et al. (1992), little evidence of either cognitive impairment or psychotic symptoms was found although some participants reported symptoms of depression (15.4%), loneliness (7.1%), and anxiety (8.1%). Anecdotally, Aday, (1994) also found evidence of depression, guilt, and psychological stress among older inmates (N=25) who were first-time offenders.

Chaiklin, (1998) speculated that older inmates with mental illness are overlooked because of limited resources, cramped environments, and improperly trained staff, but further attributed low detection rates of mental illness to staff suspicions about malingering.

In 1997, Singleton, Meltzer and Gatward, (1998) performed a major national survey of psychiatric morbidity among prisoners aged 16-64 years. This survey was conducted by the Social Survey Division of the ONS on behalf of the Department of Health for the Institute of Psychiatry in order to provide up-to-date baseline information about the prevalence of psychiatric problems among male and female, remand and sentenced prisoners in England and Wales in order to inform policy decisions about services. The survey was conducted between September and

December 1997. Of the male sentenced population (N=1121) a quarter of those surveyed were aged 16-20 years with two thirds aged <30 years. 15% of prisoners had been given a sentence of less than one year, 42% 1-3 years; 30% 4-9 years, with 10% serving >10 years, of whom 56, (5%) of the overall population were lifers. The largest proportion of prisoners (35%) was in Closed Category C prisons. The survey confirmed 40% of serving prisoners as having an identified mental health disorder, 63% a history of hazardous drinking with the prevalence higher in the life sentence population when compared to a similar biographical group within the community. Levels of depression were reported as being 33% in sentenced prisoners with approximately one fifth taking some form of medication which acts upon the central nervous system. However, when sample sizes are small the sampling error associated with prevalence rates will be quite large and could result in between group differences that are not present in the whole population.

Gullone, Jones and Cummins, (2000) in a sample of male sentence prisoners, (N=81; age range 18-73yrs; Mean=35.2yrs; SD=9.8) in a maximum security unit in Melbourne, explored coping styles and prison experience as predictors of psychological well-being in male prisoners. Time spent in prison ranged from one month to 8yrs 4mnths (Mean length 1.7yrs) with sentences ranging from one month to 22yrs (Mean 5.31yrs; SD=5.75). Screening tools included: Self- Esteem Inventory, Becks Depression Inventory (BDI), and the State Trait Anxiety Inventory. The study attempted to draw conclusions relating to change from a cross sectional design and although an acceptable strategy it is limited with more conducive data being derived from longitudinal analysis. Selected screening tools included the BDI which is not elderly specific. Findings revealed 22% of prisoners as falling in the asymptomatic range of depression, 38% of prisoners to be moderately depressed, and 6% as

being severely depressed. The sample represented only a small proportion of the overall prisoner population thus there may be unidentified biases in the data, although their findings are consistent with previous research.

In a UK study assessing hidden psychiatric morbidity (N=203), in the same cohort of elderly sentenced prisoners from 15 prisons in England and Wales previously mentioned, Fazel et al. (2001a) reported 32% having a diagnosable psychiatric illness; the most common diagnosis was depression, with figures significantly higher than among the general population. The Geriatric Mental State Schedule (GMSS), a semi-structured clinical interview was used to assess prisoners' mental state and the Structured Clinical Interview for DSM-IV Axis II for personality disorders. The prevalence of depressive illness was five times greater than that found in other studies of younger adult prisoners and elderly people in the community. Risk factors associated with depression were poor physical health and/or previous psychiatric disorders. Despite the high levels of depression, only 12% of those diagnosed with a depressive illness were on antidepressant medication. However, it is not clear from the report whether other treatments or therapies were offered as alternatives to antidepressant therapy. Life sentence prisoners were not represented in the study.

Fazel and Danesh, (2002a) in a systematic review of 62 surveys from 12 Western countries comprising 23 000 prisoners with a mean age of 29 years, concluded that prisoners were several times more likely to have psychosis and major depression and about ten times more likely to have antisocial personality disorder in comparison to the general population. A significant conclusion arising from the study was that prison health services will encounter increasing difficulties in providing appropriate

care for prisoners with significant psychiatric disorders a proportion of who will age in prison.

When comparing the prevalence of psychiatric, demographic and personality characteristics disorders in a group of sex offenders (N=101; Mean=65.9yrs) and non-sex offenders (N=102; Mean=65.1yrs) Fazel et al. (2002c), reported both groups as having similar prevalence rates of mental illness, but with significant differences in some demographic features. However, elderly sex offenders had increased schizoid, obsessive-compulsive, and avoidant personality traits supporting the view that sex offending in the elderly is associated more with personality factors as opposed to either mental illness or organic brain disease. The authors acknowledged several limitations to the study including: combined different types of sex offenders, a recognition that sex offenders not being an ideal comparison group, and whether the findings were generalisable to all sex offenders in view of the severity of offences committed.

Coid, Fazel and Kahtan, (2002) in a study of admissions to medium and high secure units from 7 (of 14) health regions over a 7-year period, reported 52 patients, (<2%) were aged 60 years and over. These patients were atypical, highly selected with half having committed homicide, had fewer previous convictions than their younger counterparts and were older when first admitted to psychiatric hospitals, usually in the context of their offending behaviour. Depressive illness, delusional disorder and dementia were the most prevalent diagnoses, the latter being confirmed in just over one third (33%) of patients. This study suggests that the number of admissions to specialist services reflect an absence of more suitable provision for elderly patients at a lower level of security, with a requirement for multi-agency collaboration (a more integrated approach between prison, forensic psychiatry and old age psychiatry

services), and, in the opinion of the authors, that demented offenders are diverted away from the criminal justice system. Regional forensic psychiatric services can be helpful in offering advice but may equally be reluctant to admit elderly patients into their units because they may ill-equipped and unsuitable for the frail, physically ill and vulnerable elderly, which in turn may result in elderly mentally ill prisoners remaining in the prison system.

Curtice et al. (2003) in an 11-year elderly offender survey of referrals to a regional medium secure unit in England reported an absence of mental disorder in over half (56%) but a 19% prevalence rate of dementia although it was found that forensic psychiatrists did not routinely use standardized rating scales for the assessment of cognitive functioning. It was suggested that mild cases of dementia may therefore not have been identified. It is also the case that individuals at the very early stages of dementia, especially fronto-temporal dementia are not easily identified by clinicians unfamiliar with diagnosing dementia and it is therefore possible that many cases are missed.

Coid, Petruckevitch and Bebbington, (2003) in a further analysis of the ONS, (1998) prison survey found that prisoners who reported being placed in solitary confinement in prison were more likely to have an extensive history of psychiatric treatment and a diagnosis of either schizophrenia or depression.

Gavin, Parsons and Grubin, (2003) in a study exploring the mental health needs of male remand prisoners (N=616) who screened positively at the initial screening, (using a semi-structured clinical interview) concluded that of the 33% who screened positively, 43 prisoners (19%) revealed mental health problems with 10 prisoners

having a clearly defined mental health diagnosis. However, the study did not include either the age range of respondents or any other criminogenic variables.

Tomar, Treasaden and Shah, (2004) collected data over a 13-year period on patients (N=5477) referred to a medium secure forensic unit in London. The sample was divided into those who had first offended before the age of 65 years and those who had offended after the age of 65 years, the latter group accounting for 78 (1.4%) of all referrals. Referrals were for 55 patients of whom 45 (81.8%) had offended. Case notes of 42 (93.3%) patients were screened. Sexual and violent offences accounted respectively for 20 (47%) and 15 (36%) of offences. Analysis of the data confirmed that less than one third (31%) had no psychiatric disorder but organic disorders accounted for just over one fifth (21%) of cases. Only eight (19%) required admission to the medium secure unit. Fourteen (33%) had first offended after the age of 65 years while others were known either to psychiatric services or the criminal justice system before the age of 65 years. Although the elderly represented few referrals there is a high prevalence of psychiatric morbidity in both remand and sentenced elderly prisoners thus elderly offenders with psychiatric morbidity may benefit from specialist old age psychiatric forensic services.

2.6.4 Prisons as causes of ill health

Wilson and Vito, (1986) when surveying medical needs among (87) older prisoners of a medium security institution observed high rates of alcohol abuse among older inmates. Many inmates felt that the prison environment exacerbated their respiratory and arthritis problems. Other medical complaints were related to their beliefs that services and medications for serious illnesses were not available to them in prison. These concerns, as well as the fear of dying in prison, were more frequently

expressed among inmates in the geriatrics unit. Staff believed that inmates' medical problems were aggravated by the stress of incarceration and prison conditions. Staff also believed that older inmates were preoccupied with medical concerns because of high levels of lethargy and inactivity, especially among those in the geriatrics unit. However, findings from the study are confined to only one medium secure unit hence they are not generalisable. Ill-health was assessed from inmate file and interview, in the absence of any medical examination.

Moore, (1989) examined the impact on older inmates of the environment in a state prison in Michigan. He describes a sample (N=41; age range 50-80yrs) who were relocated to a special needs facility. Prior to relocation a total of 83% reported at least one chronic health problem, with 49% having three or more. Inmates' most frequently self-reported cardiac (26%), vision (17%), respiratory (15%), and gastro-intestinal (9%), health problems. He subsequently described 75% of inmates as being more satisfied with their environment but did not specify how this was determined. In fact, those relocated to a segregated unit demonstrated a 100% increase in medical demands.

In the UK several studies suggest that prisoners in general feel their health especially mental health has further deteriorated following imprisonment (Birmingham, 2003; O'Brien et al. 2003; Lester et al. 2003) and in a recently published study that examined the influence of environmental factors on the mental health of people in prison, Nurse, Woodcock & Ormby, (2003) found that participants reported lengthy periods of isolation with little mental stimulation, contributing to poor mental health and feelings of anger, frustration and anxiety.

2.7 Health Care

The NHS, as part of its primary care strategy (DoH, 2000c), has identified four principles of good practice:

- Fairness: services should not vary in range or quality across the country.
- Accessibility: services should be reasonably accessible to people who need them, regardless of their age, sex, ethnicity or health status.
- Responsiveness: services should reflect users' needs and preferences, and the health and social needs of the local population.
- Efficiency: services should be based on research evidence of clinical effectiveness and resources should be used efficiently.

2.7.1 Primary Care

Primary care is the first level of contact for individuals seeking health care but it does not exist in a vacuum and should therefore be viewed within the wider context of clinical governance and overall clinical management as determined within the National Service Frameworks. Health professionals are viewed as gatekeepers of the NHS, whilst the audit of standards and the modernisation of primary care practices are pivotal to achieving optimal care (DoH/HM Prison Service, 2002).

Older people in the community are predominantly the main users of both health and social care services (Coughlin & Liu, 1989) but inadequate service delivery can often result in poor clinical outcomes. Introduced at the turn of the century, the NHS Plan (DoH, 2000c) detailed a programme of investment and reform, (Table 2-10 - DoH, 2000) the principles of which were pivotal to a modern care system for older people.

Table 2-10 The NHS Plan (DoH, 2000)

Principles
• Services based upon clinical need and assuring standards of care
• The provision of clinically appropriate services- research and development
• The implementation of person-centred approach to care practices
• Acknowledging the needs of ethnic minorities - the provision of culturally appropriate services
• The introduction of performance measures indicators - clinical and practice support decisions
• Workforce development - Ensuring staff are appropriately trained
• Transparency of publicly funded services
• The co-ordination of a diverse range of services
• The introduction of health promotion initiatives
• The reduction of health inequalities
• Information systems - The preservation of patient confidentiality and ease of access to information

2.7.2 Clinical Governance

Clinical Governance (CG), defined in the 1998 consultation document as a 'First Class Service: Quality in the New NHS', is an integral part of the NHS Act (DoH, 1999a) but it can be applied to any organisation that provides health care. The foundation of CG was unmistakably political and a mechanism that allows the quality of clinical care to be monitored and valued equally with the financial performance of the primary care organisation (BAMM, 1998). CG is defined as a framework through which NHS organisations are accountable for the quality of clinical care (Scally & Donaldson, 1999), with the overall intention to encourage not only safe but best practice (Goodman, 2006). Guidance issued to the NHS in 1999 established four key steps for all NHS organisations in the first year of Clinical Governance development namely: establishing internal leadership, accountability and working arrangements;

determining what elements of CG are already in place, and where improvement is needed; drawing up a development plan in the light of previous assessment; clarifying how the organisation will report its plans and progress. The principles of CG apply to all those who provide or manage patient care services within the NHS and as from 01 April 2006 the Prison Service.

Characterised as "A framework through which NHS organisations are accountable for continuously improving the quality of care of their services and safeguarding high standards of care by creating an environment in which excellence in care will flourish" (DoH, 1999b), CG provides a means for assessing, improving and monitoring the quality of services. Two influential bodies support clinical governance: the National Institute for Clinical Excellence (NICE) and the Commission for Health Improvement (CHI).

Translating and implementing CG (Table 2-11 - DoH, 2001b) for prison healthcare will require further consideration be given particularly to certain issues in the context of its delivery and outcomes. These should include the relatively underdeveloped state of clinical audit and other quality systems; the integration of CG arrangements as closely as possible to the host PCT; contracts with external providers; different annual reporting arrangements taking into account the role of the Task Force Regional Tier following its establishment in 2001.

Table 2-11 Implementing Clinical Governance

- Clear management arrangements for healthcare
- Training development and qualifications for staff
- Meeting national standards
- Learning from complaints and serious incidents
- Clear plans for improvement
- Staff recognise their role in providing quality care
- Monitoring of results
- Detecting and resolving problems
- External accountability for quality

Table 2-11 is taken from DoH, (2001).

Both Stead, Sweeney and Westcott, (2000) and Fox et al. (2001), prior to the introduction of CG, sought to evaluate two pilot schemes trialling the efficacy of significant event audit (SEA), an important component of CG within a prison setting. The qualitative, ethnographic studies, funded by HM Prison Service, adopted a grounded theory approach, and were located in three prison healthcare centres and confined to healthcare staff. However, the true emphasis of their research was difficult to determine, with managing change, SEA and CG each a major challenge in healthcare settings, particularly within a custodial environment. Despite some initial resistance by the prison system, prison Governors were tasked with ensuring the framework for CG was in place (DoH, 1999b; 2001b). The authors maintained that prison healthcare had subsequently embraced the concept, but according to Carlen, (2002a &b), there was little evidence of effective mechanisms being in place and a common belief that its' true purpose was to focus on punitive or disciplinary measures in order to control standards and prevent mistakes happening in the future. Suggested key issues for further discussion included developing the right

relationships with other initiatives; determining how far 'tailoring' of CG requirements will be necessary for prison health care, and the requirement for specific supporting guidance and other practical implementation support.

2.7.3 National Service Frameworks (NSF)

National Service Frameworks (NSFs) (DoH, 2000b) were established to improve services through setting national standards in order to improve quality and address existing variations in care, and whilst governmental policy statements on clinical practice over the past fifteen years have emphasised the importance of routinely measuring individual patient outcomes (Secretary of State for Health, 1999; DoH, 1998;1991), concerns about the widespread intrusion upon dignity and age discrimination in access to care subsequently prompted the formulation of the NSF for Older People.

2.7.4 NSF for Older People

The NSF for Older People (DoH, 2001a) was the first comprehensive strategy designed to integrate and forge more effective links between health, social services and other ancillary services for older people, by ensuring appropriate high quality and fairer funding, whilst improving access to and developing services to facilitate independence. The policy outlined a programme of reform with the aim of promoting and extending healthy active life and compressing morbidity by the prevention or delay of the onset of ill health and disability, concomitantly reducing the impact of illness and disability on health and well-being. It also aimed to develop a new layer of care (intermediate care), between primary care and specialist services provided by a range of professionals, for example GPs, hospital doctors, nurses, physiotherapists, occupational and speech therapists, social workers and carers.

2.7.5 Multi-disciplinary Approach

NSFs stress the importance of treating co-existing physical illness (multiple-pathology) and enhancing social networks in the management of psychiatric morbidity (depressive illness, anxiety, and early cognitive impairment) and of encouraging a multi-sectoral/disciplinary approach to promoting health and well-being in old age. It is an evolutionary process within an intended 10-year framework (and beyond) whereby the needs of older people with specific diseases and other conditions will be identified. The framework is intended to be seated within the context of current policy, available resources, and be evidence based, with the NHS being the primary focus.

2.7.6 Themes

NSFs have a wide ranging remit, with several fundamental changes generic across all standards. National standards for a defined service or care group must be jointly agreed together with performance indicators against which progress within an agreed timescale can be measured with a central role given to outcomes measurement and the stipulation of a minimum data set (Audit Commission, 2002). These standards, enshrined within four themes (Table 2-12 - NSF, 2001), are to be applied regardless of setting. The standards are authoritative statements by which clinical staff can describe the responsibilities for which its professionals are accountable. Consequently standards reflect the values and priorities of the profession and provide direction for practice and a framework for the evaluation of its practice. Written in measurable terms, standards also illustrate accountability to the public and define outcomes for which professionals are responsible. Well articulated sets of standards could facilitate:- quality assurance systems; databases; regulatory

systems; financing methodologies; development and evaluation of service delivery and organizational structures; certification activities; policies, procedures, and protocols; education.

Table 2-12 Themes within NSF Standards

Themes within the National Service Framework
• Respecting the individual
• Intermediate care
• Provision of evidence-based specialist care
• Promoting an active, healthy life

Table 2-12 is taken from DoH, (2001).

2.7.7 Older Peoples' Needs

The responsibility for all NHS organizations together with social services is to ensure that the views of older people are fairly presented by a designated representative. The overarching brief will be to raise awareness of the needs of older people together with overseeing care practices. The NSF therefore has a broad scope and is the key vehicle for ensuring that the needs of older people are central tenets to a programme of reform for health and social service provision by a process of setting national standards designed to improve quality and address existing anomalies in care practices.

2.7.8 Standard 1

The delivery of health care within HM Prisons in England and Wales falls primarily on health care staff that fall into one of the following categories: prison service nurses; health care officers with nursing qualifications; health care officers without

nursing qualifications; contracted in services such as Community Psychiatric Nursing Services. Productive working relationships between the NHS and the prison service building on the Knowledge and Skills Framework and Prison Healthcare competency tool kit are essential to secure effective health services for prisoners, with the new partnership agenda reflecting the requirement for better integration of NHS services and in the case of older prisoners satisfying the standards as defined in the NSF for older people.

Central guidance dictates that healthcare in prisons should promote the health of prisoners; identify prisoners with health problems; assess their needs and deliver treatment or referral to other specialist services as appropriate. It should also continue any treatment procedures and care practices originating in the community, thereby contributing to a seamless service, and for the majority facilitating 'through care' on release. In general, the majority of healthcare provision in prisons is of a primary care nature with a higher prevalence in the spectrum of mental health disorders, although imported chronic physical illnesses are of equal concern (Coyle, 2005).

2.7.9 Standard 2

Treatable health conditions may be missed or misunderstood either during initial prison screening or assessment following transfer. The single assessment process, introduced in the NSF for older people, aims to ensure older people's care needs are comprehensively assessed without procedures being needlessly duplicated by different agencies. In 2003 the Department of Health established an accreditation process for off-the-shelf assessment tools that have been developed by independent bodies for national use in the overview assessment of older people's needs.

Successful implementation is likely to be built on best local practice, suitably adjusted to cover necessary domains, rather than imported model with no prison resonance. Where electronic systems are not being used attention needs to be given to developing paperwork of a reasonable volume which practitioners view as being sensible and functional.

As from October 2004 the Disability Discrimination Act (1995) applied to all prisons in the United Kingdom, hence prisons are deemed responsible for meeting all requirements contained within the Act. This includes enabling disabled prisoners by adjustments to policies, procedures and practices which have hitherto excluded them.

2.7.10 Standard 7

In mental health this requires adherence to and working towards meeting the standards set out in the National Service Framework. Thus the role of primary care staff in prisons can best be summarised as:

- Supporting the Governor and other staff to develop an environment that maintains mental health and well-being (Standard 1).
- Identifying prisoners with mental and substance abuse disorders (Standard 2).
- Managing prisoners with common mental health disorders, for example depression (Standard 2).
- Referring appropriately for assessment, advice or treatment (Standard 2).
- Working with diverse groups of patients from many different cultures.

- Providing information and guidance for those who provide regular and substantial care for prisoners with mental health problems - in prison often staff as well as family members (Standard 6).
- Contributing to the multidisciplinary work to prevent suicide (Standard 7).

The NHS Plan called for 'In-Reach Teams' to be established by 2004 yet the NSF for mental health found that few authorities had specifically designated teams. Despite the more contemporary guidelines calling for improved co-ordination between prisons and NHS trusts, psychiatric practitioners continue to encounter significant problems when attempting to achieve desirable clinical outcomes.

When a prisoner enters reception a new clinical record should be created, with efforts made to retrieve any information required from the prisoner's GP or other relevant service. The prisoner's explicit consent should be obtained prior to application (PSI 25/2002) although in exceptional circumstances information may be requested and disclosed without consent. Receiving a new prisoner, following transfer, is equivalent to registering with a new NHS primary care practice, but completion of this process in the community often occurs some considerable time after registering, and is to some extent dependent upon circumstances and local practice guidelines.

There are good reasons in the prison system to ensure that prisoners are seen by a member of the health care team before the prisoner's first night of arrival and are as follows; morbidity within the prison population; increased risk of self harm and suicide following the stresses of transfer; the need to ensure compliance with supplies of currently prescribed medication. Whilst reception screening in primary care is not standardised it is expected that during the consultation the health care

team 'make such enquiries and undertake such examinations as appear to be appropriate in all the circumstances' as set out in the General Medical Service contract.

When acknowledging morbidity in the prison population it will be appropriate, in addition to general medical issues, to specifically note mental health, substance misuse and the potential for self-harm. The population in each prison will vary in age, gender, ethnic background and morbidity and, in addition, there will be 'prison specific' issues that will need to be included in local procedures. Each establishment should therefore have developed a local protocol and procedure for the reception of transfers to its establishment that meets its local needs and is responsive, as appropriate, to changes in population and any significant clinical events.

2.7.11 Standard 8

Full screening, in theory, should have been undertaken and completed prior to transfer to both training prisons (HM Prisons Kingston & Albany) although this may not always have been the case. Health care staff assigned to reception for medical screening may not have mental health training, be deskilled and have limited experiences of mental health assessments. This increases the potential to miss prisoners with mental health problems. Some prisoners may not be amenable to assessment on arrival into the prison system. Other prisoners, especially older individuals, may be concerned about sharing the fact that they have a history of mental health problems for fear that this knowledge may render them more vulnerable to bullying/victimization from other younger prisoners.

Following its initial piloting in ten prisons (Carson, Grubin & Parsons, 2003), a comprehensive assessment tool has gradually become more widely adopted across

the prison estate and generally been given a favourable reception (Grubin, 2004). Nevertheless, a number of criticisms have been levelled, primarily directed towards its format (a self-reporting questionnaire) and it being reliant upon the prisoner's understanding. It does, furthermore rely, in part, upon the skill of the interviewer, and there is an allotted section for overall comment. Emerging psychiatric problems, more commonly mood disorder can often be overlooked and hence go unnoticed.

2.7.12 NICE

The National Institute for Health and Clinical Excellence (NICE); DoH, 2005c) provides authoritative advice on the effectiveness of interventions to improve health and reduce health inequalities, and on treatments and the best clinical practice. Topics for public health guidance include: smoking and tobacco control; diet and nutrition; exercise and physical activity, and mental health. Health promotion considerations should be adequately and explicitly included within Local Health Delivery Plans drawn up in partnership with PCTs/Local Health Boards. Services provided to prisoners should ensure access to health education and prevention programmes and activities including screening which promote awareness of healthy lifestyles and address as a minimum: mental health promotion and well-being; smoking; healthy eating and nutrition; drugs and other substances. At present prison clinic audits are conducted every two years contrary to audit compliance (PSO, 2004) and viewed as being barely satisfactory, although the process is still in its infancy.

2.8 Achieving the Standards

2.8.1 The Implementation of Clinical Governance Arrangements

All prisons must ensure that arrangements are put in place to develop clinical governance in prisons with an identified clinical governance lead in health care. A base line assessment must be carried out by the prison with the relevant Prison Health Regional Teams.

2.8.2 Audit Compliance

In accordance with audit compliance, clinical supervision, provided by appropriately qualified staff must be available to all nursing staff to ensure healthcare staff are not professionally isolated. Clinical supervision is integral to professional practice (NHSME, 1993), and gained prominence following publication of "A Vision for the Future" (DoH, 1993) and is gradually assuming greater importance in NHS Trusts (Farrington 1998). It provides practitioners with support (Cutcliffe & Eping, 1997; Manley, 1994), education (Brown & Bourne, 1996; UKCC, 1996; Butterworth, 1994), and according to Lyth (2000), and Sloan (1999), enhances quality of care. Although Faugier, (1992) contested that ineffectual supervision constituted failure, the influence of Butterworth and Faugier (1992) subsequently established it to be synonymous with both personal and professional development. Yegditch, (1998) however, remained unconvinced suggesting that the role, boundaries and purpose of supervision are still unclear, possibly reflecting unresolved tension between personal and professional growth. Clinical supervision provides a formal structure within which openness and a willingness to learn can be fostered. Its' successful implementation, according to Freshwater et al, (2002); Bishop and Freshwater, (2000), will progress clinical practice and encourage clinical leadership. The experiences of nurses

engaged in the process are generally positive (MacDonald, 2002), but establishing a causal relationship between supervision, better nursing care, and improvement in patient outcomes remains elusive.

2.8.3 Clinical supervision

Subsequent to the Mental Health Nursing Team Review (DoH, 1994b), clinical supervision was primarily influenced by risk assessment and case-management (Mullarkey, Keeley & Playle, 2001; Morris, 1995), and is now well established (Butterworth, Carson & White, 1997). However, more recent initiatives such as a person-centred approach to care practices (DoH, 2001b), and the emphasis on direct accountability within the context of clinical governance (BGS, 1999), has necessitated the requirement for those involved to select an appropriate model of supervision.

2.8.4 Transfer of Healthcare

The responsibility for primary healthcare in prison was transferred to Primary Care Trusts (PCTs) with an agreed completion date of April 2006 for the full devolution of commission responsibility from Strategic Health Authorities to those PCTs that hosts prisons. There are 85 PCTs that have at least one prison in their area, and all but one Strategic Health Authority in England has at least one prison in their sphere of responsibility. The challenges posed in delivering and achieving identified outcomes within the HMPS-NHS partnership are wide ranging (Table 2-13 - DoH, 1999), and include cultural, organisational and security considerations, thus PCTs will therefore need to work in close collaboration with their prisons to embrace these and issues especially mental health provision and communicable diseases. The responsibility for all NHS organizations together with social services is to ensure that the views of

older people are fairly presented by a designated representative. The overarching brief will be to raise awareness of the needs of older people together with overseeing care practices.

Table 2-13 Prison Healthcare - Intended Outcomes

Prison Health
• PCTs will commission prison health services by 2006
• Prisoners are a valid part of our health communities
• Prison presents an opportunity to address previously unmet health needs
• Programme of change similar to NHS
Aiming to
• Develop the workforce
• Improve prison regime
• Increase educational, work and therapeutic activities

Table 2-13 is taken from the HMPS-NHS Partnership. DoH, (1999).

2.8.5 Best Practice

To move the clinical effectiveness agenda forward successfully a real partnership between all key personnel must be forged - from those responsible for the delivery of healthcare to senior management level. It is important that the mental health needs of older prisoners are addressed and that prisoners should not be disadvantaged simply because they are prisoners. The real challenge confronting the commissioning transfer will be to develop and improve existing services in prisons to bring them in line with the wider National Health Service (Table 2-14).

Table 2-14 Prison Healthcare -The Application of Best Practice

Applying best practice within a prison setting is implicit upon
• Maintaining autonomy - clinically guided as opposed to operationally led
• Staff/patient interaction - therapeutic with agreed identified outcomes
• Staff support - including health promotion
• Patients as individuals - as opposed to solely prisoners
• Provision of alternative coping strategies - in-reach services and listener schemes
• Involving families and on-going support - whenever possible

In accordance with the Council of Europe (1993) directives health policy in custody should be integrated into and compatible with national health policy; the prison health care service should have sufficient qualified medical, nursing and technical staff and appropriate premises, installations and equipment of a quality comparable, if not identical, to those in the outside environment; Mental health services and social services should aim to provide help and advice to inmates and strengthen their coping and adaptation skills. These services should co-ordinate their activities, bearing in mind their respective tasks. Their professional independence should be ensured, with due regard to the specific conditions of the prison service.

Chapter 3

Hypothesis and general Methodology

Chapter 3 begins by stating the hypothesis. The term 'elderly prisoner' is defined and a comprehensive and critical review of the literature is provided together with search terms adopted, web and other electronic sites visited. A general methodological section outlines the overall proposed research framework including ethics and procedures (consent, capacity & security). The design and duration of the research are described and data to be collected. The category, numbers of prisoners accommodated at both HM Prison Kingston and HM Prison Albany are identified, including a short history of each establishment. A description of proposed screening instruments is given, those selected together with several that were considered but discarded with explanations provided. Specific methodologies identify the range of prison and health specific variables recorded, in addition to how cognition and depression is to be assessed, with a detailed proposed analysis of the results provided. An explanation of how the views and experiences of prisoners at different stages of sentences are to be garnered and framed within an ecological analysis. The relevant principles and standards contained within the National Service Framework for older people for evaluating current primary and secondary healthcare provision are highlighted.

3.1 Hypothesis

Following from the previous discussion it is hypothesised that elderly prisoners would have a greater degree of ill health, as assessed by a number of physical and psychological indicators, than community based aged matched populations and that these ill health indicators would be related to the adverse consequences of the prison environment including poor health care delivery.

3.2 Searching the Literature

A systematic and comprehensive review of the literature was undertaken in order to identify both current knowledge and published policy in relation to older life and indeterminate sentence prisoners in England and Wales, in the wider context of: Knowledge about older people within the criminal justice system; Ageing/clinical ageing and its overall consequences; Physical health and well-being; Chronic disease in older adults; Cognitive status in the elderly; Organic brain disease and depression; Depressive Illness, and Mood disorder in older adults; Screening Tools and Assessment Scales in Old Age Psychiatry; Clinical Governance (CG); CG in Prison/Custodial Settings; National Service Frameworks (NSF); NSF for Mental Health; NSF for Older People (NSF); NSF in Prison Settings; Clinical Supervision; Clinical Supervision in Prison Settings.

3.2.1 Purpose of the literature review

The purpose of the literature review was to:

1 Critically analyse published research into the physical, psychological and social attributes of elderly life/indeterminate sentence prisoners and identify the range of both health specific and prison specific variables.

2 Identify known features and demographic characteristics, together with the current and projected number of elderly life/indeterminate sentence prisoners and their current clinical status.

3 Explore the existing culture within prison settings, the possible tension arising from custody/control and care, and staff/prisoner, prisoner/prisoner relationships within the context of health care provision.

4 Determine existing primary and secondary healthcare arrangements including the application of the National Service Frameworks, Clinical Governance, and Clinical Supervision within the prison system including access to, delivery of, and the quality of health care provision.

5 Identify existing reception health screening procedures and selected tools, and potential clinical issues arising from their administration including any diagnostic difficulties with their application in custodial settings.

6 Review published policy and policy documents by the Department of Health, the Prison Service, HM Chief Inspector of Prisons, and the Prison Reform Trust in relation to older prisoners.

7 Determine the health-related concerns of older prisoners, their perception of healthcare provision at different stages of sentencing and the implications for

clinical practice especially in view of the newly acquired equivalence status with the National Health Service (NHS).

8 Compare and contrast any reported evidence/prevalence of psychiatric and physical morbidity within this group and make comparisons, where possible, with the equivalent age-matched community populations using statistics from other studies including previous ONS surveys in England and Wales.

3.2.2 Databases Accessed

A search of the following electronic bibliographic databases was undertaken for relevant books and journal articles: University of Southampton Library Catalogues:- AGE Info; ASSIA; British Nursing Index; Cambridge Journal Online; Campbell Collaboration Library; Caredata; CINAHL; Cochrane Library; Criminal Justice Abstracts; Current Legal Research Topics Database Project; HMIC; Index to Theses; IBSS; IPA; ISI proceedings; Medline Express; Online Newspapers (The Guardian; Daily Telegraph; The Independent; The Times); The BBC (bbc.co.uk); PsychInfo:- Psylit; PubMed; RGN Journals Database; Silver Platter ARC Service; SSCI; Social Care Online, and WebSPIRS between 1965 and 2005.

Initially, the terms for the search were identified and agreed between the researcher and Faculty librarian, and by scanning available background material. The key words were truncated when required to retrieve variants if databases allowed. When necessary the search strategy was adapted for simpler databases or for web-based resources that did not allow for complex strategies or multi-term searching. Selected search terms used included:

Table 3-1 Adopted search terms

"Prison" and:	"Criminal Justice Policy" and:
Population in England and Wales	Sentencing
Older Prisoners	Sentencing Act
Elderly Prisoners	Life sentence Prisoners
Elder Prisoners	Lifers
Geriatric Prisoners	Elderly Lifers
Older Inmates	Mandatory and Discretionary Life Sentences
Ageing Offenders	Indeterminate sentence Prisoners
Growing old	Long-Term Prisoners
Effects of imprisonment	Post Tariff Life Sentence Prisoners
Adaptation to Prison Life	Beyond the Tariff
Human Rights	Release of Life Sentence Prisoners
Healthcare	

"The Prison Service" and:	"Ageing" and:
HM Chief Inspector of Prisons and Probation	Health
HM Prisons Inspection Reports (Announced & Unannounced)	Chronic Physical Health
HM Prisons Albany and Kingston	Growing old
Directorate of Healthcare	ONS Surveys
Home Office	Cognitive Status
House of Commons	Cognitive Impairment
	Mild Cognitive Impairment
"Department of Health" and	Organic Brain Disease
Provision of Healthcare	Dementia
Clinical Governance	Alzheimer's Disease
Clinical Supervision	Depression
Health Promotion	Depressive Illness
Health Education	Depressive Episodes
National Service Frameworks (NSFs)	Mood disorders
NSF for Older Persons	Prevalence of Dementia & Depression
NSF for Mental Health	Co-morbidity
	Multiple-Pathology
	Poly-pharmacy

In general databases were search from 1990 to include 15 years of literature, although several of the newer and smaller databases included only more recent literature. Where possible, the searches were limited to retrieve literature published in English.

3.2.3 Web Sites Identified and Visited

Web-sites with an obvious focus on older offenders, including NACRO (National Association for the Care & Resettlement of Offenders) were searched using specific search terms (Table 3-1) directed towards eliciting information relevant to the research topic and included "old", "older", "elderly", "life sentence", "determinate", "indeterminate sentence", "mandatory", "discretionary" and "offender", "inmate", "criminal", or "prisoners". More general sites and databases were searched with a general reference point of "offender", "older offenders, and "long-termers".

All issues of the Howard Journal published from 1995 - 2006 were searched for relevant material. Other journal articles and policy documents focussing on older prisoners were supplied on request by allied organisations.

Abstracts when available were searched and reference lists of articles examined to check for other articles of relevance and to give confidence that the search had been comprehensive. All material was managed and organised manually.

3.2.4 Other Electronic Sources visited included:

www.parliament.the-stationery-office.co.uk/pa/cm/cmhaff.htm
www.homeoffice.gov.uk
www.homeoffice.gov.uk/rds/prisons1.htlm
www.hmprisonservice.gov.uk/
www.homeoffice.gov.uk/hmipris/hmipris.htm
www.homeoffice.gov.uk/prisons/prisomb.htm
www.penlex.org.uk/pages/index.html
www.howardleague.org/
www.nacro.org.uk/
www.prisonreformtrust.org.uk/main.html
www.smartjustice.org
www.open.gov.uk/lcd
www.doh.gov.uk/prisonhealth

The nature of the published work in this relatively unexplored area of elderly life/indeterminate sentence prisoner research has resulted in poorly organised literature with mixed terminology and reference points adopted in a wide range of databases. Material gathered from websites, stakeholders and experts supplemented the main computerised database search. This included documents, government directives and consultation documents.

3.3 General Methodology

This combined quantitative and qualitative cross-sectional prison-based survey in a population of elderly life sentence prisoners (N=181), aged 55 years and over at two category B training prisons, HM Prisons Kingston and Albany, comprised three quantitative studies reporting: (1) Chronic ill health and well being, (2) Cognitive status, (3) Depressive symptoms and illness in a sub-sample of this population (N=121), together with potential contributory factors. It reports the socio-demographic and criminogenic characteristics, health status together with prison and non-prison related variables, and evaluates quantitative data collected from a standardised assessment schedule (Appendix 1); recorded information held in the inmate medical file, together with details from a face to face semi-structured clinical interview (Appendix 2a). Results following the administration of four validated and reliable screening tools are analysed. Overall results from the study are compared, where relevant to findings from HM Chief Inspector of Prisons Thematic Review (HMIP, 2004), Psychiatric morbidity among prisoners in England and Wales (ONS, 1998), and several studies (Colsher et al. 1992; Fazel et al. 2001; Loeb & Steffensmeier, 2006) identifying the health and unmet treatment needs of elderly male sentenced prisoners. Diagnostic criteria are compared to data from the Health

Survey for England (NatCen, 2003) and older, age-matched people in community-based surveys and studies.

The provision of current healthcare delivery is assessed using the principles and standards as defined in the National Service Framework for Older People (DoH, 2001) together with the efficacy of Clinical Governance and adopted models of Clinical Supervision within a custodial setting. Qualitative data gathered at interview details a range of prisoners' views on their overall experiences at different stages of sentencing, including previous, present and predicted health status, together with access to and current standard of healthcare provision. The views of prison healthcare staff on the provision of health care and their attitude towards ageing life sentence prisoners are explored in a face to face semi-structured interview (Appendix 2b).

3.4 Ethics and Procedures

3.4.1 Ethical Approval and Study population

The study received ethical approval (Ref No:-p010204) from the Director of Prison Healthcare and University of Portsmouth, Ethics Committee. Following an agreed protocol with the prison Governor and Healthcare Centre Manager, the total population, (N=183), defined as prisoners aged 55 years and over, serving life or indeterminate sentences at either HM Prison Kingston or HM Prison Albany (Category B prisons) were identified for inclusion in the survey. A total of 181 male prisoners were interviewed and assessed over the period from February 2003 to May 2006, representing a 99% consent and response rate.

3.4.2 Consent Procedures

Care was taken over gaining informed consent, paying particular attention to the special circumstances that affected the individual's ability to give free informed consent. Following discussion and subsequent agreement with the Clinical Manager at both prisons (Appendix 3a & b) a participant information leaflet (Appendix 4) was personally handed to each potential respondent with further explanation given on request prior to seeking their written consent (Appendix 5).

3.4.3 Special Procedures

The researcher undertook a security briefing by HM Prison Service at HM Prison Albany before embarking upon the research.

Prior to embarking upon the empirical studies, the researcher underwent training in the administration of the Mini Mental State Examination (MMSE); Alzheimer's disease Assessment Scale - Cognition (ADAS-Cog); Geriatric Depression Scale - (GDS), and Barthel Index, at the Memory Assessment & Research Centre, University of Southampton, Moorgreen Hospital.

3.4.4 Capacity Issues

In accordance with the protocol approved by the ethics committee, when informed consent could not be obtained from a prisoner, as a result of impairment from either reduced cognitive capacity or limited comprehension, guidance was sought in the form of a verbal request following prisoner approval from independent advisors (prison medical officer/clinical manager) for assent to the research.

3.4.5 Database

Participants were assured of confidentiality and all data has been stored in accordance with the Data Protection Act (1998). Anonymity was preserved by numbering each participant, by the use of codes on the screening tools, and the recording of age as opposed to date of birth. On completion, all data collected has been held in a locked filing cabinet, accessible only by the investigator; it will be kept for five years.

3.5 Design

3.5.1 Data collected

Data on demographic and criminogenic background, occupation, prison specific variables, including previous time spent in prison, estimated date of release, length of sentence served and length of sentence remaining, were obtained from information contained in the inmate file and using a standardised overall assessment schedule (Appendix 2 & 6). A comprehensive medical history was taken from the inmate record file, a face to face in depth semi-structured clinical interview, (Appendix 2 (b) and from the administration of three standardized and validated neuro-psychiatric screening tools:- the Alzheimer's Disease Assessment Schedule - Cognition (ADAS-Cog) (Appendix 9a &b), Mini Mental State Examination (MMSE) (Appendix 10a & b), and Geriatric Depression Scale (GDS) (Appendix 11). Assessment of functional ability was undertaken using the Barthel Index Functional Evaluation (Barthel Index) (Appendix 12). The diagnosis of dementia and depressive illness was classified against Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM IV, 1994) internationally agreed criteria. Following each interview, a comprehensive clinical report (Appendix 7a&b) was completed for

inclusion in prisoner medical records in accordance with the agreed research protocol. Two case histories are reported (Appendix 14a & b).

3.5.2 Duration of Study

Data collection, over a three-year period, (February 2003 - May 2006) took place during weekly visits to one or other of the prisons (either 10.00am-12.30pm or 2.00pm-4.30pm; Monday & Friday). Following agreement with the Clinical Manager, all interviews and assessments were conducted in the medical centre at each prison, with the exception of one prisoner who was accommodated in the segregation block at HM Prison Albany. Each interview was approximately 50 minutes in duration with data obtained from two of the selected screening tools subsequently compared to published age norms and education levels.

3.6 Prisons

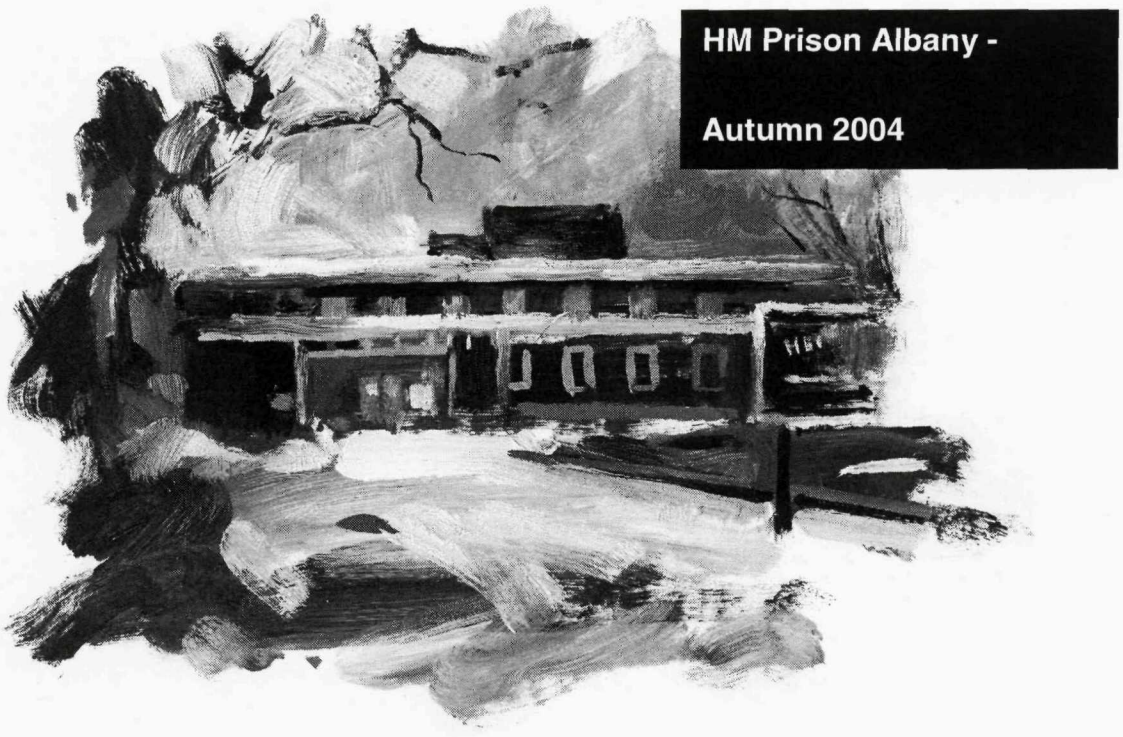
3.6.1 HM Prison Albany

Category:- B Training Prison

Area Organisation:- Thames Valley, Hampshire and Isle of Wight (South East 1)

Number Held:- 516 at July 2004

Figure 3-1 Numbers held and operational capacity



Picture 3-1 HM Prison Albany in the Autumn (2004)

Nicholas Murdoch

HM Prison Albany is a Category B training establishment with an operational capacity of 526 and comprising 6 residential units. The prison operates an integrated

regime and caters for a predominantly sex-offender population through the delivery of Accredited Programmes and supportive regime activities. HM Prison Albany is one of a group of three prisons located together, and occupies the site (opposite St Mary's Hospital) of a former military barracks on the outskirts of Newport, Isle of Wight. It was designed and built as a Category C Training Prison in the early 1960s. Soon after opening in 1967 security was upgraded and in 1970 the prison became part of the dispersal system. HM Prison Albany has never been popular with prisoners, partly attributable to its location on "The Island". It suffered major disturbances in 1983, which closed most of the prison for over a year. In 1992, following a major review of the dispersal system the prison was re-designated as a Category B Closed Training establishment. In 1998 the prison changed from being half vulnerable Prisoner Unit and half Normal Location, and is now exclusively sex offenders and vulnerable prisoners.

There are six residential units, A to F Wings. With the exception of one recently built unit, (F Wing) each Wing is identical in design and all exit off one main corridor. The wings contain four galleried landings with three spurs of eight cells on each floor, totalling 24 cells to each landing. The first landing has only two spurs of prisoner living accommodation totalling 16 cells, the remaining third is utilised for staff office accommodation. Both A and E wings have one less cell than the other wings as two cells have been combined to create Listener rooms. There is no integral sanitation and washing: lavatory and shower facilities are on a shared basis.

3.7 HM Prison Kingston

Category:- B Lifer Prison/C within E wing special unit

Area Organisation:- Thames Valley, Hampshire and Isle of Wight (South East 1)

Number Held:- 197 at March 2004

Figure 3-2 Numbers held and operational capacity

Picture 3-2 HM Prison Kingston

Nicholas Murdoch

HM Prison Kingston is a category B training establishment with an operational capacity of 197. It manages life-sentenced prisoners as a second stage establishment and previously older prisoners in category C conditions, providing a range of offending behaviour programmes, work and educational opportunities. HM Prison Kingston was the only prison in the United Kingdom that attempted to maintain a unit (E Wing) for elderly, infirm prisoners.

However, the conditions on E Wing were heavily criticised as being unfit for purpose by the Chief Inspector of Prisons during an unannounced inspection in 2001 (and subsequent announced follow up inspection in 2002). The facility has since been relocated to HM Prison Norwich and the wing reallocated to general usage. Although the efforts of the staff were directed towards creating a more sheltered environment for older lifers, many prisoners were reluctant to reside on the wing, in view of it not being staffed 24hrs each day and the lack of Social Services input. The unit was unable to cater for extremely frail/ill prisoners, hence its role was correspondingly unclear and of limited capability.

The prison was built between 1874 and 1876 by French prisoners of war but the majority of the records were subsequently lost during World War 2. It is one of the most distinctive buildings within the prison estate, has listed status with many of the original Victorian architectural features still remaining. Portsmouth's city arms are evident in numerous places, a reminder of the prison's original role as a city jail holding males, females and children. The prison was closed during the recession of the 1930s, becoming a military detention centre 1939-45, after which it was a Prevention Detention Centre and Borstal Recall Centre. Since 1970 HM Prison Kingston has specialised in holding and evaluating life sentenced prisoners.

The prison comprises four wings spurring off a central rotunda with A, C and D wings being the main prison with single cell accommodation (in-cell sanitation) and one 'buddy cell'. The recreational areas are situated within the wings.

Each prison accommodates different prison populations and has a labour force characteristic of other workforces in the area. HM Prison Kingston is staffed disproportionately by ex-servicemen and their relatives, whereas high unemployment rates and an island industry heavily reliant upon tourism had resulted in a local (Newport) workforce at HM Prison Albany. A percentage of staff at both sites had retired and subsequently returned to work on an agreed part-time basis. Daily routines in both establishments were broadly similar albeit with different visiting protocols (Appendix 8).

3.8 Identification of appropriate screening tools

There is an extensive range of scales available to assess all aspects of mental and physical health in older people which may be of relevance in the assessment of overall need. However, despite the current emphasis placed on needs-led health provision, little guidance has been provided as to the most appropriate means of assessing global need. Although the application of standardized instruments can facilitate a systematic approach to the assessment process the choice of the individual scale relies specifically on the question that is to be asked, and whilst the ideal scale does not exist, there is a requirement for it to be appropriate for both the population and the environmental setting (Boustani et al. 2002).

Scales developed specifically for, and standardized in, older people are preferable to scales developed for younger people, which may not translate efficiently to older

populations. Determining which scale should be selected should therefore always follow an analysis of the underlying purpose (Table. 3-2) with clinical domains measured separately using a specific scale, or alternatively as part of a multi-dimensional instrument.

Table 3-2 Screening Tool - Critical Appraisal Checklist

Descriptive	
Background	Where and when was the tool developed? Why was the screening tool developed? For what population/setting was it developed?
Purpose	What does the screening tool aim to determine? Was the tool developed as a measure of need? How is need defined/conceptualised?
Format	What format does the screening tool take? What are the domains covered? How many items are there? What is the method of administration? What is the response format? How is the tool scored and analysed? Can individual patient data be aggregated to provide a population perspective?
Evaluative	
Psychometric validation	What evidence is there of the tool's reliability in a custodial setting? What evidence is there of its validity in a custodial setting? Has the tool been developed or assessed using the health care user's views as a criterion for validity? What evidence is there that it is responsive to change that is significant from the health care user's and clinicians perspective?
Stakeholder Perspectives & User-centred-ness	To what extent does the tool capture the views of the multiple stakeholders (healthcare staff & clinicians)? Does it provide insight into the health care user's view (does it capture the views of those with all stages/severity of the condition or a select sub-group)? Is the tool faithful to the content and form of the health care user, carer and/or clinician views? Does the method of obtaining, coding, analysing or standardising these views distort them?
Feasibility	What evidence is there that the screening tool is feasible to use within a custodial setting? How much if any training is needed and is it available? How long does it take to complete and analyse?
Utility	Is the tool acceptable to and perceived as relevant by prison healthcare staff and clinicians? Does it provide additional information not readily available? Will the information aid care planning and decision-making?

3.8.1 Cognitive Screening Tools

The quantification of neuropsychological testing originated in the early 1950s (Roth & Hopkins 1954) with the subsequent emergence of domain specific areas including orientation (time, place and person), memory (short and long term deficits), attentive span and concentration abilities. These early beginnings, according to Burns, Lawlor and Craig, (1999) were later incorporated into the Blessed Dementia Scale, (1968) that confirmed Alzheimer's disease (AD) as having the same pathology of dementia and an association between the quantitative measures of dementia and senile changes in the cerebral cortex of elderly subjects. The scale generated an abundance of mental tests with several versions and derivatives, some of which were validated against neuro-pathological findings. Shortly afterwards, in America, Folstein & Folstein published the Mini-Mental State Examination (MMSE, 1975), which is now probably the most widely adopted measure of cognitive function. It is generally acknowledged to be of value in the early diagnosis of Alzheimer's disease, although it was not originally intended for use in any diagnostic sense.

There is, however, an extensive range of cognitive scales for mental health assessment in older people, (Table.3-3) which may be of relevance in old age psychiatry. Although 162 are currently obtainable (Israel, Kozarevic & Sartorius, 1984) the ideal does not exist, whilst the generic term for these scaled tests is usually a dependency measure. In view of their propensity to blur the boundaries between dementia and simple memory impairment, tests of short-term memory although easy to administer, result in higher prevalence rates, especially when compared to tests that are multifaceted. Specific cognitive testing will therefore result in a high sensitivity especially during the pre-clinical phase thereby facilitating early intervention and reducing the rate of false negatives.

Table 3-3 Scales determining Cognitive Impairment in Dementia

Use	Scale	Rating	Allocated Time (minutes)
Screening	Mini-Mental State Examination (MMSE)	By interviewer	10
	Mental Test Score/Abbreviated MTS (MTS/AMTS)	By clinician	10/3
	Clock-drawing test	Standardised interpretation of drawing by clinician	2
	Seven-minute neurocognitive screening battery	By trained interviewer	6-11 (mean 7min 42secs)
Detailed profile of cognitive deficits	Alzheimer's Disease Assessment Scale - Cognitive section (ADAS)	By trained observer	45
Staging of dementia	Clinical Dementia Rating (CDR)	By clinician, using information gathered as part of clinical practice	40
Global change	Clinicians' Interview-Based Impression of Change	By trainer/rater	10-40
Behavioural & Psychological symptoms	Revised Memory and Behaviour Problems Checklist	From caregiver reports	15-20
	Neuropsychiatric Inventory (NPI)	By clinician in interview with carer	10
	BEHAVE-AD	By clinician	20
	Manchester and Oxford Universities Scale for the Psychological Assessment of Dementia (MOUSEPAD)	By experienced clinician with carers	15-30
	Cohen-Mansfield Agitation Inventory (CMAI)	By carers	10-15

Table 3-3 has been adapted from Burns, Lawlor & Craig (2002).

The five major, relevant domains in dementia are mood, behaviour, functioning, cognition and quality of life. Ratings can be self-reported, observer-rated, or based

on information from an informant. Subjective ratings are highly dependent on the co-operation of patients and their ability to understand instructions whilst observer-based ratings are time consuming and can misinterpret severity of disorder. Informant-based ratings are commonly used for people with dementia, although ratings may be subject to bias, mood state and perceptions. Best results are achieved by a combination of proxy reporting followed by direct patient interview. According to Mohr et al. (1996) the most reliable validated tests focus exclusively upon cognitive impairments and are therefore appropriate in Alzheimer's disease and vascular dementia for example, when the pattern of cognitive decline and lack of insight can vary considerably between individuals. The clearest indication is cognitive decline, more specifically memory in combination with at least one other main cognitive function: for example comprehension, judgement and sequencing.

3.8.2 Prison Specific Screening Tools

The introduction of standardised tests within a custodial setting may often involve a hidden cultural bias that can be illustrated by questions relating to events outside the prison walls.

3.8.3 Screening Tools

Scales that measure depressed mood do so at a symptomatic level with the general assumption that there is a linear relationship between the score and the severity of the illness. The attribution of depressive symptoms in individuals with medical illnesses can often lead to delays in the initiation of treatment. Particular difficulties with the measurement of depression unique to older people include the tendency for denial, its atypical presentation, (more somatic complaints), and the coexistence of depression and cognitive impairment. In an effort to lessen diagnostic problems

several scales have been developed which focus either on the psychologic symptoms of depression and excludes somatic symptoms, or exclude symptoms that may be attributed to both depression and dementia. Melancholic and psychotic depression may be more prevalent in older people than in younger persons.

The risk of chronic diseases and associated limitations in activities of daily living rises as the proportion of elderly people increases. Whilst not all chronic diseases may be life threatening, they are a substantial burden on the health and economic status of the individual, affect quality of life and well-being, contribute to disability and functional decline and cause medical, social, and psychological sequelae. Understanding the relative contribution of different factors to chronic ill health in particular health screening, psychological state, aspects of the environment and access to health care provision are all important in assisting our understanding of chronic disease presentation within a prison setting.

3.9 Measurement Instruments

Consideration was given to using several screening instruments but I selected those that I felt best suited my initial hypothesis i.e. that dementia would be prevalent in this population, and whilst having limitations the MMSE and ADAS-Cog scores are well recognized as the most appropriate tools to screen for dementia and to assess the degree of cognitive impairment.

My contact with prisoners was largely limited by time constraints. Each visit was restricted with two and a half hours of available time and with the intention of interviewing 2-3 prisoners at each visit. The escorting of prisoners from the wing to the Medical Centre was reliant upon an available wing officer with frequent delays

almost inevitable. In addition, the prisoners' available time, their ability to concentrate and limited compliance thresholds necessitated an interview of less than one hour. Furthermore, there was frequent disruption by unscheduled lock down periods. Whilst all instruments provide useful data the length of time in administering some served only as an impediment to their usage. Thus a number of instruments were excluded on the basis that they would take too long to complete.

3.9.1 Screening tools considered:-

1 The 107 item Cambridge Cognitive Examination (CAMCOG) which forms part of the CAMDEX interview (Roth et al. 1986; 1988). It has excellent inter-rater reliability and is used extensively but was discarded in view of time restrictions (90-100 minutes) and although the additional information derived from the CAMCOG is known to be valuable by clinicians in their assessment of patients, the differential diagnosis of dementia not being my primary interest.

2 The Geriatric Mental State Schedule (GMSS - Copeland et al. 1976) is based on the Present State Examination (Wing et al. 1974) and Psychiatric Status Schedule (Spitzer et al. 1970). It takes 40-45 minutes to administer and gathers information on a broad range of psychopathology and behaviour. However, as Fazel, (2001) noted it has not been used in a prison setting and was too broad an instrument for the purposes of this study.

3 The Beck Depression Inventory (BDI - Beck et al. 1961) takes 20 minutes to administer and is self-rating. It is often used in assessing depression, demonstrates excellent internal consistency and validation as scored by independent ratings. However, whilst representing the gold standard for self-rating depression it is not elderly specific.

3.9.2 Selected Screening Tools

3.9.2.1 The ADAS-Cog

The Alzheimer's Disease Assessment Schedule - Cognition (ADAS-Cog); (Rosen, Mohs & Davis, 1984) is specifically structured to evaluate the cognitive aspects of Alzheimer's disease and can distinguish different levels of dementia severity across the spectrum of the disease. The ADAS-Cog is reported to be a sensitive cognitive assessment scale and is both reliable and valid among the elderly. It has a sensitivity of 90%, specificity of 94.75%, and overall accuracy of 92.3% (Brookmeyer, Gray & Kavas, 1998). It is appropriate for people in different environments, takes 35 minutes to administer by a trained observer and is acknowledged to be the 'gold standard' of cognitive scales used in pharmaceutical trials. The primary cognitive function includes components of memory, language and praxis with 11 main sections, with higher scores suggesting greater impairment (Appendix 9a & 9b). As far as confounding variables are concerned, conflicting reports have emerged over the effect of education, with one study (Reisberg et al. 1996) showing its significance, and another not (Ihl, et al. 1992).

3.9.2.2 The MMSE

The Mini Mental State Examination (MMSE); (Folstein, Folstein & McHugh, 1975) was developed as a short, easy to administer measure of mental status. Its initial purpose was a bedside screening test for dementia and was based on a review of existing clinical tests of cognition, including the Weschler Adult Intelligence Scale (WAIS) and other popular "clinical tests of intellectual ability". It is effective as a screening tool for cognitive impairment with older, community dwelling, hospitalised and institutionalised adults. The original validity and reliability of the MMSE were

based on 206 patients with a variety of psychiatric disorders, the scale successfully separating those with dementia, depression, or both. Details of extensive subsequent validity and reliability studies are described by Tombaugh and MacIntyre, (1992). The MMSE takes only 5-10 minutes to administer and comprises an 11-question measure that tests five areas of cognitive function:-orientation, registration, attention/calculation, recall/language (Appendix 10a). It is scored out of 30 with lower scores reflecting greater impairment (Appendix 10b). Three studies (van Gorp et al. 1999; Monsch et al. 1995; Uhlmann & Larson, 1991) reported age and education to be significant, while one study (Bohnstedt, Fox & Kohatsu, 1994) found ethnicity significant.

Previous research (Doraiswamy et al. 1997) has clearly demonstrated ADAS-Cog and MMSE scores to significantly correlate ($R = -0.76$, $p < 0.0001$) and are known to be inversely related. The ADAS-Cog and MMSE are the cognitive scales that are most frequently adopted in clinical trials.

3.9.3 Confirmation of Diagnosis

The diagnosis of dementia is classified using Diagnostic Statistical Manual IV (DSM IV, 1994) internationally agreed criteria.

3.9.4 GDS

Geriatric Depression Scale (GDS); (Yesavage, Brink, Rose, Lum, Huang, Adey & Leirer, 1983) is a reliable and well-validated screening tool, supported through both clinical practice and research, although it tends to focus on the psychological symptoms of depression and excludes somatic symptoms. The GDS correlates well with the number of research diagnostic criteria symptoms for depression. It is scored out of 30 and has a an 84% sensitivity and 95% specificity at a cut off point of 11

whereas a cut off of 14 decreased the sensitivity rate to 80% but increased the specificity rate to 100% (Brink et al. 1982). The computed value of the alpha coefficient is 0.94, suggesting a high degree of internal consistency. A systematic review of the validity of the GDS against a range of clinical assessments of depression showed a sensitivity of 0.75 and a specificity of 0.77, (Wancata, 2006) with high test-retest reliability. The GDS does not contain somatic, vegetative symptoms of depression, which are often symptoms of age rather than depression (Harralson, & Lawton, 1999). The Department of Health recommends the GDS be used for screening in the elderly although suggests modification for specific populations (Appendix 11). Question 12 was modified (original - 'Do you prefer to stay at home, rather than going out and doing new things?') to more accurately reflect the reality of the prisoners' circumstances (modification - 'Do you go to association?'). The sensitivity of the GDS in subjects with the burden of chronic disease is likely to result in a proportion of false positives.

3.9.5 Confirmation of Diagnosis

The diagnosis of depression is classified using Diagnostic Statistical Manual IV (DSM-IV, 1994) internationally agreed criteria.

3.9.6 Barthel Index

The Barthel Index Functional Evaluation (Barthel Index); (Mahoney & Barthel, 1965) represents probably the oldest and most widely used scale to assess physical ability in the elderly to perform tasks associated with independent living, and is frequently used in psychiatry (Appendix 12). Its reliability has been assessed thoroughly in four ways: by self-report; by trained nurse; and by two independent skilled observers, with agreement generally present in over 90% of situations. Validity, reliability,

sensitivity and clinical utility have been reviewed, described as excellent with an amended scoring system of 20 subsequently introduced (Wade & Collin, 1998). Explicit guidelines for rating have subsequently been devised for the scale (Novak, Johnson & Greenwood, 1996).

3.10 Specific Methodologies

All interviews were conducted by myself, having had extensive experience in assessment of the elderly and not being a member of the prison staff.

3.10.1 Chronic ill health and well being: Its origins and contributory factors

The health status of each prisoner in the overall population was measured through either self-report or secondary analysis of prisoner medical records, including current prescribed medication as per prisoner medication chart, and pre-determined specific health indicators.

3.10.1.1 Measures

Five health variables specifically associated with ageing as defined in several community-based population surveys and the Medical Research Council Medical Research Council (MRC, CFAS 2000; Grundy & Sloggett, 2003) were identified and included:- hypercholesterolaemia, ischaemic heart disease, hypertension, respiratory disease (COPD) and diabetes, together with chronic disease complications namely angina, arthritic changes, hepatic dysfunction and the range of prescribed medication. Other ill health variables were recorded and included sensory impairments, dental hygiene; smoker/non-smoker. Assessment of functional change was undertaken using the Barthel Index Functional Evaluation (Barthel Index;

Mahoney & Barthel, 1965). Prisoners were invited to assess their past, present and predicted general physical health using a three category rating scale:- good, fair, poor. A range of prison specific and non- prison specific variables previously identified elsewhere (Fazel et al. 2001; Liebling, 2005; Crawley & Sparks, 2005) as potentially influencing morbidity in older community-based and prison populations were also recorded including:- length of sentence; length of sentence served; probable length of sentence remaining; previous time in prison; previous convictions; visitations in past 12 months; written/received letters in past 12 months; contact with outside; friendships; self-reported relations with staff; in-cell hobbies; Christian belief; gymnasium attendance; satisfaction with health care; satisfaction with food; complaints about noise; attendance at education; attendance at offending behaviour programmes.

Ageing relative to chronological age was clinically assessed by the researcher, (an experienced clinician) based on physical appearance, dress, communication, conversation and overall demeanour.

3.10.2 Cognitive Impairment

The cognitive status of each prisoner in the overall population was assessed during an in-depth face to face semi-structured clinical interview of approximately 45-minutes duration, and measured using interviewer administered validated screening tools.

3.10.2.1 Measures

Cognitive function was measured using the Alzheimer's Disease Assessment Schedule - Cognition; (ADAS-Cog - Rosen, Mohs & Davis, 1984). Cognitive status

assessed by means of the Mini Mental State Examination (MMSE - Folstein, Folstein & McHugh, 1975); for item 3 (attention and calculation) respondents were asked to make five serial subtractions of 7 from 100 rather than spell 'world' backwards. Following each interview, a comprehensive clinical report was completed for inclusion in prisoner medical records in accordance with the agreed protocol. Information obtained during the interview and from testing with the ADAS-Cog and MMSE was reviewed and, if appropriate assessment using the Barthel Index (Barthel Index; Mahoney & Barthel, 1965) was undertaken with the diagnosis of dementia classified against Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (1994) internationally agreed criteria.

3.10.3 Depressive Illness and its contributory factors

Levels of apparent reported depressive illness revealed at clinical interview and confirmed in medical records were noted to be prominent in the initial group (60 in number) of prisoners interviewed. Following ethical approval and written consent (Appendix 5) the presenting mood of each prisoner (121 subjects), including behaviour and appearance and attention to personal hygiene, was assessed during an in-depth face to face semi-structured clinical interview of approximately 45-minutes duration, and measured using interviewer administered validated screening tools.

3.10.3.1 Measures

Psychological symptoms of depression were assessed using the Geriatric Depression Scale (GDS - Yesavage et al. 1983). Mild depressive illness was defined as GDS scores 11 to 20 points and severe depression 21 to 30 points. A range of prison specific and non prison specific variables previously identified elsewhere, as

influencing the presence of depression in prison populations and the elderly were also recorded.

3.11 Statistical Analysis

Results were analysed using standard parametric tests including multiple regression, logistic regression, Pearson's product moment correlations, partial correlation, factorial ANOVA and t-tests. Standard measures of effect size associated with all statistical tests are reported together with the relationships between a range of variables including:- length of sentence served and variables relating to physical health, cognition and depression and the relationships between measures of physical health, cognition and depression. Correlation between physical ill-health, cognition and depression with length of sentence served was explored using linear regression analysis. The large sample size ensured that tests, in general were very powerful ($p > 0.8$). As the data was derived from real populations many of the groups to be compared were of very unequal sizes and many of the factors were non-independent which violated the assumptions of a number of potentially relevant multivariate techniques such as MANOVA hence the use of a univariate approach for many questions. However, logistic regression and multiple regresson were used where appropriate. All information from interviews and questionnaires was coded by assigning a number to each subject and removing any personal identifying information. This was first entered on an EXCEL spread sheet after which a data file was created using the Statistical Procedures for the Social Sciences (SPSS) version 11 for Windows for the statistical analyses.

3.12 Experiencing Prison - The Prisoners Views (N=181)

Qualitative information gathered by a process of note taking during clinical interviews and a standardized assessment schedule is used to describe in detail prisoners experiences and views of prison life, prison milieu, and provision of healthcare at various stages of their sentences, and includes two case histories. Effective analysis was undertaken using Fourth Generation Evaluation (FGE; Guba & Lincoln, 1989; 1994) combined with Appreciative Inquiry (Liebling, Price & Elliot, 1999). Both approaches highlight the necessity to recognise the importance of both consumer and professional stakeholders, whilst serving as a stimulant for change. These methods are based on the understanding that the emotional, physical and psychological impacts of imprisonment on elderly men can only be understood by listening to their accounts of their prison experiences, and by observing how they go about their day-to-day lives in prison. FGE as a methodology promotes an activist ideology enables inclusion, involvement, co-operation and negotiation in an environment that aims to reach all stakeholders. The appeal of a negotiation process is that the evaluation provides the opportunity for stakeholders to express their views.

3.13 Ecological Analysis

The environment may have significant influence on individual behaviour, and can be used to explain and describe the experience of imprisonment. Individuals are influenced by their environment (Stanton, 1962), which is composed of unique characteristics that give a setting unity and coherence (Rigby, Leach & Greasley, 2001).

The effects of imprisonment on older inmates may thus be better understood by a process of ecological analysis which examines the dynamic interactions of the physical and psychological characteristics of the ageing prisoner with the physical and social environment. For example, personal safety and security are major concerns of older prisoners, whilst factors such as poor vision, hearing deficits, sharing a noisy and crowded environment and slower reaction times may place the older person at greater risk in their living environment. However, a prison which prioritises safety and security by design is likely to place less emphasis upon privacy, independence and choice. Thus the prison environment is always a compromise and adaptation in prison implies a dual process in which the older prisoner adjusts to the physical conditions of the prison as well as the social dynamics of prison life.

The ecological model premises that prisoners who have low environmental congruence, that is expressed needs that are not being matched with perceived resources, suffer from more extreme symptoms of psychological distress than do their counterparts, who enjoy relatively high congruence.

For the purposes of this evaluation and in order to align the methodological approach with the identified NSF appropriate standards, the model put forward by Donnellan et al. (1988) - an ecological analysis (Table 3-4) has been adapted for use in this setting. This model serves as a framework in which to compare the prisoners' perspective of a number of key areas that may influence physical and psychological health including health screening; attitudes and beliefs; relationships and personal plans and compares them with the prison officers' views to examine any conflicts or

self perpetuating factors. The physical environment, common to both prisoners and prison officers is also explored.

If there is an imbalance between the person and the environment the outcome may result in different forms of adaptive behaviour which may often have a negative effect on the psychological well-being of the individual. Social disharmony in the first instance exists when the structure and culture of a community (the prison) is incapable of implementing and expressing the values of its own residents (the prisoners).

Table 3-4 Ecological Analysis

Health Issues	**Attitudes and Beliefs**
Physical/Mental status/Well-being	Uniqueness
	Stereotypic notions
	Equal human value
	Expectations
Relationships/Interactional Style	**Personal Plans**
Expectations- self/others	Opportunity for choice
Quality of interactions	Empowerment
Accessibility of re-inforcers	Motivation
Culture of respect and dignity	Adaptation/coping style
	Learning opportunities
	Aspirations/dreams/life goals
	Impact of imprisonment
Environmental	
Imagery	
Lighting	
Noise	
Numbers of persons in setting	
Behaviour of Others – Congregate setting	
Sudden changes in living/working environment	

Table 3-4 has been adapted from Donnellan and La Vigna (1988).

3.14 NSF Standard for older persons

Current prison healthcare provision at both prisons is evaluated using the relevant Standards and Principles as defined and contained within Nation Service Framework Standards for older persons (DoH/NSF, 2001) and the quality of clinical care using the Clinical Governance framework to determine safe and best practice within a prison environment. Evidence was gathered from prisoner medical records including medication sheets, prisoner experiences of healthcare provision and through discussion with prison healthcare staff in order to determine:

- Screening processes on reception into prison.
- Access to health prevention campaigns.
- Primary care services.
- Pharmacological management.
- Referral and attendance at specialist health care clinics (internal and external).
- Attendance at follow up appointments.
- Management of specific chronic diseases including diets.
- Needs assessment expertise.
- Evidence and management of functional disability.
- Responsiveness to enquiry and how complaints were investigated.
- How mental health needs were identified and managed.
- The implementation of Clinical Governance arrangements.
- Clinical supervision to ensure healthcare staff are not professionally isolated.
- Staff training assessment, education and skills acquisition.

- Ethos of care practices.
- The framework and procedures for focusing on quality and monitoring of healthcare needs and provision of NSF that includes the prison more explicitly.
- Opportunities for rotational posts.

Chapter 4

Results

Chapter 4 details the basic demographics, including ethnicity and educational attainment of the study population together with criminogenic variables including sentencing and conviction history. The prevalence of five chronic ill-health indicators are provided, including prisoner self-rated health status and a range of key variables associated with well-being. Results following assessment of cognition and the prevalence of depressive illness are included, the latter in a sub-sample (N=121) of the overall prisoner population. Relationships between key variables in prisoners who have served ≤5yrs compared with those having served ≥20yrs are compared. Experiencing imprisonment and ecological analysis details an overall assessment of *imprisonment from the prisoners and prison staff perspective. Current healthcare* provision, including comparison with the principles and standards as defined in the NSF for older persons are analysed. The chapter concludes by identifying the Key Performance Rating levels at both prisons during 2005/2006.

4.1 General Findings

A total of 183 prisoners, aged >55yrs were identified and approached, of whom 181 were interviewed, representing a 99% inclusion rate. Of the overall total, 161 prisoners were held at HMP Albany comprising 31% of this prison's CNA (516), and 22 prisoners were held at HMP Kingston comprising 11% of this prison's CNA (197). In June 2004 the largest concentration of prisoners aged >55yrs was located at HMP Albany.

4.1.1 Basic demographics

The mean age of the study population (N = 181) was 63.2yrs (SD = 6.4, range 55 to 83yrs) (Fig. 4-1). Examination of all prisoners aged 55yrs or more showed that 63 (35%) were aged 55-59yrs, 48 (26%) between 60-64yrs, 42 (23%) between 65-69yrs; 16 (9%) between 70-74yrs; 7 (4%) between 75-80yrs and 5 (3%) 80yrs and over.

Restricting the demographics population to those aged over 60yrs (N = 118) showed that 48 (41%) were between 60-64yrs, 42 (36%) between 65-69yrs; 16 (13%) between 70-74yrs; 7 (6%) between 75-80yrs and 5 (4%) 80yrs and over.

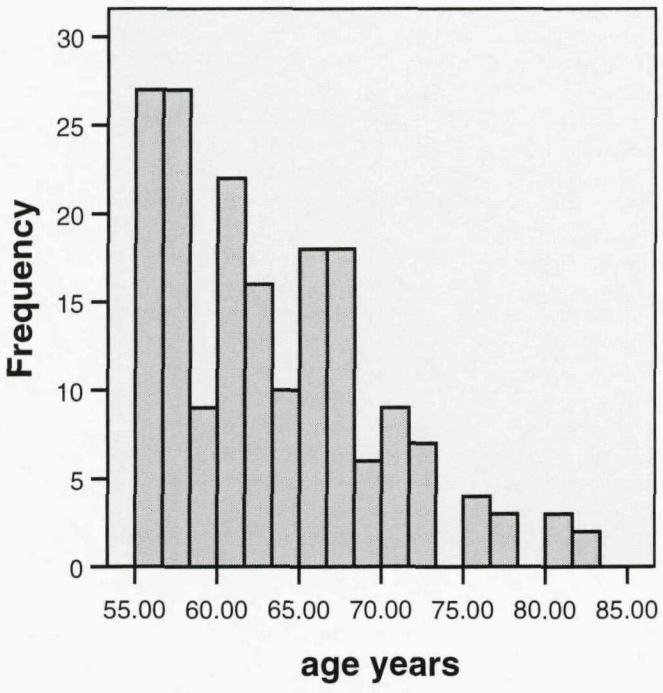


Figure 4-1 Number and Age of prisoners in years (N=181)

4.1.2 Ethnicity

The overwhelming majority of prisoners 176 (97.3%) were white, with 2.7% of minority ethnic origin. The ethnic minority sub-sample was in the 60-69yrs age group.

4.1.3 Marital Status

41 prisoners (22.7%) were single, 43 (23.8%) married, 97 (53.6%) divorced/separated.

4.1.4 Dependents

Table 4-1 Number of children

Number of children	Number of prisoners	Percentage (%)
0	42	23.2
1	20	11.0
2	44	24.3
3	27	14.9
4	15	8.3
5	13	7.2
6	7	3.9
7	6	3.3
8	1	0.6
9	2	1.1
10	1	0.6
11	2	1.1
13	1	0.6

139 prisoners (77%) had children from various marriages (range 1 to 13) with 20 (11%) having 6 or more (Table 4-1). Eight prisoners (0.6%) had other family members serving prison sentences with three siblings (2 sons & 1 daughter) currently serving life sentences for murder.

4.1.5 Employment

Levels of pre-prison employment were high in the study population. 138 prisoners (76.2%) were employed, 43 prisoners (23.8%) unemployed, with 3 prisoners having never been in employment.

A total of 15 prisoners (8.3%) had occupied professional or managerial positions, with 4 sex offenders in the professions, either teaching, medical or the clergy. 44 prisoners (24.3%) were unskilled and 122 prisoners (67.4%) were either skilled, semi-skilled or had manual jobs. 64 prisoners (35.4%) had served time in the armed forces prior to imprisonment.

4.1.6 Social status and Accommodation

Comparable with the general prisoner population the study group was predominantly from low to middle class backgrounds. 50 prisoners (27.7%) previously lived in privately owned housing, with 122 (67.4%) in rented accommodation. Nine prisoners (4.9%) were residing in hostels or sleeping rough just prior to imprisonment.

4.1.7 Education

59 prisoners (32.6%) had left school before the age of 15yrs, 86 (47.5%) at age 15yrs, 15 (8.3%) age 16yrs, with 21 prisoners (11.7%) attending college and higher education until age 20yrs. (Table 4-2). 52 prisoners (28.7%) regularly truanted from school and 26 (14.3%) had been excluded.

Table 4-2 Age at leaving School

School leaving age (yrs)	Number of Prisoners	Percentage (%)
12	1	0.6
13	19	10.5
14	39	21.5
15	86	47.5
16	15	8..3
17	11	6.1.
18	5	2.8
19	4	2.2
20	1	0.6

A total of 16 prisoners (8.9%) had been in education between 6-7yrs, 131 (72%) between 8-9yrs, 15 prisoners (8%) a total of 10yrs, and 19 (10.5%) between 11-14yrs (Table 4.3).

Table 4-3 Education in years

Education in Years	Number of Prisoners	Percentage (%)
6	1	0.6
7	15	8.3
8	75	41.4
9	56	30.9
10	15	8.3
11	8	4.4
12	9	5.0
14	2	1.1

24 prisoners (13.2%) reported limited/poor reading skills and 26 (14.3%) poor numeracy. 106 prisoners (58.6%) had no qualifications with 47 (26%) having a vocational award. 26 prisoners had formal qualifications with; 11 prisoners (6.1%) having 'O' level (GCSE) equivalent, and 15 prisoners (8.3%) having gained 'A' levels and higher grades. 27 prisoners (14.9%) were currently attending either part or fulltime education classes..

4.2 Criminogenic variables

4.2.1 Offences

41 prisoners (22.7%) had committed either murder multiple murder, (including war crimes), manslaughter or violent crime, including arson, robbery and drug related offences. 140 (77.3%) were sex offenders and been convicted of rape, multiple rape and indecent assault.

4.2.2 Sentencing and Conviction History

Sentence terms ranged from 5 to 35yrs with a mean length of 20.9yrs (SD = 25.6). Current time spent in prison varied from 4.5 to 44.0yrs, with a mean length of 8.1yrs (SD = 9.6 - positive skew). 110 (61.0%) prisoners had served ≤5yrs with 25 (13.8%) prisoners having served ≥20yrs. Probable length of sentence remaining ranged from 1 to 18yrs dependent upon satisfying various 'conditional release' criteria, for example attendance at identified offending behaviour programmes and following risk assessment for potential dangerousness (Table 4.4). A total of 65 prisoners (35.9%) were post-tariff having remained in prison beyond their estimated date of release with a minimum of 3yrs and maximum of 19yrs additional time served.

Table 4-4 Sentencing and Conviction History

Variable	Minimum	Maximum	Mean	Std. Deviation
Length of sentence (yrs)	5	35	20.9	25.6
Length served (yrs)	4.5	44	8.1	9.6
Sentence remaining (yrs)	1	18	12.8	19.5
Number of previous convictions	0	8	1.00	1.8

4.2.2.1 Previous convictions

A total of 69 (38.1%) prisoners had previous convictions with 62 prisoners (34.3%) having spent several years in borstal and approved schools, and 47 (26.0%) had previously served sentences in other adult prisons. Convictions ranged from first time offenders to those with several previous custodial sentences. The prisoners, as

a group, had on average one previous and a maximum of 8 convictions, (M=1.0; SD=1.8) (Table 4.4). Time spent in prison prior to index offence was approximately 3yrs (M=2.8; SD =4.7).

A comparison of the age structure; prison offences and length of time served of the study population compared with life sentence prisoners aged 60 years and above is shown below.

Table 4-5 Age Structure; Prison Offences and Length of Sentence served

		Life sentence prisoners (N=506)	Study population (N=118)	χ^2 statistics
Age structure	60 -69 yrs	411 (81%)	90 (76%)	
	70 years or more	95 (19%)	28 (24%)	χ^2 1.5 p =0.22
Index offence	Violence against person	332 (66%)	26 (23%)	
	Sexual offence	143 (28%)	91 (77%)	
	Other	31 (6%)	0 (0%)	χ^2 101 p < 0.001
Length of sentence served	< 10 yrs	304 (60%)	91 (77%)	
	≥ 10 yrs	202 (40%)	27 (23%)	χ^2 13.2 p < 0.001

4.3 Physical Health Status

4.3.1 Ill-Health Indicators

Five chronic ill health indicators both self-reported and confirmed in the inmate medical record were identified:- hypercholesterolaemia, hypertension, ischaemic heart disease, respiratory disease (COPD) and diabetes in addition to evidence of polypharmacy (4 or more prescribed medications). 38 prisoners (21.0%) reported (and confirmed in the medical notes) an absence of chronic disease, 19 prisoners (10.5%) reported one, 39 (21.6%) between 2 and 3 chronic diseases; 67 (37.0%)

four chronic illness with 18 (9.9%) prisoners reporting all 5 chronic illnesses (Table 4.5). 105 (58%) prisoners had evidence of poly-pharmacy.

Table 4-6 Prisoners with (0-5) Chronic Ill-Health Indicators (N=181)

Number of ill health indicators	Number of Prisoners	Percentage (%)
0	38	21.0%
1	19	10.5%
2	11	6.1%
3	28	15.5%
4	67	37.0%
5	18	9.9%

Prisoner specific health indices were identified and compared with age matched older populations (Table 4-6).

Table 4-7 Specific Findings and Age Adjusted Norms

	Study Group (N=181)		Age Adjusted Norms**	
Health indicator	Number	Percentage	55-64 yrs	65-74 yrs
*Hypercholesterolaemia	96/146 (35 missing cases)	66%	80%	68%
*Hypertension	127	70%	39%	48%
Ischaemic Heart Disease	110	61%	19%	32%
*Diabetes	14	8%	8%	11.5%
*COPD	78	43%	15%	19%
Current Smoker	152	84%	22%	13%
*4+ items of medication	105	58%	35%	45%

(* GP Quality Outcome Framework targets – BMA 2006)

** Nat Cen (2003) www.dh.gov.uk/en/Publications and statistics/DH 4098712

4.3.2 Hypercholesterolaemia

Blood chemistry data to determine cholesterol levels were unavailable for 35 (19.3%) of prisoners in the study (N=181). For the purpose of this study prisoners were categorised with a raised serum blood cholesterol level of 5.2mmols/L or above. Raised levels for males in England and Wales are normally defined as 5.5mmols/L or above (BHF, 2004). The discrepancy is accounted for due to the reporting practice in the laboratory used in the study. 96 (66%) of prisoners in the study were categorised as having hypercholesterolaemia.

4.3.3 Hypertension

Following recent guidelines on hypertension management (British Hypertension Society, 2003) hypertensives (people with high blood pressure) are defined as those with either a systolic blood pressure (SBP) >140mmHg, a diastolic blood pressure (DBP) of >90mmHg or taking prescribed medication for hypertension. Prison medical records confirmed 127 prisoners (70.2%) of whom 52 (28.7%) of prisoners recording a high systolic reading, the latter which is known to be a better predictor of subsequent cardiovascular risk. This rate was evenly distributed across the prisoner age range. However, blood pressure is not routinely measured and recorded on an annual basis and findings are based on measurements recorded at either the initial and subsequent prison reception screening.

4.3.4 Ischaemic Heart Disease (IHD)

Ischaemic Heart Disease (IHD) (defined as a history of reported and confirmed angina or heart attack), arrhythmias, congestive cardiac failure and cardiac insufficiency was diagnosed in 110 (60.7%) of prisoners. Both stable and unstable

angina was reported and confirmed in their medical notes by 80 prisoners (44.2%), with 14 prisoners (7.7%) prescribed sublingual vasodilators (GTN spray).

4.3.5 Diabetes

Diabetes mellitus, defined as a metabolic disorder of multiple aetiology was classified into 2 types (type 1 formerly insulin dependent diabetes (IDDM) and type 2 formerly non-insulin dependent diabetes (NIDDM). Both types have different aetiologies and are therefore treated differently. Type 1 is treated with insulin injections, while type 2 is mainly controlled with diet and/or oral hypoglycaemic agents. Clinically diagnosed diabetes (both type 1 and 2) was confirmed in 14 (7.7%) of prisoners. 6 prisoners (3.3%) were being treated with a combination of diet and oral hypoglycaemic agents, with only 2 prisoners (1.1%) prescribed regular insulin.

4.3.6 Chronic Obstructive Pulmonary Disease (COPD) and Smoking

Chronic obstructive pulmonary disease (COPD) occasionally referred to as chronic obstructive airways disease (COAD) was reported by and confirmed in the medical notes of 78 (43.1%) of prisoners. Respiratory symptomatology varied from asthma, chronic bronchitis, bronchiectasis, to emphysema. 3 prisoners (1.7%) were described as severely emphysematous and profoundly dyspnoeic, one of whom had developed an accelerated decline in lung function ultimately resulting in chronic hypoxaemia and the requirement for intermittent long-term oxygen therapy. A total of 23 prisoners (12.7%) were regularly prescribed oro-broncho dilators (Ventolin & Becotide) with peak prescribing of inhaled therapy in prisoners aged >65yrs. Those reporting asthma had generally developed the disease before the age of 40yrs. 150 prisoners (84%) in the study were heavy/moderate consumers of tobacco.

4.3.7 Poly-pharmacy

Multiple drug use was widespread in this population. The incidence of poly-pharmacy (PP), defined as the long-term simultaneous use of (multiple) two or more drugs, and the consequential risk of adverse drug reactions (ADR) was very much in evidence and confirmed by prisoner medication records. 105 prisoners (58.0%) were currently taking ≥4 items of prescribed medication, with a general trend being towards an increasing prevalence of PP with increasing age. Episodes with a concurrent use of ≥10 drugs were observed in 11 prisoners (6.1%), and the maximal number of concurrently used drugs recorded in 4 cases (2.2%) was 13 items. Only 5 prisoners (2.7%) were not taking any prescribed medicines. Repeat prescribing was common especially for those with co-existing diseases and as a result of different drugs being used to treat the same condition. 99 prisoners (54.6%) on repeat prescriptions were prescribed in excess of 4 concurrent items of medication.

4.3.8 Functional Ability and Mobility

The degree of functional disability was measured using the Barthel Index. 6 (3.3%) of prisoners were functionally disabled achieving Barthel scores of ≤20pts, with 175 (96.7%) functionally independent. 83 prisoners (45.8%) reported some reduction in previous mobility levels predominantly attributable to breathlessness and lack of fitness, of whom 3 (1.7%) used walking aids.

4.4 Other Indicators of health

4.4.1 Dental Health and Sensory Impairment

41 prisoners (22.6%) had all their teeth, 141 (77.9%) had full or partial dentures although many prisoners preferred not to wear them. 65 prisoners (35.9%) reported

uni/bi lateral hearing loss, and 36 (19.9%) required a hearing aid. In keeping with the general ageing population a substantial number of prisoners 166, (91.7%) reported vision impairment ranging from presbyopia to cataracts and glaucoma.

4.4.2 Alcohol Consumption

20 (11.0%) of prisoners self-reported excessive alcohol consumption (alcohol dependency syndrome) prior to sentencing. Hepatic dysfunction as determined by elevated enzymes (AST, GGT, & ALT) both in a series of liver function tests and liver biopsy was confirmed in the medical records.

4.4.3 Self-rated Health Status and Mortality Rate

Prisoners were asked to rate their overall health using a three category rating scale: good, fair, poor (Table 4-7).

Table 4-8 Prisoner - Self reported health status (N=181)

Health Status Category	Prior to prison	Currently	Predicted
Good	16 (8.8%)	18 (9.9%)	4 (2.2%)
Fair	109 (60.2%)	107 (59.2%)	62 (34.3%)
Poor	56 (30.9%)	56 (30.9%)	115 (63.5%)

When asked about their physical health status, either prior to imprisonment or 5yrs previously, 16 prisoners (8.8%) rated it as good, 109 (60.2%) rated it as fair with 55 prisoners (30.9%) rating it as poor. Current health was rated as good by 18 (9.9%) of prisoners, 107 (59.2%) rated it as fair with 56 (30.9%) rating it as poor. 4 prisoners (2.2%) predicted continuing good health in the foreseeable future, 62 (34.5%) predicting it to be fair with 115 prisoners (63.5%) predicting poor health.

During the course of the research period, (a little in excess of three years) a total of four prisoners (2.2%) in the study died, all from natural causes (3 at HMP Kingston and 1 at HMP Albany).

4.4.4 Prison Healthcare

When asked to rate the quality of healthcare 116 (64.1%) of prisoners in the study rated it as either very good or good, 65 prisoners (35.9%) rated it as either poor or very poor. 150 prisoners (82.8%) viewed the management of chronic diseases as unsatisfactory, together with responses to emergencies especially at night and during lock-down periods.

4.5 Well Being

In addition to the health indicators a number of key variables were recorded which have been associated with psychological well-being in prisoners (Table 4-8).

Table 4-9 Percentage indicator and measures of well-being

Well being measures	Percentage with well-being indicator
Visited in past 12 months	20.4%
Written letters in past 12 months	21.6%
Received letters in past 12 months	22.1%
Some contact at all with outside	29.2%
Many friends	5.0%
Self report good relations with staff	7.2%
In cell hobbies	30.4%
Christian belief	11.0%
Gym attendance	17.7%
Satisfied with health care	64.1%
Satisfied with food	24.3%
Attendance at Prison Work	61.0%
Complaints about noise	54.1%

4.5.1 Visits

For some prisoners the loss of contact with either family or friends outside the prison was a major cause for concern, especially the oldest old cohort. The most valued form of communication was through face-to-face visits.

Table 4-10 Number of prisoner visits in previous 12 months

Number of visits in previous 12 months	Number of Prisoners	Percentage (%)
0	144	79.5%
1	24	13.3%
2	9	5.0%
4	4	2.2%

144 prisoners (79.6%) had not received any visits during the previous 12 months. 33 prisoners (18.3% had received between 1 and 2 visits, with 4 prisoners (2.2%) having 4 visits, each lasting a maximum of 2hrs per visit. (Table 4-9).

4.5.2 Correspondence

142 (78.4%) of prisoners had not written any letters in the previous 12 months, 31 prisoners (17.1%) had written either 1 or 2, and 8 prisoners (4.5%) had written between 3 or 4 letters (Table 4.10).

Table 4-11 Number of letters written each month

Number of letters written each month	Number of Prisoners	Percentage (%)
0	142	78.4
1	24	13.2
2	7	3.9
3	1	0.6
4	7	3.9

Tables 4-10 and 4-11 refer to the previous 12 months.

A total of 141 prisoners (77.9%) had received no correspondence in the previous 12 months, with 5 prisoners, (<3%), having received between 4 and 9 letters, some of which were from various legal advisers. (Table 4-11).

Table 4-12 Number of letters received each month

Number of letters received each month	Number of Prisoners	Percentage (%)
0	141	77.9
1	25	13.8
2	7	3.9
3	3	1.7
4	4	2.2
9	1	0.6

4.5.3 Relations with Prison Staff

Self-Rated Relationship with Prison Staff

When asked to rate relations with prison staff, 13 (7.2%) of prisoners rated them as good, 86 prisoners (47.5%) rated them as barely satisfactory and 82 (45.3%) of prisoners rated them as poor.

4.5.4 Relations with Prisoners

When asked about friendships with other prisoners, 156 (86.2%) stated having no prisoner friendships. 9 prisoners (5.0%) described having prisoner friends, but 16 prisoners (8.8%) rejected the notion of friendships in a prison setting.

4.5.5 In-cell Hobbies

On average prisoners spent 4.5hrs each day (Monday - Friday) involved in some kind of purposeful activity but less time during the weekend (Appendix 8a, b, & c). When asked about in-cell hobbies 55 (30.4%) of prisoners were actively occupied in various pastimes predominantly art and craft work. 126 prisoners (69.6%) occupied their time watching television, listening to the radio or music, reading, or educational pursuits. 38 prisoners (21.0%) complained about limited access to hobby materials.

4.5.6 Christian Belief

When asked about religious affiliations, defined as believing in and being accepted by God, 38 prisoners (21.0%) said they attended bible reading classes, church services and religious groups. 161 prisoners (89.0%) reported having no Christian beliefs and little if any interest in religious pursuits.

4.5.7 Attendance at Gymnasium

When asked about how often they attended the gymnasium each week a total of 32 prisoners (17.7%) said they attended once every week and 16 prisoners (8.8%) attended on at least 2 occasions each week. 6 prisoners (3.3%) took physical exercise in the grounds on approximately 2 occasions each week. 110 prisoners (60.7%) did not participate in any 'formal' physical activity during the course of each week.

4.5.8 Satisfaction with Prison Food

When asked if they were satisfied with the prison diet 44 prisoners (24.3%) said they were satisfied and 137 (75.7%) said they were dissatisfied.

Table 4-13 Number of prisoners requiring a special diet

Special diet	Number of Prisoners	Percentage (%)
Yes	34	18.8
No	147	81.2

34 prisoners (18.8%) were restricted to special diets for health reasons primarily diabetes, elevated cholesterol levels, irritable bowel syndrome, and diverticular disease (Table 4-12).

4.5.9 Complaints about Noise and Reported Sleep Pattern

When asked about the level of noise 98 prisoners (54.1%) complained about excessive noise levels throughout the day and during the night. 31 prisoners (17.1%) described a good sleep pattern, 117 (64.6%) described it to be fair and 33 prisoners (18.2%) described a poor sleep pattern (Table 4.13).

Table 4-14 Prisoner sleep pattern

Description of Sleep pattern	Number of Prisoners	Percentage (%)
Good	31	17.1
Fair	117	64.6
Poor	33	18.2

Difficulty in getting off to sleep and early morning waking was a common theme especially for the oldest old prisoners. 3 prisoners (1.7%) all at HMP Albany were prescribed night sedation (Zopiclone 7.5 - 15mgms).

4.5.10 Prison Work

110 prisoners (60.7%) attended work. Of those unable to work (71 prisoners) 36 prisoners were medically unfit, with the remainder (35) 'retired' due to risk factors associated with old age.

4.6 Cognition

4.6.1 Initial Cognitive Assessment When Measured Using MMSE

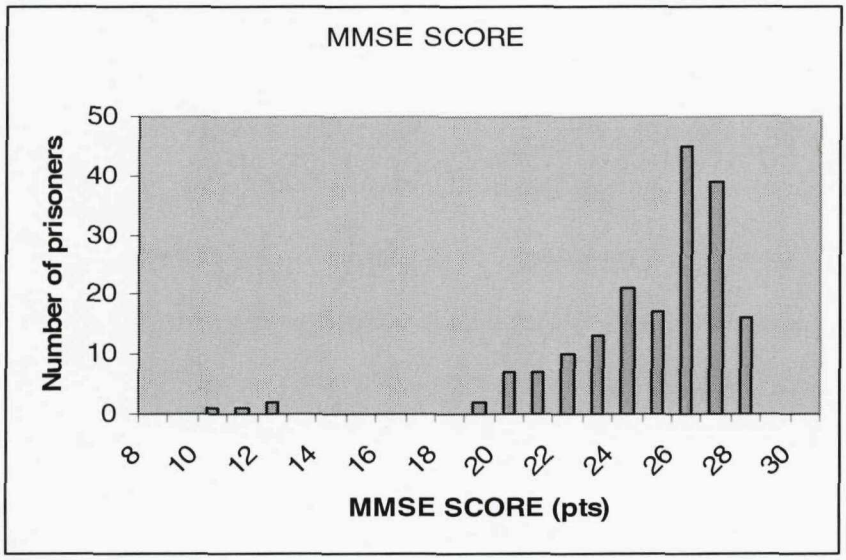


Figure 4-2 Distribution of MMSE Scores

The majority of prisoners scored > 24 points (Fig. 4-2), with a significant number achieving between 26 and 28 points (max 30pts). There were, however, 4 outliers with scores suggesting severe cognitive impairment, indicative of dementia (confirmed by clinical presentation at interview and further testing with ADAS-Cog). Mean MMSE score when excluding outliers was 25 points (SD = 2.21). From previous normative data (Folstein, Folstein & McHugh, 1975) (see appendices 10b) it is estimated that a population with ages between 55 to 84yrs and an equivalent educational experience (8th grade) the mean MMSE is 25.5 points.

4.6.2 Specific Cognitive Assessment When Measured Using ADAS-Cog

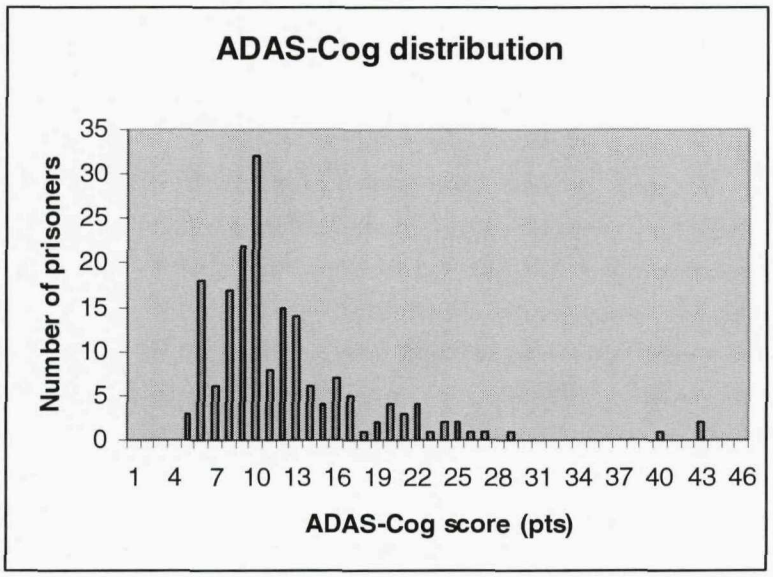


Figure 4-3 Distribution of ADAS-Cog Scores

The distribution of scores for the majority of prisoners (approx 135) fell between 7 to 11pts (Fig 4-3), with a number of outliers. When excluding outliers the mean score was 10.7 points (SD = 4.9). From previous normative data (Rosen, Mohs & Davis, 1984) it is estimated that a population with ages between 55 to 84yrs and an equivalent educational experience is 12.5 points (SD = 3.5). The ADAS-Cog score was significantly lower in the prison population compared with an equal sized normative population group (95% CI 0.92 to 2.7 points, p = 0.001) when excluding the 4 outliers (Fig. 4-4).

There was a good correlation between MMSE and ADAS-Cog scores, r(181) = -.84, p = .0001.

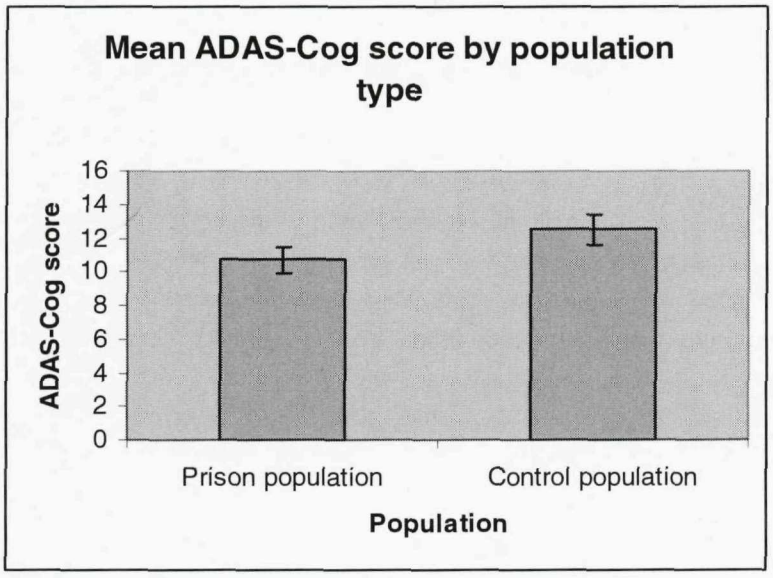


Figure 4-4 Mean Adas-Cog score by population type

4.7 Depression

Depression was frequently self-reported in the initial group of prisoners interviewed (N=60). In order to quantify levels of depression in prisoners yet to be interviewed, ethical approval was granted for a change in the study protocol to include the administration of the Geriatric Depression Scale (Yesavage et al. 1983). All remaining prisoners (N=121) were assessed using the GDS.

4.8 Basic Demographics of the GDS assessed Sub Sample

The basic demographics of the sample are presented in Table 4-14.

Table 4-15 Basic Demographic Information. (N = 121)

Time in years	N	Mean	Std. Deviation
Age	121	63.9	6.9
Length of sentence	121	20.3	23.9
Length of sentence served	121	8.6	9.9
Previous time in prison (excluding current sentence)	121	2.8	4.7
Time served on remand	121	1. 1	.64
Age left school	121	15.0	1.4
Education	121	8.7	1.4

The sub-sample of prisoners (N=121; 104 at HMP Albany & 17 at HMP Kingston) undergoing GDS assessment was directly compared with the initial sample (N=60) with reference to prison related variables including type of offence, location, length of sentence served; there were also no differences between the two samples in relation to social and health related variables The only significant difference between the two samples was that the GDS measurement group were marginally older (GDS group age M = 63.9yrs, SD = 6.89) than the initial sample (61.8yrs, SD = 5.10), t(152.56 Levene's adjusted) = 2.26, p = .025, d = .17.

4.8.1 Criminogenic Variables

Current time spent in prison ranged from 4 to 44yrs, with a mean length of 8.6yrs (SD = 9.92). Prisoner typology ranged from first time offenders to recidivists. The prisoners, as a group, had on average one previous conviction (M =.98; SD = 1.75) with approximately three prior to their index offence (M = 2.8; SD = 4.7) (Table 4-15).

Table 4-16 Prisoner Specific Variables

	Number of Prisoners	Percentage (%)
Marital Status		
Single	25	20.7
Married	31	25.6
Divorced	65	53.7
Total	121	100.0
No of times married		
0	14	11.6
1	71	58.7
2	30	24.8
3	6	5
Employment prior to imprisonment		
Yes	87	71.9
No	34	28.1
Type of offence		
Murder	29	24.0
Sex offence	92	76.0
Location		
HMP Albany	104	86.0
HMP Kingston	17	14.0
Previous convictions		
Yes	43	35.5
No	78	64.5
Served as a regular in the Armed Forces		
Yes	47	38.8
No	74	61.2

The GDS scores of the sub-sample (N=121) were normally distributed (M = 10.9; SD = 5.3 points). 59 prisoners (49%) scored below the threshold for depression (i.e. 10pts or less), 58 prisoners (48%) scored in the mild depression range (i.e. 11-20pts) and 4 (3%) of prisoners scored in the severe depression range (i.e. 20pts and

over). Notably, of the 59 prisoners scoring <11pts the majority, 33 prisoners (56%) scored 10 points i.e. on the border-line of mild depression (Fig. 4-5).

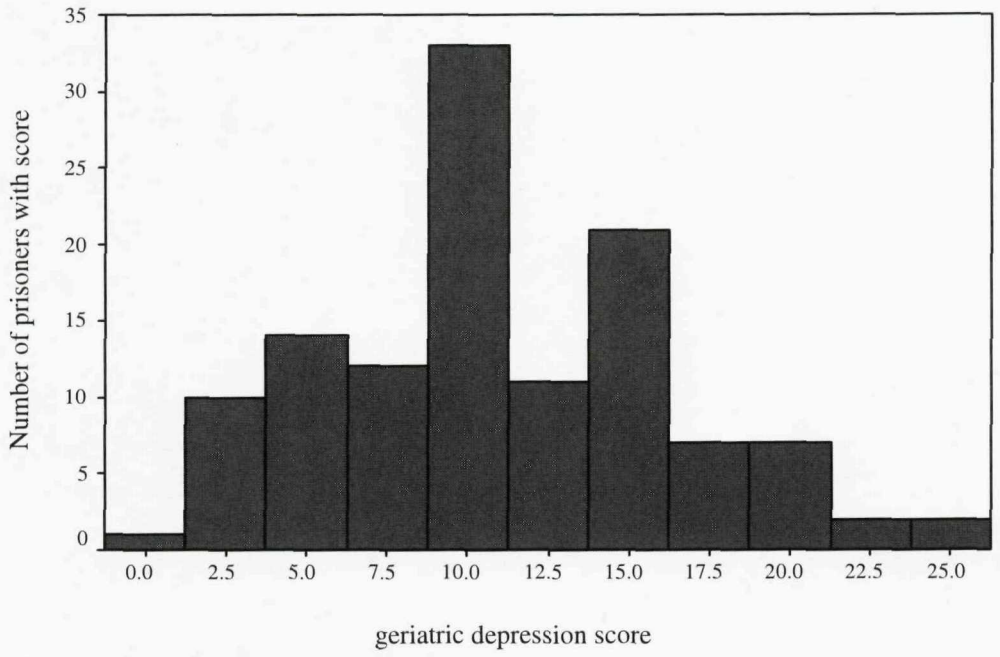


Figure 4-5 Depression as indexed by Geriatric Depression Inventory

4.9 Relationship between Variables

4.9.1 Demographics and Criminogenics

4.9.1.1 Length of Sentence

There was no significant relationship between the length of sentence awarded and the current age of the prisoners (Spearman rank 0.001 p = 0.9) or education years (Spearman rank -0.10 p =0.3). A borderline significant relationship was found between length of sentence awarded and the presence of pre-employment (prisoners with pre-employment 19.0yrs c.f. 27.0yrs in those with no pre-employment MWU p = 0.05). No differences were found between the current marital status of the prisoners and the length of the prison sentence (Kruskall Wallis p > 0.1).

4.9.1.2 Length of Sentence Served.

There was no significant relationship between the length of sentence served and the age of the prisoner (Spearman rank 0.06 p = 0.4) or years in education (Spearman rank -0.10 p = 0.2). Likewise no relationship was found between length of sentence served and the presence of pre-employment (prisoners with pre-employment 7.5yrs c.f. 9.7yrs in those with no pre-employment MWU p = 0.2). Prisoners who were divorced were more likely to have longer prison sentences than prisoners who were married (9.6 yrs c.f. 4.7yrs MWU $p < 0.0001$).

A separate analysis was performed by categorising prisoners into those who had served sentences ≤ 5yrs and ≥ 20yrs. Prior to completing these analyses it was demonstrated that there was a difference in sentence length between the ≤ 5yrs age group (M = 2.8yrs, SD = 1.6, N = 110) and the ≥ 20yrs age group (M = 29.5yrs, SD = 7.3, N = 25). Thus, there was a large difference in the mean length of sentence between the two groups, t(24.52 Levene's adjusted) = 18.07, $p<0.0001$, Cohen's d = 5.03 (Fig. 4-6) with no overlap between the two groups in terms of length of sentence served.

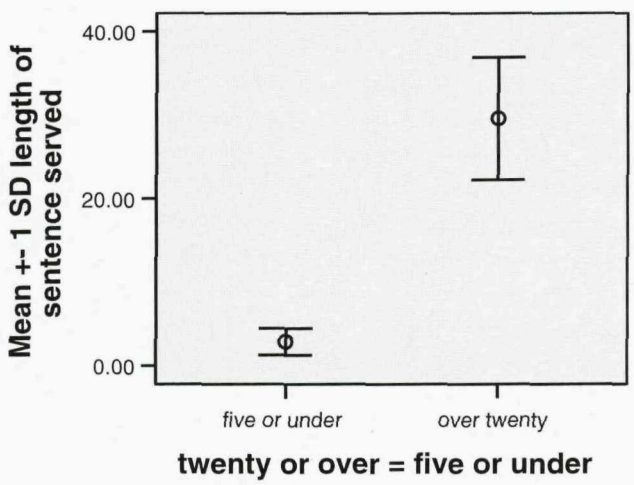


Figure 4-6 Mean length of sentence - ≤ 5 years and ≥ 20 years

The age profiles of the two groups (see Fig. 4-7) were similar (M ≤5yrs group = 62.4yrs, SD = 5.7; M ≥20yrs group = 64.8yrs, SD = 6.8; MWU p = 0.11).

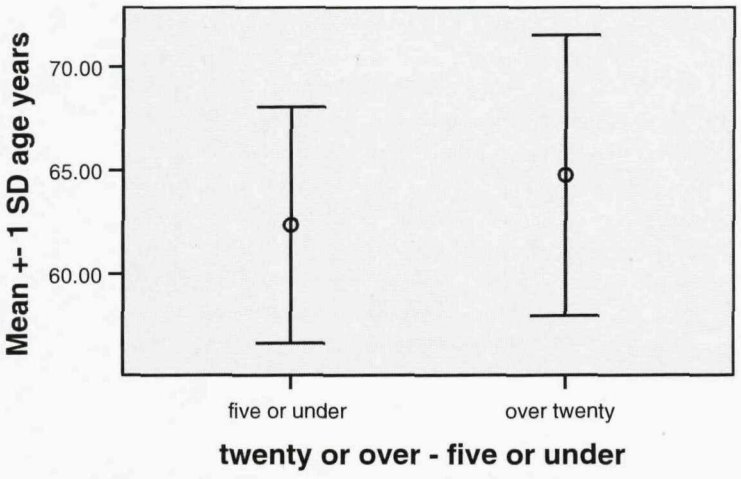


Figure 4-7 Age as a function of length of sentence group

There was no significant difference in education years between the two groups (M ≤5yrs group = 8.9 yrs, SD = 0.4; M ≥20yrs group = 8.5 yrs, SD = 1.0; MWU p = 0.53). In addition, no relationship was found between length of sentence served and employment prior to imprisonment or service in the armed forces (Both cases p > 0.1). Prisoners having served sentences ≥20yrs were more likely to be divorced than those having served sentences ≤5yrs (68% c.f. 43%; χ^2 6.8 p = 0.03).

4.9.1.3 Previous Convictions

There was no difference in current age between prisoners with previous convictions compared to those without (63.3yrs c.f 63.2 yrs MWU p = 0.8). Likewise there was no relationship between the presence of previous convictions with previous employment (X^2 0.6 p = 0.5) or marital status (X^2 3.8 p = 0.2). There was a significant relationship between education and reduced recidivism with prisoners

with no previous conviction having greater years of education (8.9 yrs c.f. 8.6 yrs MWU p = 0.03).

4.9.2 Demographics and Physical Health

A number of previously identified indicators of poor physical health were associated with increasing age (Table 4-16). Thus, the presence of hypercholesterolaemia; hypertension; IHD and poor mobility were all associated with increased age. No significant relationships were found with smoking; poor hearing; visual impairment; polypharmacy (≥4 medications); COPD; diabetes and increasing age.

Table 4-17 Average age of prisoners with or without health indicators

Health indicator	Mean age yrs (SD)		Test result
	Health indicator present	Health indicator absent	
Hypercholesterolaemia	64.1 (7.1)	61.4 (5.9)	t(131) = 2.64, p = .009
Ischaemic heart disease	64.2 (6.9)	61.8 (5.3)	t(178) = 2.61, p = .005
Hypertension	63.8 (6.7)	61.7 (5.2)	t(128) = 2.19, p = .015
Poor Mobility	64.5 (7.0)	61.7 (5.3)	t(175) = 3.04, p = .001

Marital status; employment (including previous service in armed forces) prior to prison was not associated with the presence or absence of indicators of poor health (χ^2 all p > 0.1).

Significant relationships were found between years of education and the presence or absence of a number of indicators of poor health (Table 4.17). In addition, prisoners with qualifications had significantly fewer current ill health problems than those without qualifications (1.73 c.f. 2.67 health problems; mean difference = 0.94; (95% CI 0.26 to 1.97; p = 0.006).

Table 4-18 Education Years & Health Indicators

Health indicator	Mean education yrs (s.d.)		Test result (MWU)
	Health indicator present	Health indicator absent	
Hypercholesterolaemia 96/146	8.6 (1.2)	9.3 (1.5)	p = 0.002
Ischaemic heart disease 105/181	8.6 (1.2)	9.0 (1.5)	p = 0.04
Hypertension 127/181	8.6 (1.2)	9.1 (1.6)	p = 0.04
COPD 78/181	8.8 (1.3)	8.8 (1.4)	p = 0.67
Diabetes 14/181	9.0 (1.4)	8.8 (1.3)	p = 0.45
> 4 medications 104/181	8.6 (1.3)	9.0 (1.4)	p = 0.01
Poor Mobility 84/181	8.6 (1.3)	8.9 (1.3)	p = 0 .05
Smoking 88/181	8.5 (0.9)	9.0 (1.5)	p = 0.01

Likewise, there was a statistical difference in the years of education in subjects with poor dental hygiene compared to good hygiene (8.5 yrs c.f. 9.4 yrs MWU $p < 0.001$). However, no relationship was found between education years and COPD or diabetes (Table 4-17).

4.9.3 Demographics and Well Being

The only measures of well-being that were associated with increasing age were complaints about noise, rpb (181) = .21, p = .004, poor appearance, correlation rpb (181) = .15, p = .038 and premature ageing, correlation rpb (181) = .17, p = .023. No significant relationships were found between measures of well-being and years of education; marital history or previous employment.

4.9.4 Demographics and Cognition

There was a negative correlation between MMSE score and increasing age (Spearman rank correlation - 0.24 p = 0.001) and a positive correlation between increasing age and ADAS-Cog score (Spearman rank correlation +0.27 p = 0.0001). Employment prior to prison was associated with a trend towards a higher MMSE score compared with those unemployed prior to imprisonment (25.1 (2.5) c.f. 23.9 (4.1) pts p = 0.06. Employment prior to prison was associated with a trend towards a significantly lower ADAS-Cog score compared with those unemployed prior to imprisonment (10.6 (SD 5.4) c.f. 13.3 SD (8.0) p = 0.04. Likewise, the presence of a formal qualification was associated with a higher MMSE score and a lower ADAS-Cog score (MWU p = 0.03 both cases). But there was no significant correlation between either education in years and MMSE score (Spearman rank 0.03 p = 0.6) or education in years and ADAS-Cog score (Spearman rank 0.02 p = 0.8). There was no significant relationship with cognitive scores and marital status.

4.9.5 Demographics and Depression

There was a low positive correlation between increasing age and GDS score (Spearman rank + 0.2 p = 0.024). There were no effects of marital status, employment prior to prison (including service in the armed forces), on GDS scores. There was a weak negative correlation between years of education and GDS scores (Spearman rank -0.2 p = 0.03). The small number of prisoners (N = 17) who left school with qualifications had significantly lower mean GDS scores when compared to those without any qualifications (7.4 c.f. 11.5 points; mean difference 4.1 (95% confidence interval 1.4 to 6.7 points; p = 0.003).

4.10 Criminogenic Variables and Health

4.10.1 Physical Health

With the exception of smoking there were no statistical differences in the length of sentence served and the presence of any of the key ill health indicators (see Table 4-18).

Table 4-19 Sentence served and Health indicators

Health indicator	Mean sentence served yrs		Test result (MWU)
	Health indicator present	Health indicator absent	
Hypercholesterolaemia 96/146	8.7 (10.0)	8.1(9.8)	p = 0.47
Ischaemic heart disease 105/181	8.8 (10.0)	7.0 (8.9)	p = 0.12
Hypertension 127/181	8.5 (9.8)	7.0 (9.1)	p = 0.12
COPD 78/181	8.5 (9.5)	7.8 (9.7)	p = 0.38
Diabetes 14/181	9.1 (9.1)	8.0 (9.7)	p = 0.39
> 4 medications 104/181	8.1 (9.6)	8.0 (9.7)	p = 0.8
Poor Mobility 84/181	8.8 (10.2)	7.2 (8.9)	p = 0 .2
Smoking 88/181	9.5 (10.2)	6.8 (8.8)	p = 0.02

Likewise, there were no statistical differences in the length of sentence served and prisoners with vision impairment; hearing deficit or dental hygiene (all cases MWU p > 0.1).

A separate analysis of prisoners with sentences currently serving ≤5yrs compared with those serving ≥20yrs also showed no statistically significant relationships with

the presence or absence of the health indicator (X^2 statistics all cases (including smoking p = 0.12) p > 0.1).

In order to control for possible confounds of age and years of education with health indicators a series of logistic regressions were carried out using length of sentence served as the main predictor variable and the presence or absence of the various health indicators included in Table 4.6 (hypercholesterolaemia, hypertension; ischaemic heart disease, COPD; diabetes; polypharmacy and smoking status) as outcome variables. Analysis of the effects of age and education in years were introduced as separate predictor variables to assess possible confounding with the length of sentence served.

Logistic regression analysis with the presence or absence of hypercholesterolaeamia as the outcome variable and length of sentence served; age and education years as predictor variables showed a significant relationship between age (p = 0.04) and education years (p = 0.009) with the presence of hypercholesterolaemia but no statistically significant relationship between length of sentence served and the presence of hypercholesterolaemia (p = 0.7).

Logistic regression analysis with the presence or absence of hypertension as the outcome variable and length of sentence served; age and education years as predictor variables showed a trend relationship between age (p = 0.10); education years (p = 0.07) but no significant relationship between length of sentence served (p = 0.56) and the presence of hypertension.

Logistic regression analysis with the presence or absence of ischaemic heart disease as the outcome variable and length of sentence served; age and education years as predictor variables showed a significant relationship between age (p = 0.04)

and education years (p = 0.03) with the presence of ischaemic heart disease but no statistically significant relationship between length of sentence served (p = 0.48) and the presence of ischaemic heart disease.

Logistic regression analysis with the presence or absence of COPD as the outcome variable and length of sentence served; age and education years as predictor variables showed no significant relationship between age (p = 0.25); education years (p = 0.98) with the presence of COPD and no statistically significant relationship between length of sentence served and the presence of COPD (p = 0.55).

Logistic regression analysis with the presence or absence of diabetes as the outcome variable and length of sentence served; age and education years as predictor variables showed no significant relationship between age (p = 0.10); nor education years (p = 0.32) with the presence of diabetes and no statistically significant relationship between length of sentence served and the presence of diabetes (p = 0.75).

Logistic regression analysis with the presence or absence of polypharmacy as the outcome variable and length of sentence served; age and education years as predictor variables showed a significant relationship between education years (p = 0.03) with the presence of polypharmacy but no statistically significant relationship between age (p = 0.75) or length of sentence served (p = 0.75) and the presence of polypharmacy.

Logistic regression analysis with the presence or absence of smoking as the outcome variable and length of sentence served; age and education years as predictor variables showed a significant relationship between education years (p =

0.009) with smoking but no statistically significant relationship between age (p = 0.25) or length of sentence served (p = 0.10) and smoking.

Thus, following multiple logistic regression analysis, age, and in particular education years, have a marked effect on the presence of ill health indicators but the length of sentence served has no relationship with the presence of ill health indicators.

4.10.1.1 Previous Convictions

With the exception of smoking, where 46/69 (66%) of prisoners with a previous conviction smoked c.f. 42/112 (38%) of prisoners with no previous conviction (Chi 2 = 14.5 $p < 0.0001$), there was no significant difference in the presence or absence of these health variables with previous time spent in prison.

4.10.2 Well Being

There was a clear relationship between the length of sentence served and the amount of contact with the outside world; those prisoners who had contact with the outside world had served significantly shorter period of time in prison (M = 4.58, SD = 6.02) than those who had no contact with the outside world (9.45, SD = 10.37), $t(179) = 3.14$, $p = .002$, $d = .62$). Prisoners with Christian beliefs had also been in prison for a significantly shorter length of time (M = 3.70, SD = 2.38) in comparison to those prisoners who did not report Christian beliefs (M = 8.63, p = 10.00), $t(179) = 5.17$, $p = .0001$, $d = .83$).

There were no significant relationships between prisoners who had served ≥5yrs or ≥20yrs and self reported relations with staff; satisfaction with health care; appearance; premature aging; in-cell hobbies; prisoner friendships, and attendance at the gymnasium. However, those prisoners serving ≥20yrs were more satisfied

with food $\chi 2$ (1) = 4.50, p = .034, Cramer's V = .18, but were less likely to report Christian beliefs $\chi 2$ (1) = 3.85, p = .05, Cramer's V = .17 and had less contact with the outside world $\chi 2$ (1) = 7.26, p = .007, Cramer's V = .23.

4.10.3 Cognition

No significant correlations (controlling for age and education years) were observed between ADAS-Cog scores and length of sentence served, (r2 =0.15, p > 0.05), or the MMSE scores and length of sentence served, (r2 = -0.13, p > 0.05).

Likewise there was no significant difference in ADAS-Cog scores between the two sentence groups (≤ 5 yrs Mean = 10.47, SD = 5.54; ≥ 20 yrs Mean = 12.52, SD = 7.87, p > 0.05). The distributions of the two groups were similar (Fig. 4-9).

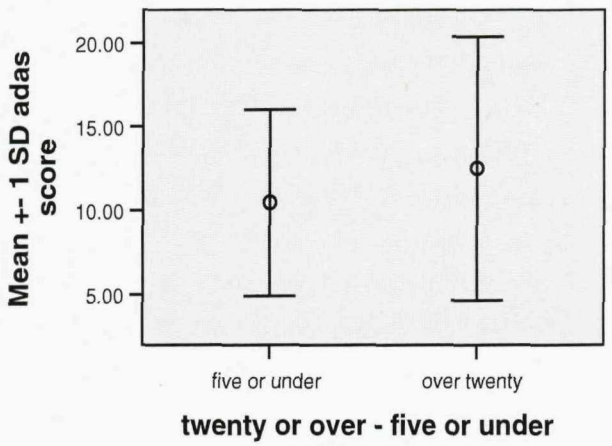


Figure 4-8 ADAS-Cog score as a function of length of sentence served.

The pattern was similar for the MMSE scores (Fig. 4-9) with no significant difference (≤ 5 yrs M = 25.27, SD = 2.59; ≥ 20 yrs M = 24.24, SD = 3.23, p > 0.05) and highly overlapping distributions.

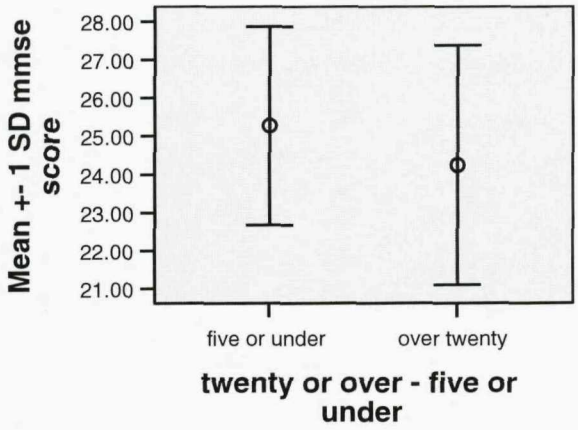


Figure 4-9 MMSE score as a function of sentence served.

Thus in terms of both the ADAS-Cog and MMSE there is no difference between the two groups in terms of the test scores.

Excluding prisoners with dementia, (MMSE < 10 pts) prisoners with a previous conviction had a lower MMSE at interview compared with those with no previous conviction (24.2 (3.1) C.F. 25.5 (2.5) pts $p = 0.05$). However, this was not significant for the ADAS-Cog score.

Sex offenders achieved significantly better MMSE scores ($M = 25.3$, $SD = 2.2$) than murderers ($M = 23.0$; $SD = 4.4$) $t(179) = 3.3$, $p = .002$, $d = 0.7$. A similar pattern is observed with the ADAS-Cog scores (sex offenders $M = 10.3$, $SD = 4.7$; murderers $M = 14.4$, $SD = 9.07$) $t(179) = 2.8$, $p = .007$, $d = 0.6$.

A multiple regression approach was adopted to simultaneously examine the relative contribution of various criminological variables whilst controlling for possible confounding variables.

Hierarchical multiple regression was used to further assess the contribution of age, education, length of sentence served, type of offence and previous convictions on

the ADAS-Cog. The predictors accounted for a statistically significant amount of variance, f(5,175) = 9.16, p =.00021, accounting for a moderate amount of variance, R^2 .21. In line with the univariate results only age, t = 4.83, p = .0002 (standardised beta weight = .38) and sex offender status, t = 3.11, p = .002 (standardised beta weight = .22) had a significant influence on the ADAS-Cog score.

Hierarchical multiple regression was used to further assess the contribution of age, education, length of sentence served, type of offence and previous convictions on the MMSE. The predictors accounted for a statistically significant amount of variance, f(5,175) = 10.21, p = .00031, accounting for a moderate amount of variance, R^2 = .27. In line with the univariate results only age, t = 4.68, p = .0002 (standardised beta weight = .32) and sex offender status, t = 3.94, p = .00011 (standardised beta weight = .28) had a significant influence on the ADAS-Cog score.

For both ADAS-Cog and MMSE the multiple regression analysis confirmed the univariate findings.

4.10.4 Depression

GDS scores were unrelated to length of sentence served (Pearson Correlation 0.053, p = 0.55). In addition, there was no curvilinear relationship between GDS and time served i.e. no evidence that prisoners have an initial high level of depression that declines fairly rapidly followed by a gradual rise over time served (Fig. 4-10).

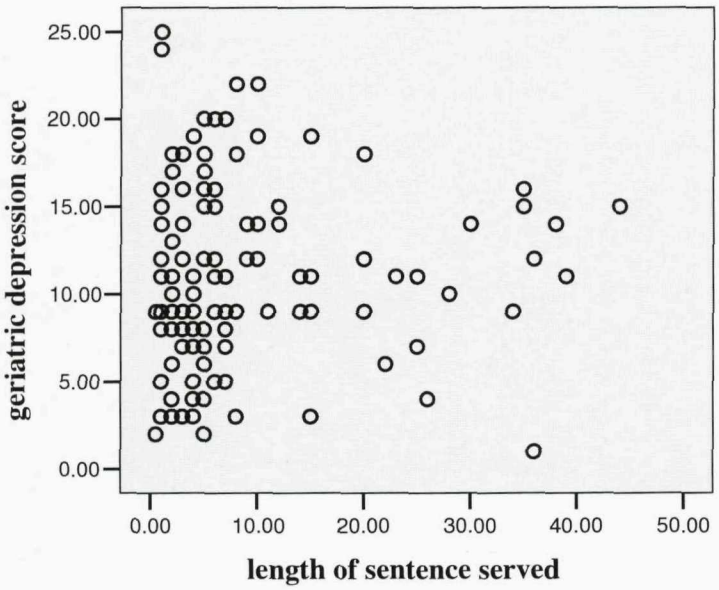


Figure 4-10 GDS scores as a function of the length of prison sentence served.

In order to control for possible confounding variables a multiple regression approach was adopted. Hierarchical multiple regression was used to assess the relative contribution of age, education years and length of sentence served to the GDS score. The predictors accounted for a statistically significant amount of variance, $f(2,118) = 4.22$, $p = .017$, however, the amount of variance accounted for was modest, $R^2 = 051$. The only predictor variable that accounted for a statistically significant amount of variance was age, $t = 2.12$, $p = .036$. The effect size of age was modest, standardised beta weight = .19.

A group approach involving a comparison of GDS scores of prisoners who had served ≤5yrs (N = 67) and ≥20yrs (N = 18) also revealed no significant differences in GDS (t-test p = 0.58).

No relationship was found between the number of previous convictions and GDS score (previous conviction GDS mean score 11.9 (SD = 5.2) c.f. 10.3 (SD = 5.3); t-test p = 0.10).

4.11 Relationship between Physical Health, Cognition and Depression

4.11.1 Physical Health and Cognition

With the exception of the presence of IHD which was associated with a reduction of cognitive scores at assessment (ADAS-Cog 12.0 (SD = 6.7) c.f. 9.7 (3.9) pts p = 0.008; MMSE 24.5 (3.1) c.f. 25.4 (2.1) pts p = 0.02) there was no relationship between the health variables and cognitive function.

4.11.2 Well Being and Cognition

With reference to MMSE scores, prisoners with no contact with the outside world (M = 24.42, SD = 3.29) had significantly greater cognitive impairment that prisoners with some contact with the outside world (M = 25.8, 1.8), t(179) = 2.7, p =.006, d = .5. There was a similar pattern for the ADAS-Cog data with prisoners with no contact (M = 12.0, SD = 6.8) having significantly greater impairment than those with some contact (M = 9.2, SD = 3.8), t(179), p = .005, d = .6. There were no other relationships between indicators of well-being and either the MMSE or ADAS-Cog scores.

4.11.3 Physical Health and Depression

Chronic illness in terms of hypercholesterolaemia, IHD, hypertension, illnesses in the past 12 months and whether prisoners were prescribed more than 4 medications (excluding antidepressants) were all related to higher GDS scores (Table 4-19). These effects were not confounded with age or length of sentence served.

Table 4-20 Effects of Health Variables on GDS Score

Factor	N	Mean	SD	T-test results	95% CI of difference between means
Hypercholesterolaemia + Hypercholesterolaemia -	70 30	11.30 8.46	5.20 4.45	t = 2.59, p =.011, Cohen's d =.72	0.66 - 4.99
IHD + IHD -	72 49	11.92 9.42	4.67 5.74	t = 2.62, p =.01, Cohen's d =.43	0.60 - 4.36
Hypertension + Hypertension -	87 34	11.80 8.62	5.26 4.55	t = 3.10, p = .002, Cohen's d =.43	1.15 - 5.21
More than 2 illnesses* + More than 2 illnesses -	108 13	15.31 10.37	4.90 5.06	t = 3.33, p = .001, Cohen's d = .98	1.99 - 7.86
More than 4 Meds* + More than 4 Meds -	70 51	12.15 9.19	5.24 4.83	t = 3.17, p = .002, Cohen's d = .43	1.11 - 4.80

* in past 12 months

The effect of the presence of any of the five indicators on their own was to significantly increase GDS, all with medium to large effect sizes. Ill-health indicators were combined to produce a general index of illness (Table 4-20).

Table 4-21 Prisoners with 0 - 5 Ill-Health Indicators

Number of ill health indicators	Number of Prisoners	Percentage (%)
0	22	18.2
1	15	12.4
2	5	4.1
3	22	18.2
4	47	48.8
5	10	8.3

Only 5 prisoners had 2 ill-health indicators (Table 4-20) thus this group were excluded from further analysis. An increase in the burden of illness had a clear cumulative negative effect on GDS score ($F(4,111) = 5.52$, $p = 0.0005$, $\eta 2 = .17$)

(Fig. 4-12). Restriction of the analysis to include only those with complete data on cholesterol status (N=100) did not substantialy change this relationship ($F(4,87) = 7.51$, $p = 0.0001$, $\eta 2 = .27$). There was a small non significant relationships between the number of ill health indicators and age (Pearson Correlation 0.17, $p = 0.06$), and a small significant correlation between ill health indicators and length of sentence served (Pearson Correlation 0.18, $p = 0.042$).

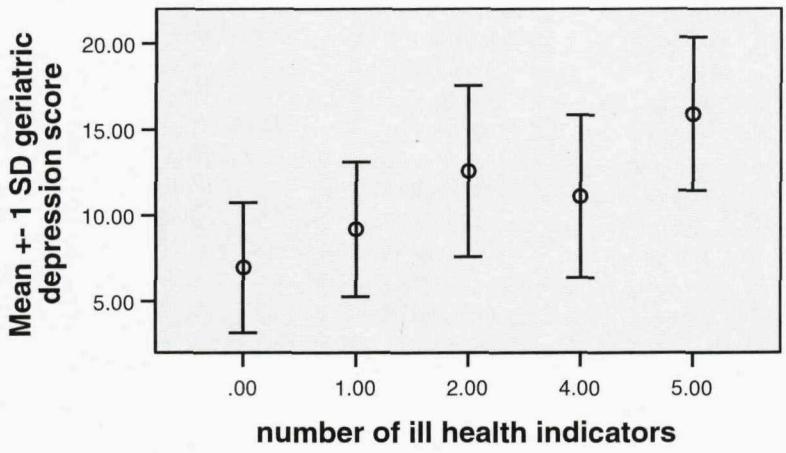


Figure 4-11 GDS as a Function of Number of Ill Health Indicators

GDS scores were higher for prisoners with restricted mobility however this effect was confounded with age. There was no relationship between smoking status, quality of vision or hearing and GDS scores. Prisoners who rated their health care as unsatisfactory had significantly higher mean GDS scores than those who rated their health care as satisfactory (12.5 c.f. 10.2 points; mean difference = 2.3 points; (95% CI 0.4 to 4.4); $p = 0.02$) (Figure 4-11).

Those prisoners requiring a special diet scored significantly worse on the GDS ($M = 14.1$, $SD = 5.5$) than those not requiring a special diet ($M = 9.8$, $SD = 4.7$), $t(119) = 4.2$, $p = .0001$, $d = 1.2$.

Those prisoners with a history of psychiatric illness (including depression, anxiety and alcohol/substance abuse) had significantly higher mean GDS scores than those without a psychiatric history (12.0 c.f. 9.1 points; mean difference 2.9 (95% confidence interval 1.0 to 4.8 points; p = 0.003). A prior history of depression had no more effect than any other prior psychiatric diagnosis.

4.11.4 Well Being and Depression

Prisoners satisfied with health care had significantly lower GDS scores (M = 10.1, SD = 5.0) than those dissatisfied with health care (M = 12.5, SD = 5.3), t(119) = 2.3, d =.45.

Prisoners' estimation of their current health status (good, fair or poor), their past health status and future health status were all significantly related to GDS scores. For all three measures those who estimated their health as poor had the highest GDS scores, those who self-rated as fair were in the mid-range, and those who rated their health as good,achieved the lowest GDS scores (see Table 4-21).

Table 4-22 Self-reported health status and GDS scores

	Poor	Fair	Good	F test
Past health status	N = 40, M = 12.95, SD = 4.96	N = 76, M = 10.10, SD = 5.16.	N = 5, M = 6.80, SD = 3.63	F(2,118) = 5.88, p = .004
Present health status	N = 39, M = 12.92, SD = 5.13	N = 76, M = 10.31, SD = 4.98	N = 6, M = 5.33, SD = 3.88	F(2,118) = 7.45, p = .001
Future health status	N = 78, M = 11.97, SD = 4.92	N = 40, M = 9.12, SD = 5.47	N = 3, M = 7.00, SD = 3.46	F(2,118) = 5.06, p = .008

There was a significant effect of self-reported quality of sleep on GDS scores (f2,118) = 4.64, p = .01) with those reporting a good sleep pattern having the lowest GDS scores (M = 8.3, SD 4.4), fair sleepers scoring in the mid-range (M = 11.1, SD = 5.3) with those reporting a poor/disturbed sleep pattern having the highest scores (M = 12.7, SD = 4.7).

Other prison related variables were also recorded including previous experience in prison, attendance at behaviour programmes, whether had in-cell hobby, self-reported quality of relations with prison staff, friends in prison, attendance at gymnasium, satisfaction with quality of food, complaining about noise, and being in prison work. None had any relationship with GDS scores.

4.11.5 Depression and Cognition

There was a significant correlation between cognitive function as indexed by the MMSE and the GDS (Pearson Correlation -0.22, p = 0.016) (it is a negative correlation as a lower MMSE score indicates greater impairment) but not between ADAS-Cog and GDS (Pearson Correlation +0.12, p = 0.12) suggesting that a reduction in cognitive function is accompanied by an increase in GDS.

4.12 Experiencing Imprisonment

4.12.1 Prison Regimes

HM Prison Albany operated a stringent, closely controlled, highly procedural, explicit and relatively consistent regime which, according to a number of prisoners, apparently contrasted sharply with other establishments. However, this was generally favoured by older prisoners especially the restraining effect on the

noisiness and vibrancy of the younger population, although loud music invariably drew negative comments together with the 'early morning chorus' of the increasing number of geese and gosling during the Spring. Intrusive and invasive situational controls (cell searches) caused considerable resentment together with environmental management and excessive prominent surveillance.

HM Prison Kingston had previously operated a more liberal routine but a recent change of Governor had resulted in a less favoured regime and prison staff appearing to rely upon authority as the basis for exercising their powers. Loud music and shouting was evident throughout the landings during lock down periods. Surveillance was omnipresent but drew less unfavourable comment.

4.12.2 The Prisoners

Prisoners in the study appeared to have aged prematurely having sallow complexions following years of limited exposure to fresh air and sunlight. Multiple tattoos on theirs arms and fingers were commonplace, with many tattooed by other prisoners. Few prisoners were overweight. Hair styles ranged from close cropped to long and tied back in a pony tail. Clothing varied from prison shirts and green trousers with shoes, to trainers, track-suit bottoms and tee-shirts, with necklaces and crucifixes typically worn outside the tee-shirt, the latter occasionally unwashed and stained with food. The wearing of wrist-watches was more in evidence at HMP Albany. The standard of personal hygiene for a number of prisoners was poor especially those housed in the older blocks and dormitories, and many prisoners presented with cracked, nicotine stained, dirty fingernails. Several continued to bite their nails acknowledging it to be a lifelong habit.

The majority of prisoners were fully mobile although several had developed a noticeable reduction in gait attributable in part to early arthritic changes and ageing. Several were breathless upon even the mildest exertion following the short walk from the cell block to the health care centre, and in some cases were perspiring heavily.

4.12.3 Prisoners Views of Health and Well Being

With ageing the eldest group, those aged >70yrs, acknowledged becoming increasingly concerned about ill-health and its consequences together with the probability of dying in prison. The burden of chronic disease and dealing with the consequences of persistent and debilitating ill-health was viewed by many as an almost insurmountable continuous challenge, and in some instances an invisibility of need had only served to further exacerbate a developing restricted lifestyle and gradual withdrawal from mainstream prison life. Poor health and the prison retirement age had prevented some from working and in doing so had added to a sense of loss (another lost role) feeling further devalued, and highlighted the boredom of incarceration and the concept of serving 'hard-time'. In some instances poor basic skills, ill-health, sensory impairment and consequential exclusion from available activities had lead to boredom and an increasing vulnerability.

Eric (aged 68yrs) had been sentenced to life imprisonment in 1985 with an indeterminate release date and was currently 13yrs over tariff. His clinical history was extensive, revealing a multiplicity of chronic diseases including, severe emphysema, hypertension, poor circulation and hypertrophy of the bladder neck. He looked far older than his biological age and said he was experiencing increasing episodes of profound breathlessness and angina.

".....I can't go on much longer mate.....each day is more difficult.....I can hardly get out of bed.....if they opened the gates I couldn't walk through them.....better off dead.....I'll never finish my sentence whatever it is.....although I don't want to die in prison for the sake of my family.....I've told them not to resuscitate me if I collapse."

For older prisoners having no privacy and being under constant direct surveillance was viewed as being both uncomfortable and invasive with a lack of respect and understanding from prisoners and staff alike injurious to their self-esteem. A predominant complaint was the unacceptable level of noise in the prison and the constant loud music.

John (aged 74yrs) was vocal in his opposition to the existing prison regime for not being considerate of other prisoners' needs especially the older men.

".....prison is for younger men, those ghetto blasters drive you mad.....I often get upset when I'm watching the television especially having to tolerate the behaviour of some of them in here".

Others felt similarly but were disinclined to voice their irritation possibly because of reprisals and the withdrawal of goodwill. I was not immediately aware of excessive noise throughout the duration of my visits, but during lock-down periods several radios and music centres were in competition, although 'battery life' curtailed their usage to some extent.

Approaches to dealing with the rigours and challenges of prison life differed. The deprivation of liberty and resulting sense of isolation is amplified when prisoners either elect not to or encounter difficulties with (possibly because of illiteracy) communicating with family members or friends. Several younger old prisoners (those

aged 55-60yrs) had completely severed links with the outside world, in an attempt to suspend time, thereby ensuring a 'trouble free' passage throughout their sentences. Incarceration according to the reigning effects literature paradigm is akin to being frozen in time.

"*.....No commitments, no disappointments..... no news is good news.....they can't take away my thoughts or my spirit.*"

This rationale is fundamentally flawed by virtue of the changing world and needs of the individual. Previous roles in life, those of a partner, husband, lover, father, grandfather would gradually be eroded and irrevocably lost forever. Over the years several prisoners had received correspondence from their wives' solicitors informing them of impending divorce proceedings together with an intention not to permit prison visits from their children although the news had not been entirely unexpected.

Others were similarly less fortunate with divorce, loss of contact with relatives, friends and former colleagues equally common. By comparison, a number of prisoners viewed the maintaining of family links to be pivotal in surviving the prison experience and were seemingly unable to accept enforced changes and the unforeseen consequences that would invariably occur as a result of imprisonment with the passage of time. Filled with dread and despair and a fear of being alone throughout the long years ahead without any significant others was almost unbearable, and on occasions had resulted in acute mental health problems.

"*.....I previously cracked up in prison.....I felt bored and thought I would never survive the experience.....I'm due for a visit on Friday, if she turns up.*"

Receiving and writing letters was generally confined to solicitors with the exception of one prisoner who was negotiating with two authors to ghost write his journey through the prison system.

There was an underlying palpable tension as opposed to overt hostility between prisoner officers and prisoners, possibly as a result of being either the empowered (prison officers) or the disempowered (prisoners).

"*.....It's the staffs' attitude that can either make or break the psychological well-being of a prisoner. It's the staff who have all the power and if a prison officer wishes to make a prisoner's life a misery they can do so quite easily*".

In the majority of instances, recounting past relationships had a tendency to be relayed as a series of chronological events with either limited or the complete absence of emotional warmth. When asked about friendships the majority of those interviewed acknowledged having few prisoner friends, with an inclination towards mistrust of others. Those who had aged in prison had a tendency to remain in their cells, pursuing a range of hobbies, including painting and model-making with the completed work invariably worthy of praise. One prisoner had taught himself braille following unsuccessful laser treatment for glaucoma in his remaining eye. Access to and usage of the telephone was generally confined to younger prisoners, which is probably indicative of relationship loss associated with ageing in prison. Any consequences created by the deprivation of heterosexual relationships were never articulated.

The opinion of a more robust and obviously physically fit individual (aged 60yrs) was somewhat more forthcoming. When describing his fellow inmates he viewed the majority as being "lost causes", and lacking in spirit.

".....Tossers.....If they opened the gates at nine o'clock tomorrow morning here most of this lot would be at the front door at four o'clock asking to be let back in for tea and a bed for the night."

He had been sentenced to life imprisonment in 1980 with a recommended 30yrs tariff at least, but with a still indeterminate release date. He maintained his physical fitness by visiting the gymnasium three/four times per week, refuted his guilt, and prior to imprisonment had served in the Royal Navy.

".....count myself lucky in some respects.....do this standing on my head....just like the last commission.....without the travel.....the ship's company is crap though".

During my second visit he told me he was not overly optimistic about an impending appeal, but was not prepared to undergo any offending behaviour problems, and was somewhat uncomplimentary about the psychology department.

"Prison confirms nothing mate, proves nothing, it's just there.....it won't crack me though.....they think I'm nuts.....what do they know anyway.....I'll show them".

Years of imprisonment combined with ageing had resulted in several prisoners becoming institutionalised. Michael (age 68yrs), who had spent over half his adult life in prison stated he felt uncomfortable sleeping in his cell if the door wasn't locked - a common practice on E-Wing at HMP Kingston throughout the course of each day. He told me he placed his shoes under the bed legs to prevent them being stolen, and hid his tobacco in various nooks and crannies.

".....I'm institutionalised you know - suits me, suits them..... I've learnt the game over the years.....you can't trust anyone here mate it's not safe with the door unlocked".

Jimmy (aged 67yrs) had long since given up the need to track time.

".....I no longer have any responsibility for myself..... I have a tendency to forget what day it is but it doesn't really matter.....it works with or without me"

The 'oldest old' (>75yrs) those who had served >25yrs appeared resigned and at often at ease in the knowledge they would remain in prison for the rest of their lives. For them prison had become home, they feared release, although the thought of dying alone generated fear and concern. Family contacts had dwindled over the years, with many relatives either deceased or infirmed. Ageing and the threat of dependency had resulted in a decline in self-confidence and self-esteem with increasing anxiety. A state of learned helplessness appeared to exist in others whereby several had drawn the depressing conclusion that whatever course of action they may choose to embark upon it could not influence their present situation.

Colin (aged 77yrs) had served an excessively long sentence, (post-tariff lifer in excess of 20yrs) but was uncertain as to the exact number of years. He told me his mood was low and had been for some considerable time. He had problems with sleeping, a variable appetite and was poorly motivated as evidenced by lying on his bunk for the majority of each day. He had a daughter who he believed to be living in Reading but had not met her in over 30yrs and there were no other relatives. He had murdered his wife in a fit of rage on discovering her apparent affair with one of his friends.

".....I've got no interest whatsoever in being released..... Where else would you get meals and a bed for nothing.....your paying for this mate.....I presume I'm still here because I am a risk to the public am I?"

I revisited Colin some eight months later when he told me that his release was imminent. His daughter had contacted and subsequently visited, following which she had agreed to provide a home for him in the event of him being able to leave prison on life licence. The transformation in Colin was truly remarkable. His mood had lifted and he was more alert, maintained eye contact during conversation and was planning for a future outside the prison walls.

".....great isn't.....thank God I'm getting out of this place.....its like having my life back".

For those who were less able to adapt to change, tolerate uncertainty and familiar with a rigid and fixed regime, their mood was influenced by uncertainty with complaints about being ill-informed a common theme in most of their conversations. Comments ranged from *"it keeps you on your toes; it gets me down"* to more explicit references to *"mushroom management"*. Inexplicable 'lock-downs' attributable to staff lateness and shortages resulted in extended in-cell periods with a consequential increased tension and frustration in many prisoners.

Barry, aged 59yrs, a former psychotherapist was still encountering difficulties with the imposed prison regime even though he had served >5yrs of an indeterminate sentence.

".....in prison you are constantly vigilant about transgressing rules, codes and beliefs; there were countless questions that can only be answered by experience..... the paradox of this place is glaringly obvious: everyone wants prisoners to be punished and they

expect rehabilitation. Fine, but the vulnerability of prisoners, and the lack of self-esteem reduce all good intentions to less than zero. I want to open my own mail; I want to eat when I am hungry; I want to show my emotions, but displaying emotion is a sign of weakness and in prison weakness is often preyed upon".

Listeners were more in evidence at HMP Albany. Samaritan-supported schemes are now operated in over 100 prisons throughout England and Wales, approximately two thirds of the prison estate, with listener schemes founded upon similar principles to community-based Samaritans. Individual prisoners who possess the necessary skills (empathy, understanding, able to communicate, acceptance) to support others are carefully selected by both staff and Samaritans, and can be available 24hrs each day therefore being a useful peer group resource. Although listener schemes may not be appropriate in all prisons and unsuitable in young offender establishments, elderly prisoners frequently posses those necessary skills, although the introduction of listener schemes (Swansea Prison 1991) initially created issues of confidentiality and a considerable challenge to the prison culture.

Bill (aged 54yrs) had served just four years of an indeterminate sentence following the brutal murder of his wife after discovering her apparent affair with one of his colleagues. He was transferred to HMP Albany in view of his vulnerable status and was finding imprisonment increasingly difficult to cope with possibly not unsurprisingly in view of his previous occupation. Following several appointments with a number of prison doctors he was on the verge of giving up but was noticed to be becoming progressively more withdrawn - non attendance at meal times, never attending association. He self-injured and was subsequently seen by a listener, an older prisoner over ten years his senior. Although initially resistive to this intervention he gradually adjusted without recourse to more formal clinical intervention.

"..... I didn't give a damn about the future .....I told them at the Sick Bay but they weren't much help .....saw a different doctor on each occasion .....kept repeating myself ..... they didn't have a bloody clue ..... told me to exercise more..... mix with other inmates .....what a load of bollocks ..... couldn't see a way out so I cut myself ..... never done it before ..... strange feeling ..... started to talk with Stan ..... he's OK really ..... been around a lot but knew what he was talking about and knew what I meant ..... he's OK is Stan ..... I trust him."

Several reported being 'born again' Christians after experiencing a spiritual event whilst others had re-affirmed their hitherto albeit lapsed belief in God.

"..... whatever the truth is or where it lies ..... I am a devout non-denominational Christian from which I derive huge strength."

John (aged 63yrs) prior to imprisonment had been a long-haul commercial pilot working for a major airline and had frequently over flown the Isle of Wight during both inward and outward bound flights. He had served a little over six and a half years of a 15yrs sentence for sexual offences against young boys. His mood was mildly depressed, possibly because his wife had recently informed him of impending divorce proceedings. He viewed his time in prison as being damaging and alienating, with an absence of time-markers, and the uncertainty of not knowing the exact date of his release.

"..... I don't need the time or experience of prison to change my life ..... I'm not a person any more ..... I've got the same shape of a person but emotionally I'm hollow inside ..... there's just nothing there anymore ..... in one sense the future is unthinkable but it is becoming an obsessional thought ..... the unreality of time is almost palpable ..... days in prison are indistinguishable with a predictable

sameness ..... weeks and months meaningless ..... I try to think of ways of increasing the business of each day, each hour, each second ..... lying on my bunk fills me with dread ..... hours can pass quickly, seconds can be long ..... I fantasize about flying over the IOW, especially when I hear the noise of aircraft at the local flying school."

Anthony (aged 69yrs) had worked for many years as a production manager at the BBC. He had been given an excessively long first time sentence for historical offences several decades previously committed against young boys and over an extended period of time. His wife of many years managed to visit on a regular and frequent basis. For him the shame brought on his family and the knowledge of how his friends and previous colleagues would likely view him was burdensome and clearly reflected in his mood that was predominantly low. He felt any positive contribution made during his life would be overshadowed by his criminal past. He acknowledged his time spent in boarding school had assisted in him coping during the early days of confinement but had subsequently redefined himself for both cosmetic purposes (how I portray myself is how I wish to be viewed) and as a further coping strategy (inertia in prison leads to capitulation). For him the greatest fear was losing his wife either through divorce, illness or death. Despite his melancholia, he was, I felt, self-piteous and lacked both remorse and victim empathy.

"..... I went to boarding school ..... that's how I can serve and survive my sentence ..... I sit in the pensioners' garden during both the Spring and Summer months and reflect ..... mental agility is the key to serving the sentence ..... I edit the prison magazine and I am a member of creative writing group ..... a curious contradiction for me is that I don't have enough time to do the

things I plan ..... but there again I have all the time in the world ..... I thank God for a stable marriage and a loyal partner".

Christopher (aged 57yrs) previously a teacher with a Master's degree (psychology) likened serving his sentence to writing academic assignments. When viewed as a whole he would be overwhelmed by its magnitude (he had been sentenced to 20yrs) but if measured in small units of three or four years he would likely survive the experience.

"..... *transactional analysis helps with coping with imprisonment ..... its like writing your work ..... you need to manage your time appropriately ..... write a piece each night, perhaps two or three paragraphs as opposed to writing a chapter ..... its the only way you can achieve a reasonable outcome.*"

When asked how he would describe his mood he told me it was *"... OK but living in prison was like a tight gut feeling"* but objectively I felt he was bordering on depression and subsequently confirmed this in his clinical report. He unfortunately attempted suicide several months following screening after apparently not being given access to a computer to further his academic studies.

4.12.4 Ecological Assessment

Table 4-23 Ecological analysis

Ecological ASSESSMENT	Prisoners	Prison Staff
Health Issues	Poor initial screening processes Imported multiple chronic Illnesses Functional deficits Under-diagnosed Limited access to healthcare Poor chronic disease management	Ill equipped to screen elderly prisoners Gatekeepers - enabling access to appropriate healthcare; detection and ongoing clinical management Limited elderly diseases understanding Lack of elderly specific requirements
Attitudes/ Beliefs	Initial adherence to previous codes Labelled by staff Undervalued Loss of self-esteem Loss of self-respect Loss of autonomy Learned helplessness Hopelessness and despair	Prisoners are different Labelled - viewed as being manipulative and subversive Stereotypical notion of prisoners - positively re-enforces their thoughts -emergence of vicious circles Self-fulfilling/Occasionally empathetic Indifference
Relationships/ Inter-actional Style	Confrontational Tendency to seek isolation Limited conversational abilities/echolalia/poor turn-taking Truculent Prisoner code	Authoritarian/Overbearing To conform Limited conversation Superficial, frequently patronising Avoidance Superficially respectful
Personal Plans	Disrupted life pathway Limited influence Dis-empowered De-motivated Limited Access Role modelling Mood dependent Absence of significant others	Frequently second career Like to be in control De-motivated Tendency to prefer a quiet life Inconsistency when interpreting policies and procedures Survive to the end of the shift Significant - but unrelated to prisoner needs
Environmental	Prison regime Inadequate living conditions characterised by overcrowding and poor sanitation Austere, threatening, grim and lacking warmth Harsh, invasive lighting Noisy Material deprivation; frequently intrusive, occasionally unpredictable and hostile leading to a loss of personal security; Staff uniforms impact adversely on inter-actional styles	

4.13 Ecological Analysis

Table 4-22 highlighted a noticeable disparity arising from the perceived functions and expectations of the prison regime by prisoners in comparison to those of prison staff. The difference was particularly evident in relation to the prison environment and functions of custody, care and control, although both prison staff and prisoners encountered difficulties in maintaining their solidarity and adherence to either the prison officers' mandate or the 'cons code'.

4.13.1 Health Care

The partial abandonment of the once avowed goal of rehabilitation especially at HM Prison Albany had decreased the perceived need and availability of social and mental health services available to prisoners. Lower socio economic classes demonstrate greater morbidity and may also have poor access to healthcare. They were subject to poor initial reception screening processes and inconsistent clinical management, while prison staff were not sufficiently trained to either screen or detect chronic ill-health in elderly prisoners. The prison population is more static in training prisons and healthcare staff are not usually present for 24 hours each day. Many prisoners in the study worried about their physical health but in some instances may have exaggerated concerns about the seriousness of the health problem.

4.13.2 Attitudes and Beliefs

The prison disciplinary system was generally viewed by prisoners as being a mechanism which could substantially increase their period of captivity and worsen its conditions. Serious shortages in staffing and other resources had resulted in the

deskilling of many prison officers who on occasions resorted to forms of prison discipline that had especially destructive effects upon prisoners and repressed as opposed to resolving conflict. This was evident by unnecessary lock down periods for no justifiable reason other than a head count, the transfer of disruptive prisoners often at extremely short notice, both of which was invariably viewed as unjust and resulted in resentment.

4.13.3 Relationships

A defining feature in both prisons was the relationship between prison officers and the prisoners for whom they were responsible. Prison officers akin to prisoners were a very heterogeneous group. There was an apparent relationship of mutual dependency between prisoners and prison staff with one group not being able to function without the other. A number of prisoners characterised the staff as being indifferent and being inured to the hardships of prison life. In the study population this was particularly evident in prisoners aged 70 years and over who preferred more structure and predictable behaviour from both prison staff and fellow prisoners. This outward impression of continuity had over the years initially provided a sense of emotional well-being and enabled a regulated lifestyle as a means of compensating for an uncertain and unpredictable future.

However, over time long-term prisoners in adjusting to the muting of self-initiative and independence that prison demands had become increasingly dependent on institutional contingencies that they had once resisted. Eventually it had seemed more or less appropriate to be denied significant control over day-to-day decisions and in the final stages of the process to become heavily dependent on institutional

decision makers (prison officers) to make choices for them and to rely on the structure and schedule of the institution to organize their daily routine.

4.13.4 Personal Plans

Personal safety and security were major concerns for 'older old' prisoners. Older prisoners acknowledged becoming less flexible and more rigid as evidenced by having the cell door locked in the event of spending time on the wing. They preferred stability, and clearly had difficulty adjusting to change unlike younger prisoners who view change as being more stimulating. Several prisoners felt infantalised and viewed the degraded conditions in which they lived serving only to repeatedly remind them of their compromised social status and stigmatized social role as prisoners. As a result a diminished sense of self-worth and personal value was apparent in many instances.

Prison officers regarded themselves as the forgotten servants of the criminal justice system, having a lack of clarity and the absence of a clear definition as to an appropriate prison office/prisoner relationship. The majority of staff at HMP Kingston had previously served in the armed forces or in some instances other family members had worked in the prison service, whilst at HMP Albany its location and a paucity of other employment on the island had resulted in a highly restricted population drift towards work in the island prisons (3 in number).

4.13.5 Environment

HMP Kingston on my initial introductory visit created an immediate impression of age with a pair of large wooden gates set in a weather-beaten gate lodge. The chipped brick and stonework, and in places rusting iron, all showed the decay of years. Some

areas of the prison were dimly lit and climbing stairways hazardous attributable to both poor illumination and the absence of high visibility strips to more clearly define stair edging. The colour of the walls were standard prison grey/green/magnolia, in poor decorative order with barred, curtain less windows restricting the amount of daylight and fresh air entering the cells. The heating system, similar to the prison, was archaic and apparently either too cold in the winter months or too hot during summertime. For older prisoners the many negative and depriving facts of prison life were further compounded by an environment which was disabling as opposed to supportive. A chair lift was available on E-Wing although it was unserviceable and therefore unusable throughout the duration of my visits the prison. Standard shower facilities were available although unsuitable for older prisoners, both for reasons of privacy (bodily changes attributable to growing older combined with the somatic consequences of ageing and disease), functionality (either lack of non-slip flooring or restricted movement, and not being able to complete showering in the allocated time period) and ridicule (viewed by younger prisoners as being old and frail). In accordance with prison policy the provision of assisted baths was also prohibited. Cellular furniture was basic and appeared uncomfortable, in a poor state of repair with chairs rigid-backed and without cushioned seating, resulting in bad posture and difficulties for prisoners when sitting down and standing up.

Although the prison was operating at full capacity, (CNA=197) overcrowding, that is the doubling up in a single cell was not in evidence, and with the exception of E-Wing where several prisoners shared dormitory style accommodation single cell occupancy was standard, as is usual for life sentence, vulnerable prisoners, and sex offenders.

HMP Albany is one of a cluster of three prisons (the others being HM Prisons Parkhurst and Camp Hill) with ancillary services (laundry, food, & pharmacy supplies) provided offsite by HMP Parkhurst. The attractive island surroundings emphasised the grimness of the prison.

The old Victorian blocks were, I felt, poorly ventilated, claustrophobic, cramped and not conducive to good health. Heating was provided by inefficient and virtually obsolete boilers (one prisoner had assisted in their installation in the early 1950s) large bore pipes with radiators invariably too hot and without any thermostatic controls. Litter was strewn on the ground adjacent to each block having been thrown out of cell windows by prisoners. If HMP Kingston created the impression of foreboding then HMP Albany was claustrophobic and with the exception of the more recently built ready to use block, lacking cleanliness. General neon strip lighting was inadequate throughout the landings and corridors. The musty smell of the blocks permeated every available space and throughout the winter months the atmosphere was not conducive to good health.

The ceilings were low, emphasising the limited size of each cell. Cell illumination was barely adequate with an absence of bedside lighting hence prisoners are required to get out of bed to switch the light off. Metal beds were permanently fixed to the floor, having one side against the wall with thin mattresses and flimsy bedding. They were difficult to make especially for older prisoners with arthritic hands and fingers who also complained of knocking their shins against the metal bed supports. Pillows and blankets were not either in plentiful supply or replaced on a sufficient regular basis. The combination of overcrowding and more punitive sentencing policies had adversely affected living conditions in both prisons, had jeopardized

prisoner safety, (the gymnasium, at meal times, in the stairwells and association areas), compromised prison management and limited prisoner access to meaningful programming. There are a variety of contexts in which these conflicts were visible, in particular the sharing of crowded and noisy living arrangements that invariably increased the environmental demands. The difficulties in preventing prison officers failing to achieve their goals and desire to 'make a difference' were primarily caused by overcrowding, lack of training and lack of support by senior management (Appendix 13).

4.14 Satisfying the Standards in the NSF for Older People

4.14.1 Current Healthcare Provision

Healthcare provision at both HMP Kingston and HMP Albany was primarily moulded by the existing culture, organised around the healthcare centre, with nursing cover provided only during working hours, (0900-1700hrs).

The healthcare centre at HMP Kingston is located on the ground floor of E wing, initially the designated accommodation block for the more elderly, frail and chronically debilitated prisoners. It did not have an in-patient facility, and comprised an administrative office with four CCTV screens, a consulting room, treatment room and spacious dental department. Medical records were filed in locked cabinets but enclosures were often out of sequence with some misfiling. Computerized software programmes had recently been introduced. The fabric and decorative order on the wing was in a poor state of repair, unsuitable for older adults and both ill-equipped and understaffed to provide an appropriate standard of both social and clinical care for an increasingly older prisoner population. Previously converted dormitory style accommodation had been a further contributory factor to its demise and was

reminiscent of the warehousing approach to care practices, an ethos that had attracted considerable criticism from both prisoners and healthcare staff alike. Other minor works (a slope to the bathroom and shower for wheelchair access) had proved equally unsuitable and unusable in view of the steep angle of incline and a far too narrow doorway. The centre 'employed' a trustee prisoner whose duties were confined to cleaning and making tea for staff and visitors.

At HMP Albany the single storey healthcare centre is attached to one of the older wings, was poorly laid out, very public and unmistakeably designed with a prison culture in mind. A physiotherapy plinth (used as a general examination and treatment table) was located in the administrative office, but was inadequately screened and provided little, if any, privacy for clinical procedures. Confidential discussions with prisoners were conducted within earshot of other prisoners and visitors sitting in the waiting area, whilst wing prison officers invariably contributed to clinical discussions often with an evident limited understanding. The centre operated a daily service hence access to prisoners at night in the event of a medical emergency was a long and arduous process involving drawing keys and summoning the duty nurse from a neighbouring prison. There were no inpatient facilities and the nearest available beds were located at HMP Parkhurst, albeit with limited accessibility. A lack of privacy and clinical practices which often flaunted any concept of confidentiality combined with an ad-hoc access to prisoners medical files served only to further undermine individual dignity and the integrity of clinical staff. The centre 'employed' trustee prisoner doubtless overheard conversations and therefore, it could be assumed, had access to confidential information.

The three perceived major defining characteristics at both prisons were discipline (disempowering and empowering strategies of governance and knowledge), risk management (prediction, surveillance, and avoidance), and social audit (according to pre-specified criteria in accordance with Prison Key Performance Indicators). Governors were deemed responsible for facilitating the delivery of effective healthcare services and for the management and clinical governance of services provided by the prison under contract to the PCT. In order to facilitate effective daily working practices, successive Governors had, in the main, adopted prison appropriate, but not necessarily clinically effective procedures, but in doing so had conformed to compliance policies, the latter primarily designed for their own guidance, regulation and performance audit.

Levels of clinical activity at HMP Albany were considerably higher than those at HMP Kingston, although predominantly confined to younger prisoners. Prior to appointment, the qualifications and professional registrations of all clinical staff were verified, with basic checks on doctors and dentist carried out in accordance with PSI 38/2003. The majority of medical officers, nurses and prison healthcare officers in each prison were aware of the National Service Framework and its proposed application to prisoners generally, but less familiar with its specificity and relevance to older prisoners.

At both prisons the regime and health provision was highly routinised with some staff believing they were experts within the system. Healthcare officers generally viewed their primary role as custodial with a resulting adherence to prison rules and procedures, and several harboured some ambivalence to the practical aspects of caring for older men. Personal care was felt to be an additional demand upon

already overburdened, overstretched health-care resources, and allied with old peoples' nursing homes as opposed to an environment housing older 'healthy' prisoners, with a resulting perception by some prisoners as staff being unaware, dismissive, lacking compassion and hence uncaring. Two prisoners were clearly unable to perform most tasks of daily living although care management had either been slow to either recognise the emerging diagnosis or thwarted by an absence of any clinical investigations. The overall environment was obviously inappropriate to manage the condition apart from which those diagnosed had increasingly become a focus for ridicule from other prisoners and a cause for discussion amongst prison officers, "*..... I'm not paid to do care work.*"

Several members of the healthcare staff expressed forthright and often discriminatory views regarding the prisoner group. One trained nurse who had recently joined the service commented about the nature of 'prisoner offences', maintaining it was difficult to be empathetic and felt 'they' were undeserving of any compassion and clinical intervention.

".....I know I shouldn't say it but I can't stand them.....they don't deserve to be cared for.....they'll never change, they're getting what they deserve.....rather be at HMP Parkhurst they're more fun at least they are men.

Several prisoners complained about what they perceived as 'lock-up mentality' whilst others bemoaned unforeseen disruptions to the day. I felt older prisoners were surprisingly more tolerant, less troublesome and more inclined to avoid conflict, but possibly more manipulative and deviant. Prison staff often encountered difficulties in acknowledging where the boundaries lay, whereas the majority of healthcare staff had over the years developed clinical 'know how' and some intuition when dealing

with more benign challenging situations. Prisoners placed considerable emphasis upon consistency and the rituals of daily life, whereas prison staff invested considerable effort in safely negotiating their way throughout each shift. For the most part prisoners and prison staff all agreed that a good day was one without major incidents - "*.....thank God it was a quiet shift*".

The healthcare managers at both prisons, neither of who possessed any formal psychiatric qualifications, had, with some difficulty, gradually adopted a number of the framework's principles as a means of informing and improving practice. However, whilst the dialogue of managerialism drove the process of change, healthcare staff were generally more sceptical, describing it as being a tyranny of transformation. Hence, implementing these principles into the broader institutional context of a custodial setting had proved fairly challenging and had been greeted with some resistance, in part attributable to the change process, a change in personnel at HMP Kingston, and staff shortages at HMP Albany. Governors at both establishments were limited by budgetary and security constraints which, they argued, rendered it impossible for them to fully implement and monitor new policy programmes that had consequently been only partially introduced over recent years, although they acknowledged national inspection benchmark standards were designed in order to create 'healthy prisons'.

4.15 Equivalent Health Care

4.15.1 Standard 1

"NHS services will be provided, regardless of age, on the basis of clinical need alone....."

HMP Kingston and HMP Albany have a type 1 healthcare centre status which provides for clinical cover and a part-time medical officer.

Both prisons operated a sick parade system with 'triage' provided by a range of nursing staff, both trained and untrained. Services, when possible would attempt to take into account any special needs arising from ethnicity, disability, age and religion, although arrangements to see the prison doctor were inconsistent, subject to last minute cancellation and unnecessarily overburdened with bureaucracy. Nurses acted as gatekeepers to medical staff but in several instances there appeared to be too much reliance on unqualified staff, the latter having responsibility for clinical decision making that in the NHS would be within the remit of trained personnel with appropriate qualifications and experience.

Healthcare was predominantly reactive rather than proactive, and in the absence of a comprehensive clinical history, the garnering of which generally relied upon either the individual or information gathered during initial screening on reception into prison, proposed treatment measures had a tendency to be 'generic' and often 'dated', as opposed to contemporary and either person or age specific. Neither prison had a clearly defined policy for those over 65yrs of age in accordance with the National Service Framework for older people. There was no evidence of any policies to either promote an active and healthy life or provide limited sedentary work for

older prisoners, with the rhythm and cadence of life primarily geared to meet the needs of younger more robust inmates.

Staff at HMP Albany had identified a number of management problems regarding the provision of health care particularly access when 'sick' prisoners remained on the wing as opposed to being transferred to the health centre at HMP Parkhurst. Security procedures were necessarily stringent thus having direct contact with these and all prisoners when the prison was on either lock-down or a patrol status was virtually impossible which clearly had serious implications in relation to both assessment and appropriate interventions.

4.15.2 Medical Services

At both prisons primary medical services were provided on an agreed per session basis by a designated General Practitioner from either a local practice or on a locum basis, neither of who was vocationally trained. All doctors providing primary care services must be qualified in accordance with PSI 38/2003 (paragraph 17). Directly employed NHS doctors at HMP Albany were responsible for primary care provision throughout the duration of the research, although a succession of 'short-term' locums had led to wide variations in clinical approaches, prescribing trends, and the management of chronic illnesses. HMP Kingston provided two half-day surgeries with three half-days available at HMP Albany, although the latter was viewed as being barely adequate in view of increasing morbidity among a much larger and older population. A proposal for increasing twice daily (am/pm) nurse-led triage clinics had been considered and potentially agreed although this endeavour would, by necessity require additional investment and incremental change in staffing levels.

4.15.3 Pharmacological Management

In both prisons administering medication was undertaken using the 'hospital model' by nurses and health care officers, but legal and administrative complications prevented the use of the standard FP10 prescription form for prisoners. Following the introduction of information technology and resulting computerization of prescriptions and the integration of clinical governance with medicines management, some improvements had been achieved. At each location pharmacy arrangements were shared with one or more prisons and delivered on a required basis. HM Prison Albany is one of a cluster of three prisons with pharmacological services/delivery provided by HMP Parkhurst, whilst HMP Kingston is reliant upon HMP Winchester for the provision of a similar service. More recent developments had included the creation of a Drug and Therapeutics/Medicines Management Committee, chaired by the senior Consultant and attended by trained nurses and convened on a two monthly basis.

Medicines would normally be held 'in the possession' of prisoners, with nearly all prisons having some degree of in-possession medication and having local policies agreed and in place. However, in view of their vulnerable status other options for taking prescribed medication at both prisons were:

- Dispensed at the medical centre at the allotted times.
- Self-medicating with either one or seven days supply (following risk assessment and dependent upon the type/classification of medicine.
- One month's supply (in exceptional circumstances).

Medication in the latter two options was provided via the MANRAX self-dispensing system, but ensuring compliance was not unsurprisingly difficult to monitor. Reviews

in medication were not routinely undertaken although in some instances occurred almost by default following successive changes in medical officers, with a tendency for repeat 28 days prescriptions to be routine as opposed to unusual.

Recent policy developments, following consultation with the Medicines and Health Care Products Agency (MHRA) on the possibility of exempting specified prison staff from section 3 Medicines Act which currently restricts them to only being able to supply medication that is pre-packed (as opposed to 1 or 2 doses), had been implemented at HMP Albany. Also included was the identification of several suitably trained mental health nurses to prescribe and administer medication (as supplementary prescribers) in order to improve services for older prisoners with mental health problems (DoH 2003; 2005). A protocol for senior named psychiatric nurses to prescribe Zopiclone 7.5mgms at night for three consecutive nights only had recently been agreed and implemented. The rationale underpinning this development had been to maximise prison access to services, enhance current capacity to operate more efficiently and increase flexibility within the clinical team.

Delays in the non-availability of medicines through administrative errors were viewed as undesirable at both prisons but deemed difficult to eradicate in view of the 'off-site' dispensing arrangements.

4.15.4 Secondary Care

The clinical management of out-patient 'Escorts' and NHS in-patient episodes 'Bedwatches' was a highly significant and contentious element of health activity in both prisons. Access to specialist healthcare was problematic, predominantly attributable to operational requirements, staff shortages, the financial costs involved in providing escorts, and to some extent public anxiety. Whilst there was no

indication that prisoners were actively prevented in gaining access to secondary care, facilitating attendance at out-patients appointments and planned hospital admissions at both prisons was largely dependent upon prison operational requirements and availability of prison officers for escort purposes. It was equally common practice for clinicians to visit both prisons under individual arrangements, on occasions with only limited notice. Several prisoner medical records contained correspondence, mostly from relatives and designated next-of-kin, complaining of non-attendances although the prisoners concerned had not been informed of any impending appointments. When asked about forward planning arrangements it appeared that the decision regarding any external clinical requirements was made on the designated day, often to the detriment of the individual concerned. Thus it could be argued that the lack of specialised care would have potentially serious health implications for the prisoner.

Existing internal clinics included: Chiropody; Dental, and Ophthalmic. There were no available physiotherapy clinics at either prison. Waiting times at HM Prisons Albany and Kingston were equivalent, but possibly shorter when compared to the NHS:- Ophthalmic appointments (one month); Chiropody appointments (one month); Dentistry (two clinics per week at HMP Albany; one per month at HMP Kingston). There were three face-to-face structured mental health clinics scheduled per week at HMP Albany and one clinic at HMP Kingston conducted by a senior skilled mental health practitioner, together with regular public protection and resettlement meetings. Nurse led diagnostic interviews were confined to mild depression; psychotic depression; bi-polar affective disorders; schizophrenia; severe personality disorder; unstable anti-social personality disorder, and emerging Korsakoff's disease. Forensic Consultant plus SPR visits were scheduled for half-a-day per week at HMP

Albany but were being renegotiated at HMP Kingston. Old age psychiatry was unrepresented in both prisons.

4.15.5 External Referrals

The number of daily referrals to external clinics was restricted by staffing levels to a maximum of two attendees. High levels of cancellations were a regular occurrence especially at HMP Albany. There was a clear problem in relation to risk and security and one in particular instance the prison service had been criticised for being overly zealous in the application of security measures such as handcuffs. Cancelled appointments were generally attributable to security reasons (unavailability of transport), operational requirements (low priority), crises in the prison (frequent 'lock downs' for head counts) and general staffing issues (invariably sickness and absences).

4.15.6 Attendance at Follow up Appointments

Non-attendance at follow-up appointments was unfortunately more usual for similar reasons with a resulting accumulation of abrupt and uncomplimentary correspondence from named Consultants. At HMP Kingston missed appointments, especially for those with chronic and progressive illnesses (diabetes, respiratory diseases, epileptiform seizures, and coronary episodes), were of particular relevance, and for some prisoners invariably resulted in acute hospital admissions with predictable problems arising from the provision of bed watch officers creating similar complications. HMP Albany encountered equivalent difficulties, amplified by a larger older prisoner population. The local community general hospitals (St Mary's) were within walking distance of both prisons.

4.15.7 Clinical Records

Clinical records were utilized, signed, stored and maintained in accordance with current guidance, including the Data Protection Act (1998), and as set out in Prison Service Order PSO 9020. However, maintaining confidentiality was noted to be a major problem at HMP Albany and in some instances had serious repercussions in relationship to clinically managing individual prisoners within the wider prison setting. Clinical documentation at HMP Kingston was generally satisfactory but at HMP Albany lacked attention to detail, with several instances of incorrect filing and records being lost in the system.

A new format for the clinical record (formerly inmate medical record IMR) had recently been developed for use in prisons and was being piloted at HMP Albany. The aims of the new record included: improving continuity of care between establishments; improving clarity and legibility of record identifying pathways of care and audit trails; improving communications between clinicians highlighting potentially serious problems in the provision of healthcare to an individual; facilitating writing letters to GPs and Hospitals; improving production of clinical summaries and a local Chronic Disease Register. The clinical record could also contribute to the formulation of a "brought forward "system for repeat blood tests, follow-ups, correspondence (etc), thereby reducing risk of litigation by delivering a professional clinical record for the use of the health and multidisciplinary team when it is sent to external bodies (PSI - 2002).

4.16 Standard 2

"NHS and social care services treat older people as individuals ..... through the single assessment process, integrated commissioning arrangements and integrated provision of services, including community equipment and continence services ..."

4.16.1 Needs Assessment

Needs assessment protocols at HMP Albany had not been reviewed during the last four years, similarly at HMP Kingston.

4.16.2 Accessibility

Apart from wheelchair access and the installation of a ramp to the shower facilities at HMP Kingston there were no alternative arrangements at either prison for prisoners who may be functionally disabled. For those with either reduced mobility levels attributable to chronic disease (emphysema; arthritis) little if any consideration had been given to their location, hence access to workshops, exercise yard, prison canteen, and visiting block was rendered challenging.

4.17 Standard 7

"Older people who have mental health problems have access to integrated mental health services, provided by the NHS.....to ensure effective diagnosis, treatment and support ....."

4.17.1 Screening

Reception screening procedures at HMP Kingston were described as barely satisfactory and occasions had either been omitted or not included in the inmate medical record. All life sentenced prisoner should undergo an annual clinical

assessment although in some cases this had either not been undertaken or recorded in their medical records. Reception screening procedures at HMP Albany were described as brief and haphazard by the healthcare staff with the standard of reporting depending upon available time and personnel. All sentenced prisoner transfers should have undergone a more formal assessment prior to any ongoing relocation. However, on several occasions omissions in a prisoner's clinical history were highlighted following an acute exacerbation of a previous underlying pathology. A number of relatives had written to the Governor expressing concern about the non-availability of earlier prescribed medication for conditions that were not noted in prisoner medical records.

Systematic screening and evaluation to identify prisoners who require mental health treatment and the means to ensure that planned treatment approaches include more than either segregation or close supervision were barely satisfactory particularly at HMP Albany.

4.17.2 Mental Health

'In-reach' teams comprising community psychiatric nurses were in evidence at HMP Albany during the latter stages of my field work but had been met with considerable resistance from prison officers (possibly indicative of their insecurity or inability to deal with any arising issues) in view of perceived clinical practice 'pushing problems back onto the wings' as opposed to in-patient treatment. Older prisoners with age related mental health problems (such as depression; emerging cognitive decline) were poorly provided, with symptomatology generally being viewed as attributable to either growing old and/or the consequences of growing old in prison. Regular

screening was not available and there was minimal psychiatric expertise at nurse level. Visiting psychiatrists were forensically trained.

4.17.3 Emergency Care

Evidence would suggest that treatment and emergency care of patients who withheld consent was managed only adequately at both prisons and was dependent upon several operational factors most notably access, but was generally in line with PSI 38/2002 Guidance on Consent to Medical Treatment. Necessary documentation was completed satisfactorily and retained, with audit arrangements in operation.

4.18 Standard 8

"*The health and well being of older people is promoted through a co-ordinated programme of action led by the NHS .....*"

Following relocation and on reception to both HMP Albany and Kingston, an initial clinical assessment of the healthcare needs of all newly received prisoners was undertaken by an available, but not necessarily appropriately trained, member of the healthcare team in order to identify any existing health issues and to plan any subsequent care, although results were again implicit upon the clinical skill of the interviewer and their knowledge base. All prisoners not identified with immediate health needs were offered a general health assessment appointment scheduled to take place in the week following reception although the response/uptake rate at both prisons was poor with little follow up arrangements in place in the event of non-attendance.

Throughout the duration of the research, GP notes did not automatically trail the prisoner on arrival at prison on transfer and could only be requested following

agreement by the individual concerned. In practice the greater majority at HMP Albany had acceded to this request, although the uptake rate at HMP Kingston was lower but with a higher incidence of itinerant prisoners having had little contact with primary medical services and no fixed abodes prior to imprisonment. Across the prison estate, 50% of all those sentenced to custody are not registered with a GP prior to imprisonment (SEU, 2002).

4.18.1 Access to Health Care Promotion

At both prisons evidence suggested that health promotion campaigns and there effectiveness were very limited with the former generally confined to leaflets and brochures located in the waiting areas at both healthcare centres. There was no identifiable health promotion nurse, little evidence on the effectiveness of any health promotion interventions and an absence of available monthly health checks to include blood pressure measurement, urinalysis, pulse and weight recording. Neither prison was able to fulfil these criteria.

Public health programme guidance was confined to strategies to help prisoners give up smoking with the assistance of nicotine patches when deemed appropriate at HMP Albany (albeit a low uptake) but not at HMP Kingston, whilst interventions assisting to promote or maintain a healthy lifestyle or reduce the risk of developing disease were not available at HMP Kingston. A previously commissioned well-man clinic at HMP Albany had been discontinued due to staff shortages with no further provision at present or planned. A similar situation existed at HMP Kingston where staff shortages had reached a critical level. There was no guidance/advice and/or clinics available for chronic conditions such as asthma and hypertension. A diabetic

nurse advisor was available to prisoners at HMP Albany (shared with the other island prisons), although the service was poorly utilized.

A more recent innovation to achieve reasonable levels of fitness had been introduced by the gymnasium staff at HMP Albany. 'Walking your way to Health' had been specifically designed for older prisoners. Individuals were loaned a pedometer for a two-week period with a view to walking 10,000 paces per day, the recommended level to ensure fitness, although the uptake rate had been variable with a generally limited response.

4.18.2 Chronic Diseases, Diets, and Palliative Care

The increased incidence and management of chronic disease presented a significant challenge for health provision at both prisons. Arrangements for repeat blood chemistry for thyroid dysfunctions or raised cholesterol levels were inconsistent. The recently introduced GMS and associated Quality and Outcomes Framework targets which provide financial incentives for primary care to increase its focus on managing chronic disease had not been met.

The provision of special diets was poor and virtually non-existent at both prisons. Catering costs were in the region of £1.38p per prisoner per day with limited availability for healthy options. A dietician was attached to HMP Parkhurst who would on request visit and discuss with prisoners their specific dietary needs but this did not include diabetic products, some of which (very limited) could be purchased from the prison canteen.

The care of dying and terminally ill prisoners in both establishments was a contentious issue with prison generally considered inappropriate in view of the

semiotics of custodianship. Healthcare staff not unsurprisingly, viewed prison as not being an appropriate place in which to die, whilst the Home Office will rarely and only in exceptional circumstances recommend medical discharge. There were no facilities for relatives and friends to stay overnight and palliative care was difficult to administer.

4.18.3 Responsiveness to Enquiry

At both prisons substantive inadequacies of prisoners' grievance and adjudicatory procedures were a significant factor in sustaining their perceptions of injustice. This was particularly relevant to the National Service Framework for older people.

4.19 Achieving the Standards

4.19.1 Implementation of Clinical Governance

Comments from the staff at both HMP Albany and Kingston implied that whilst the majority strongly supported improving the quality of services provided, few were stimulated by the prospect of 'clinical governance'. The sometimes incomprehensible terminology, the baffling array of agencies that shape the governance agenda (the HealthCare Commission & the National Institute for Clinical Excellence) and its association with monitoring and performance was felt to be far removed from the real work of patient/service user care, yet they are of course inextricably linked. Generic clinical governance meetings were convened on a fortnightly basis at HMP Albany and mental health in-reach teams CG meetings every two months with a lead representative from the PCT. The current agenda was devoted to exploring models of provision and links with regional prison managers.

4.19.2 Clinical Supervision

The implementation of clinical supervision in practice was perceived by staff to be limited and inconsistent. There was evidence to suggest especially at HMP Kingston, that clinical supervision was regarded by a number of practitioners as an additional management device (McCallion & Baxter, 1995), despite the UKCC (now the NMC) position statement (UKCC, 1996) clearly stating that it should not be used as part of an individual performance review. Lack of clarity and inconsistency in its application had resulted in further difficulties, especially when attempting to define its' overall purpose.

Butterworth's (1994) model of clinical supervision had been adopted at HMP Albany to support those involved, as a method for encouraging professional development/education, self-assessment/awareness, and to demonstrate the value of critical analytical/reflective skills. Provision was both on an individual and collective basis, although systems of either formal or informal mentorship or preceptorship had not been widely implemented.

4.19.3 Staff Training

The recruitment response and retention of appropriately skilled staff at both prisons was poor with resulting high agency staff costs, although publication of articles describing the role and career pathway of prison nurses has been more in evidence during recent years and has been of greater interest to registered nurses practicing in other sectors.

Access to and the implementation of staff appraisals and personal development records lacked consistency but at HMP Albany they were annually reviewed. Several

members of staff had previously contributed to appraisal systems but believed that these were retained for a variety of non-clinical reasons. In general the majority perceived staff appraisal as a positive opportunity, but felt they required more information and guidance as to its true intention. They identified lack of succession planning as a current weakness and suggested in may in part be the result of the absence of any clear aspirational and development planning. Skills acquisition and training were purchased by the prison service both at HMP Kingston and Albany but with a paucity of training for non aversive and other interventions that may be utilised in the management of challenging behaviours. Concerns were expressed about the non-availability of training in physical interventions which potentially placed clinical staff at risk and in harm's way.

4.19.4 Ethos of Care

At both prisons, the stated intention was to "*..... as far as possible to achieve equivalence of care without comprising security and recognising the rights of the individual*". In practice healthcare staff felt generally undervalued with the skills they had worked hard to develop poorly recognised especially by senior management. Several had experientially developed methods of working successfully within a complex environment and could be a source of significant help and guidance to newer members. Concern was expressed regarding the use of agency and bank staff especially at HMP Kingston whilst permanent staff often felt they invariably were left dealing with the adverse consequences of either dysfunctional or disorganised clinical teams.

4.19.5 Rotational Posts

At present, rotational posts and secondment opportunities, which facilitate and encourage the broadening of experience throughout the prison estate, were unavailable at both prisons primarily attributable to persistent staff shortages and a poor response to recruitment campaigns. However, opportunities for rotating several members of the In-Reach team at HMP Albany were currently under review.

4.20 Prison Service Performance Rating System

The performance rating of each public prison is used in part to inform which of the three strands of the Benchmarking improvement that prison will follow. All public sector prisons will be benchmarked over the next seven years.

The rating is a professional judgement based upon:

- Cost performance and output data from the Weighted Scorecard, showing performance against key performance targets.
- Compliance with Prison Service Standards.
- Findings from external inspections by HM Chief Inspector of Prisons and Independent Monitoring Boards.
- The views of Prison Service Area Management Board, allowing for assessment of more subjective factors such as decency and the prison's commitment to delivering change.

All prisons are rated on a 1 to 4 performance scale.

Table 4-24 Performance Indicators

Performance Level	Criteria
4	Exceptionally high performing, consistently meeting or exceeding targets, no significant operating problems, achieving significantly more than similar establishments with similar resources
3	Meeting the majority of targets, experiencing no significant problems in doing so, delivering a reasonable and decent regime
2	Basically stable, secure and providing a limited but decent regime; experiencing significant problems in meeting targets and/or experiencing major operational problems
1	Failing to provide secure, ordered, or decent regimes and/or has significant shortfalls against the majority of key targets

In quarter 4 (2005/06), HM Prison Albany was rated as operating at Level 3.

In quarter 4 (2005/06), HM Prison Kingston was rated as operating at Level 4.

Table 4-25 Performance Indicators across the Prison Estate

Performance Level	Public Sector Prisons - (Nos and %)
4	26 (20%)
3	86 (68%)
2	15 (12%)
1	0

Chapter 5

Discussion

Chapter 5 discusses the overall results. It draws upon a range of data from previous research for comparative purposes including a number of empirical studies by Fazel et al. (2001), a Thematic review of older prisoners (HMIP, 2004), Psychiatric Morbidity among Adult Male Sentenced Prisoners (ONS, 1998), and a range of health variables contained within The Health Survey for England (NatCen, 2003). Prison specific variables are contrasted with results from other surveys, and findings from the Ecological Analysis are reviewed within the context of a healthy prison. Verification of existing and outstanding requirements of healthcare provision in accordance with the recommendations contained within the identified standards of the National Service Framework for older people are considered.

5.1 Demographic Characteristics of Prisoners

In this study of elderly life and indeterminate sentence prisoners (N=181) at two Category B prisons, ages ranged from 55-83 years. 63 prisoners (35%) were aged 55-59 years, 48 (26%) between 60-64 years, 42 (23%) between 65-69 years; 16 (9%) between 70-74 years; 7 (4%) between 75-80 years and 5 prisoners (3%) aged 80 years and over. Restricting the demographics population to those aged over 60 years (N = 118) showed that 48 prisoners (41%) were aged between 60-64 years, 42 (36%) between 65-69 years; 16 (13%) between 70-74 years; 7 (6%) between 75-80 years and 5 prisoners (4%) were aged 80 years and over.

These figures are comparable to a survey of 15 prisons in England and Wales by HMIP, (2004) detailing the numbers of prisoners by establishments aged 60 years and over (N=555). It was reported that less than half (49%) were aged between 60-64 years, just under one third (30%) between 65-69 years, 19% were aged 70-79 years, and 6 prisoners aged 80 years and over.

Likwise these figures are comparable to Fazel et al. (2001), who in a study of elderly prisoners (N=203) in 15 prisons within a 100 mile radius of Oxford, reported 84% were aged 60-69 years, 14% 70-79 years, with 4 prisoners (2%) aged 80 years and over.

Loeb and Steffensmeier, (2006) in an in American study of older male prisoners (N=51) at a Pennsylvania Department of Corrections reported ages ranged from 50-80 years (M=57.3), whilst Colsher et al. (1992) reported a mean age of 57 years (SD=6.3) in their survey of older male prisoners (N=119) in Iowa state correctional facilities.

5.1.1 Ethnicity

The overwhelming majority of prisoners in the study (97.3%) were white which is comparable to 98% of people aged >60 years in the general population (Schuman, 1999). The white population in this study is higher than the 84% white and 10% black reported in the overall male prison population (ONS/DoH, 1997) and in excess of the 88.2% white and 11.8% non-white reported by Fazel et al. (2001) in their study of older male sentenced prisoners aged 60 years and over. However, it is comparable to figures produced by HM Inspectorate of Prisons with 95% white, 2% black, 2% Asian, and 1% mixed race background in prisoners aged 60 years and over (HMIP, 2004).

Colsher et al. (1992) reported just under one fifth (15%) to be of minority ethnic origin, with Loeb and Steffensmeier, (2006) reporting over a half (57%) to be white in their studies of older prisoners.

Numbers of prisoners from minority ethnic groups are rising, and between 1999 and 2002 whilst the total prison population grew by just over 12%, the number of black prisoners increased by 51% with a considerable over-representation in prisoners of African and Caribbean origin (HMP/CRE, 2003). In 2005, 1 in 11 of the general population in the United Kingdom belonged to a minority ethnic group compared to 1 in 4 of the adult male prison population, of whom just over half (57%) were black (Prison Reform Trust 2005).

5.1.2 Marital Status

The majority of prisoners in the study had been either co-habiting, or married and divorced several times prior to imprisonment. Less than one quarter (23%) were single, 24% were married, and 54% were divorced/separated or widowed. This is

comparable to a study of older prisoners aged >60 years, Fazel et al. (2001) who reported 15% were single, 31% married, 42% to be either divorced or separated, and 11% widowed. Colsher et al. (1992) reported 14% as never been married, less than one third (31%) married, under half (47%) divorced/separated, and 9 prisoners (7.8%) widowed in their study (N=119). In the general population 7% of men aged 65 years and over are single.

5.1.3 Dependents

Just over three quarters (77%) of prisoners in the study had children from various marriages and common law partners, 47 (26%) had one or two children, with 20 (11%) of prisoners having six or more. One, three times divorced prisoner (serial sex offender), reported having 13 children from three marriages. At HMP Kingston most prisoners had lost contact with their children some years ago although three continued to exchange occasional Christmas cards. Following intra-family abuse the greater majority of prisoners at HMP Albany had been prevented from contacting family members. In their study of older male sentenced prisoners, Colsher et al. (1992) reported older prisoners (>59yrs) had significantly more children ($p < .05$) in comparison to those aged 50-59 years.

Over half (59%) of male sentenced prisoners in England and Wales have dependent children under the age of 18 years (SOE, 2002). Approximately 150,000 children have a parent in prison and during their time at school, with 7% of children experiencing their father's imprisonment, (DoE&S, 2003), and nearly 30% of their children having significant mental health problems compared with 10% of the general population (SEU, 2002).

5.1.4 Employment

Less than one quarter (23.8%) of prisoners in the study had been unemployed for over three months prior to imprisonment, unlike the general male prisoner population which demonstrates high levels of long-term unemployment (44%) compared with 5% long-term unemployment in the general population. Levels of long-term unemployment prior to imprisonment were marginally higher in prisoners at HMP Kingston in comparison to those at HMP Albany. A little over three quarters of prisoners in the study (76.2%) were in full-time employment before sentencing, this compared to just under half (49.8%) reported by Fazel et al. (2001) in their study of older prisoners.

Just over two thirds (67.4%) of prisoners in the study were either skilled, semi-skilled or had manual jobs. Previous service personnel were over-represented with 64 prisoners (35.4%) having served in the armed forces, more usually the British Army. Employment for those serving life sentences for murder included fairground workers (predominantly itinerant), mercenaries, semi and non-skilled workers, and former police officers, with work for sex offenders and vulnerable prisoners generally being long-haul lorry drivers, care, agricultural and ground-workers. Fazel et al. (2001), in their study of older prisoners (N=203), reported 5% to have been in professional/managerial positions, 11% in intermediate, 51% in skilled manual/non-manual, with just under a third (32%) semi or unskilled. 11% of sex offenders (N=101) had been in professional/managerial occupations, with half in skilled, semi-skilled and unskilled employment, mainly driving posts, either a car, van or truck.

5.1.5 Accommodation

Just over one quarter of the prisoners in the study (27.7%) had privately owned property, with a little over two thirds (67.4%) living in rented accommodation. A total of nine prisoners (4.8%) were not in permanent accommodation and living alone either in hostels or in two instances sleeping rough, (2 at HMP Kingston & 7 at HMP Albany). Prior to imprisonment 15% of the sentenced male population had lived in privately owned accommodation, just under half (48%) in rented, and 5% were homeless, the latter compared to 0.9% of the general population (SEU, 2002). Just over a third (37%) of adult male prisoners has experienced homelessness (ONS, 1998). In their study of older prisoners (N=203), Fazel et al. (2001) reported just under one third (32%) owned their property, a little under two thirds (64%) rented accommodation, with a small minority, (3.5%) either residing in hostels or as having other living arrangements. A total of 170 prisoners in the study (94%) had lived predominantly in towns and city areas where access to healthcare is frequently at its poorest.

5.1.6 Education

In the study population educational attainment was slightly worse in comparison to the general prison population, marginally better when compared to findings from Fazel et al. (2001), but considerably worse than in the general population, which may be attributable to age distribution in the study population. A little less than two thirds (58.6%) had no formal educational qualifications having failed within the mainstream educational system (just under half (49%) had been excluded). 11 prisoners (6.1%) had obtained GCSEs, or 'O' levels, with a further 15 prisoners (8.3%) achieving higher academic success including five obtaining a degree, one

whilst serving his sentence. 27 (14.9%) of prisoners were currently attending either part or fulltime education classes.

In their study of older prisoners (N=203), Fazel et al. (2001) reported two thirds (66%) of prisoners had no qualifications, with one third (33%) obtaining vocational awards and either 'O' or 'A' levels. Colsher et al. (1992) in their US study of older prisoners (N=119) aged 50 years and over reported a mean of 10.4 years of education (SD=3.4).

All prisoners usually undertake a basic skills test either on first reception or prior to starting education Just over half, (52%) of the male prison population have no qualifications, under two thirds (65%) have numeracy at or below Level 1 (level expected of 11-year olds) and approximately half (48%) a reading ability at or below Level 1 (SEC, 2002). In the general population 15% have no qualifications, just under a quarter, (23%) have numeracy at or below Level 1 and 21-23% a reading ability at or below Level 1. 3% regularly truanted from school, and 2% had been excluded.

Prisoners at HMP Albany were better educated and generally more articulate in comparison to those at HMP Kingston. Approximately 13% of prisoners reported a combination of limited/poor writing, numeracy and reading skills at sentencing but eight prisoners had subsequently attended literacy classes. As a result many did not possess sufficient skills to survive within modern society: filling in forms or applications to register for healthcare, likewise for housing and employment benefit. HMIP, (2004) in a survey of older prisoners aged 60 years and over (N=395) reported just under a third (32%) required assistance with claiming benefits on release and approximately one quarter (23%) needed help with their finances. Half

of all prisoners do not have the skills required for the majority (96%) of jobs, and only 1 in 5 is able to complete a job application form (SEU, 2002).

Two prisoners in the study were dyslexic but only one had undergone a formal dyslexia assessment. Around one fifth of the prison population have hidden disabilities such as dyslexia and other learning difficulties according to a survey by the British Dyslexia Association. The number of nationally-recognised qualifications in literacy, language and numeracy achieved by prisoners has risen from 25,300 in 2001-02 to 63,500 in 2004-05. (Department for Education and Skills, December 2005). Findings from a survey of prisoners aged 60 years and over, (HMIP, 2004) revealed 46% of those interviewed (N=302) were attending education classes, with a further 17% expressing a wish to become involved in education. In a separate survey (N=149) five (3%) of prisoners required assistance with reading and writing.

In the study population six prisoners (3.3%) had requested a more extensive range of education options, although it was difficult, especially for the oldest old, to access the limited educational facilities. HMIP, (2004) in a survey of prisoners aged 60 years and over, (N=297) reported that when asked what aspects of the prison were most positive, just over one fifth (21%) replied education, and in a separate survey (N=396) when asked what changes they would make 2% stated a better range of education and 1% wanted more education.

5.2 Criminogenic variables

5.2.1 Offences

Over one fifth (22.6%) of prisoners in the study had committed capital offences, and 140 (77.4%) serious sexual offences. All prisoners at HMP Kingston had been

convicted for murder, multiple murders (drunken mishaps, crimes of passion and revenge), arson, manslaughter and violent crimes the latter invariably with sexual overtones and all were serving mandatory life sentences. Four had committed multiple murders and had been given several life sentences; 15 prisoners had served numerous sentences with a maximum number of six previous prison terms predominantly for violent crimes, two in excess of eight years prior to their index offence. One prisoner had been sentenced to three life terms when aged 67 years following historical crimes committed during the Second World War. Discretionary sentences had resulted in over one fifth (22.7%) of prisoners at HMP Kingston remaining in prison beyond their allotted tariff.

At HMP Albany the overwhelming majority of prisoners were sex offenders who had been given long sentences when either in late middle or early old age (the neophytes), recidivists who had served multiple periods in prison for similar offences, those who had served long sentences and aged in prison, and a number of middle aged men whose offences were murder but by virtue of their previous occupations were deemed vulnerable and at risk in other establishments. A total of six prisoners had committed multiple murders and as a result had been handed down two life sentences. Discretionary life sentences had resulted in just over one third of prisoners (37.3%) having served extended long sentences (post-tariff or the forgotten prisoners) but by virtue of their dangerousness, risk to the public and refusal to undertake any offending behaviour programmes would most likely remain in prison for the remainder of their lives. The majority of sex offenders were related to the victim/victims and were either their father, stepfather, grandfather or known to their victim. Murderers were known to their victims in the majority of cases but in some instances unrelated.

5.2.2 Sentencing and Conviction History

All prisoners in the study were serving either life or indeterminate sentences. Prior to transfer to either HMP Albany or HMP Kingston they had served at least two years of their sentence and a minimum of 4.5 years in total, with a small minority having spent >40 years (maximum 44yrs) in various Category A and Category B prisons. A little under two thirds (61.0%) of prisoners had served ≤5 years with a small minority (13.8%) having served ≥20 years. Indeterminate sentences had resulted in 65 prisoners (35.9%) remaining in prison far in excess of their stipulated time (post-tariff), with imminent parole an unlikely option for most. Although Home Office directives and HM Prison Service Key Performance Indicators require prisoners to address their offending behaviour prior to release on licence, 154 prisoners (85.0%) had not attended any offending behaviour programmes.

In the current political climate it is difficult to envisage this anomaly being resolved despite current overcrowding and prisons frequently exceeding their certified normal accommodation (CNA) numbers but less than the certified operational capacity. Six prisoners had recently been re-categorised from Cat B to Cat C status but were awaiting relocation. The largest proportion of male sentence prisoners (35%) are in closed Category C prisons (SEU, 2005) with just over half (54%) serving terms of ≥4 years.

The proportion of sexual offenders in the prison population is acknowledged to increase with age (Howse, 2003), with distinct differences in the criminal histories of older offenders. Given the nature of both the prisoners and prisons in this study there was as anticipated (Table 4-5) a higher number of sexual offenders serving life/indeterminate sentences when compared to the overall life sentence population.

The population in this study distinguishes two distinct profiles/categories:- firstly, older sex offenders 'neophytes' who have been given life sentences later in life, hence served less time and secondly murderers who have served many years and thus grown old (aged in place) in prison. More prisoners in this study were in the first category and had served fewer than 10 years. Furthermore, HM Prison Albany accommodates exclusively sex offenders and vulnerable prisoners.

Findings from HMIP Thematic Review (2004) of male sentenced prisoners aged >60 years (N=437) confirmed just over one fifth (22%) to be serving ≥10 years, with 71 (16%) serving life sentences. Just over a quarter (26%) had served between 2-4 years of their sentence with a little under one fifth (18%) >4 years. A total of 41% were accommodated in Category C prisons, 16% in Category A (High Security) prisons, just under a quarter (22%) in Category B prisons with 14% in local and 8% in open prisons. A total of 364 prisoners (66%) were aged >60 years at sentencing and when excluding lifers, 7% of prisoners had an estimated release date when aged between 75-79 years, with 2% when aged >80 years.

Prisoners in Category A and Category B prisons are more likely to have come into prison on their sentence when <60 years of age, be serving sentences of ≥4 years and less likely to have six months left to serve. Those in local prisons are most likely to have come into prison when they were aged 60 years - 80% compared to 67% of those in other prison types (HMIP, 2004).

Fazel et al. (2001) in their study of elderly prisoners (N=203) aged >60 years reported over half (51%) were in training prisons, over a third (37%) in local, 6.4% in dispersal and 5.4% in open prisons. Approximately three quarters (73%) had served

between 0-4 years, 10.8% between 4 and 10 years, and 16.3% >10 years which is comparable to the findings in this study.

In US studies Colsher et al. (1992) confirmed a mean of 5.7 years served (SD=6.7) with a mean time left to serve 11.9yrs (SD=11.4). Loeb and Stennsmeier, (2006) reported the majority of prisoners in their study (N=51) had entered prison after the aged of 40 years (61%) and had served on average 7.6 years (Mdn=5.0) of their current offence sentences.

5.2.3 Previous Convictions

A total of 47 prisoners (26.0%) had prior experience of and contacts with the criminal justice system, having previously served on average two or three prison terms and as a group had on average one previous conviction with a maximum of eight. In the general prison population just over half (56%) of prisoners released from prison in 1994 were re-convicted of a standard list offence within two years (White 1998). Five (2.7%) of prisoners in the study had a clearly defined forensic history reported in their medical records predominantly personality disorder, as evidenced by multiple admissions to high and medium secure units. In a small number of cases (x3) siblings were currently serving life sentences for murder.

In their study of sex and non-sex offenders (N=203), Fazel et al. (2001) reported 50.2% as having committed violent crimes (drug related, theft, fraud and robbery) and 49.8% serious sexual offences, including gross indecency, buggery and incest, with 62.7 years the age of conviction for sex offender compared to 57.9 years in the non-sex offender (N=203). This current study, with its emphasis on HMP Albany, had a higher percentage of serious sex offenders (77.3%) compared with other studies.

5.3 Physical Health Status

5.3.1 Diagnosis of medical conditions

Whilst any discrepancies between self-reported illnesses and recorded diagnoses in prisoner medical notes were noted only self-reported illnesses as confirmed in prisoner medical notes with current prescribed medication were included in the data for statistical analysis. Self-reported illnesses not confirmed in prisoner medical notes were excluded from data analysis for diagnostic purposes. However, as noted by Fazel et al. (2001) when assessing the health needs of elderly male prisoners (N=203) aged 60 years and above a limitation of assessing health solely by self-report and medical notes review, in the absence of a physical examination, may result in lower morbidity rates as prison medical records together with reception screening are known to underestimate morbidity rates through both lack of detection and resources. However, over half (58%) of prisoners in the study were prescribed four or more items of medication and were therefore in regular contact with prison medical staff for their physical health needs which provides the opportunity for ongoing clinical assessment.

5.3.2 General Findings

Two thirds (62.4%) of prisoners in the study reported high rates of major illnesses, (>2 chronic illnesses) which were confirmed in their medical records. A total of 38 prisoners (21.0%) reported an absence of chronic disease, 18 prisoners (9.9%) reported five chronic illnesses at interview, 67 prisoners (37.0%) reported four, and 28 prisoners (15.5%) reported three.

Prisoners are known to be generally unhealthy with many older prisoners at sentencing in poor physical health predominantly attributable to untreated chronic conditions (Fazel et al. 2001; Tarbuck, 2001), risky lifestyle choices (excessive tobacco intake, poor diet, & alcohol/drug dependency) coupled with neglect and only limited access to health care. On average prisoners aged >50 years suffer at least three chronic health problems, such as hypertension, diabetes and emphysema (Cropsey & Kristeller, 2005; Chandler et al. 2004; Acoca, 1998; Will, 1998), and as a group are the greatest single contributor to the high costs of prison medical expenditures (Gulliford et al. 2001).

Following sentencing, a number of prisoners in the study reported requiring immediate medical attention on arrival in prison. This often as a result of either unstable diabetes or acute/chronic respiratory disorders and anaemia, generally attributable to poor diet, the consequences of undiagnosed chronic illnesses, or withdrawal from alcohol, the latter more usual than drug/substance toxicity in older prisoners.

Just less than three quarters (74%) of prisoners in the study when interviewed were noted to be restless and often fidgety, frequently perspiring with several having a mild bilateral intention hand tremor. Acute illnesses prior to imprisonment had eventually gravitated towards chronicity, with 'acute on chronic' presentations increasing in both frequency and severity ultimately resulting in de-compensation. But despite repeated health warnings many had not heeded obvious pathological changes as a result of disease progression.

The 'oldest' old prisoner cohort, recidivists (aged >75yrs) who had served several short/extended sentences tended to fit the stereotypical image of the 'old-lag' with

their appearance, mannerisms, and current style of existence a testimony to a pre-existing lifetime of surviving from one self-manufactured crisis to another. For the remainder, the inability to influence outcomes in their environment, loss of autonomy, a lack of choice-making and continual uncertainty had combined and conspired often resulting in 'learned helplessness' whereby despondency had adversely impacted upon well-being.

HMIP, (2004) in a thematic review of sentenced prisoners (N=430) aged >60 years confirmed under half (42%) reported health problems on being received into prison but when asked about any physical disabilities just over half (51%) reported having some kind of disability. Findings from Fazel et al. (2001) in their study describing the health of elderly male prisoners (N=203) revealed less than half (43%) self-reported musculoskeletal illnesses, just over one third (36%) cardiovascular disease, and a little over one fifth (21%) respiratory diseases, although differences in self-reported and medically confirmed musculoskeltal problems were significant. In a separate study determining the prevalence of psychiatric morbidity in the same population Fazel et al. (2001) reported one documented case of learning disability of moderate severity.

Loeb and Steffensmeirer, (2006), in their study of older inmates (N=51) aged >50 years (ages ranged from 50 to 80yrs; M=57.3) at a Pennsylvania Department of Correctional facility reported all participants had co-morbidity with the number of chronic conditions ranging from 2 to 13 (Mdn=4.0). Colsher et al. (1992) in their study of older male sentenced prisoners (N=119) aged >50 years reported just under two thirds (64%) with at least one chronic illness and 0.08% reporting 5 or more. Rates were typically higher among prisoners aged >60 years than among those

aged 50-59 years. Previous research conducted in the Canadian federal prison system confirmed that, compared to younger inmates, older offenders have different demographics and offences (Brown & Brozowski, 2003) and distinctively higher levels of need for health services (Gallagher, 1990; Uzoaba, 1998; Gallagher, 2001). Older offenders (N=1871) accounted for 6% of the total population (N=30 919) in 2001/02.

A survey of the physical health in a representative sample of sentenced male prisoners (OPCS, 1995) reported less than half (48%) self-reported a long standing illness or disability. Prisoners aged 18-49 years were more likely than men of equivalent age in the general population to report long-standing illness. The most commonly reported long-standing conditions were musculoskeletal complaints (16%), and respiratory conditions (15%). Prisoners on average had a lower BMI in comparison to males in the general population with just over one third classed as overweight/obese compared to just over half of males of equivalent age.

The Health Survey for England (NatCen, 2003) when using the general health questionnaire reported less than half (44%) of males having one or more longstanding illnesses, and less than one quarter (23%) having an illness that limited their activities in some way. The prevalence of poor or very poor health increased with age to 16% in men >75 years, and was higher among those with lower household incomes.

The significance of poor physical health for an older prisoner's quality of life should not be underestimated, with high levels of frailty, poor health and dependency serving only to compromise their status quo (Berlowitz et al. 1995) and ultimately impelling them towards confronting their own mortality. In a recent review of the

literature on prison healthcare, Watson, Stimpson and Hostick, (2004) reported an estimated 85% of older inmates having two or more major illnesses, although little was known about their chronic disease management. Some of the more common health conditions reported included cardiovascular problems, arthritis, psychiatric conditions, respiratory disease, endocrine disease, and sensory deficits.

Although the existing body of knowledge on elderly prisoners is not extensive, many prison commentators have claimed long term sentences lead to premature physical ageing and can be a substantial contributory factor in chronic disease. One striking observation of the study population was their general aged appearance regardless of biological age and time served, with a little less than two thirds (65%) appearing prematurely aged (rated by researcher:- mild/mod/severe) with poor appearance and premature ageing both associated with increasing age. According to Uotinen, Rantamen and Suutama, (2005) perceived age, independent of chronological age, may indicate general well-being, and potentially reflect changes in health, with the cumulative burden of multiple-pathology known to be greater than the bare sum of single disease effect. Studies conducted with offenders aged >60 years on self-perceived age strongly indicate that health status is the best predictor of self-perceived age. Neither chronological age nor length of incarceration shows a relationship to self-perceived age. The studies conclude that as the number of health conditions increases, so does the likelihood that offenders will perceive themselves as feeling older than their chronological age. What these studies suggest is that it is health and possibly self-esteem that determines how old one feels (Wiltz, 1973; Hendricks & Burkhead, 1978). Nevertheless, there are other studies that disagree with these findings (Gillespie & Galliher, 1972; Reed & Glamser, 1979).

5.4 Physical Health Status

5.4.1 Ill health indicators

5.4.1.1 Hypercholesterolaemia

A total of 96 (66%) of prisoners in the study were categorised as having hypercholesterolaemia, although data was unavailable for 35 (19.3%) of prisoners. All cholesterol figures presented included prisoners on lipid-regulating medication. This figure is comparable to that by Loeb and Steffensmeier, (2006) in their study of older prisoners (N=51) who confirmed 59% as having high cholesterol and/or triglycerides.

In the general population NatCen, (2003) reported a mean total of 65.9% of males having a raised total cholesterol level (5mmols/L or above). The prevalence of raised cholesterol more than doubled between those aged 16-24 years (26.4%) and those aged 25-34 years (59.8%); it continued to rise to 81.0% in those aged 45-54 years decreasing again to 63.9% in those aged >75 years. Thus, in this study the prevalence of hypercholesterolaemia was comparable to age adjusted norms in a non-prisoner population.

The age-standardised prevalence of either cardiovascular ischaemic heart disease or stroke has been shown to be higher in men with levels of total cholesterol of 5mmol/L or higher, than those with levels of less than 5mmols/L. Cholesterol levels might be modifiable, either by changes in the diet or by medication although it should be noted that blood cholesterol alone is a relatively poor predictor of individual cardiovascular risk.

Long-term intervention with lipid regulating agents, (predominantly statins) has been shown to reduce serum cholesterol, significantly reduce morbidity and mortality in individuals both with, and at high risk of, coronary heart disease. There is now strong evidence to suggest that lowering plasma cholesterol levels is of value especially in individuals with symptomatic ischaemic heart disease (Ravnskov et al. 2006; Nicolosi et al. 2001), which may also apply to ischaemic stroke.

5.4.1.2 Hypertension

A total of 127 (70.2%) of prisoners in the study had raised blood pressure with 52 (28.7%) having a high systolic reading. Hypertension is one of the most prevalent and powerful contributors to cardiovascular disease and the most common cause of death in industrialised countries. Elevated levels of both systolic and diastolic blood pressure are associated with an increased risk of cardiovascular disease, with lifestyle an important factor in the management of hypertension.

Colsher et al. (1992) in their study of older (aged >50yrs) male sentenced prisoners (N=119) reported just under a half (45%) were hypertensive. Fazel et al. (2001) reported 27 (13.3%) of prisoners (N=203) aged >60 years with hypertension, with Loeb and Steffensmeier, (2006) confirming just over one third (35%) had high blood pressure in their study of older prisoners (N=51) aged >50 years. This compares to findings of hypertension in 39% of 55-64 year old males and 48% of 65-74 year old males in the community (Nat Cen (2003).

Thus, the current study suggests a higher prevalence of hypertension in this prison population compared with age matched community surveys and other prison surveys of elderly prisoners.

It seems unlikely that the differences between older prison surveys are accountable by the age structure of the differing prisons or educational background. Thus, whilst both of these factors are associated with increased hypertension they are also comparable between studies (see 5.1. and 5.1.6). This leaves the possibility of a recording error or that the population may be more prone to hypertension due to other factors e.g. higher prevalence of smoking in long term lifers (see 5.4.1.5).

5.4.1.3 Ischaemic Heart Disease (IHD)

IHD was confirmed in 110 (60.7%) of prisoners in the study which is higher in comparison to age matched population norms and other surveys of elderly prisoners. Stable and unstable angina was reported by 80 (44.2%) of prisoners of whom 14 (7.7%) were prescribed sublingual vasodilators.

The Health Survey for England (NatCen, 2003) reported prevalence rates of IHD to be just less than one fifth (19%) in males between the ages of 55-64 years, increasing to 32% in those aged between 65-74 years. Socio-economic characteristics confirmed that prevalence rates increased as household income decreased. Cooper and Kohlmann, (2001) confirmed hypertension (51.6%), ischaemic heart disease (20.25%), arthritis (36.2%), and respiratory disorder (12.4%) to be the most significant diseases reported in a population based survey of 100,000 adults aged >60 years, with over a quarter of participants (27%) having multiple pathology and declining health status with age. In an American community based population (N=108,000) of older adults aged >65 years (Mean=74yrs), Burke et al. (2001) reported over half the sample (52%) as having hypertension and 15% diagnosed with IHD.

The prevalence of IHD is very dependent on the age of the population. Based on age specific prevalence rates in the community, 0.5% of adult male prisoners are likely to suffer from IHD, ranging from 0.3% in prisoners aged 25-34 years, 0.5% in 35-44 years, to 10.3% in prisoners aged 55-64 years (ONS, 1994). However, because prisoners are drawn largely from lower social classes this figure may be an underestimate. Heart disease is about half as common again among socio-economic class V as the general population (DoH, 1995).

Loeb and Steffensmeier, (2006) in their study of older prisoners (N=51) reported a third of the sample as having heart disease, and in their study of prisoners aged >60 years (N=203) Fazel et al. (2001) confirmed just under one fifth (19.3%) had either angina or IHD recorded in the prison medical notes, although 15% of medication prescribed for cardiovascular illnesses was inaccurately targeted. Colsher et al. (1992) in their study of male sentenced prisoners (N=119) aged >50 years reported just under one fifth (19%) had physician diagnosed myocardial infarction with 7.6% angina of effort.

Similar to hypertension, this study suggests a higher prevalence of IHD than other studies but with comparable demographics. This leaves the possibility of a recording error or that the population may be more prone to IHD due to other factors e.g. higher prevalence of smoking in long term lifers (see 5.4.1.5).

Circulatory disease (which includes IHD and stroke) has remained the most common cause of death in England and Wales over the last 90 years with male deaths higher than female. There is overwhelming evidence for the benefits of treating elderly hypertensive patients below the age of 75 years up to the age of 80 years, (Elliot, 2004) and a known positive linear relationship between the relative risk of both

stroke, and ischaemic heart disease. Analysis of the General Practice Research Data Base (ONS, 2000), based on information from 288 practices, suggests that the prevalence of IHD and hypertension in the general population increased over the period 1994 -1996. The observed trend could reflect a real increase in treated disease during that period which in turn could result from increasing prevalence of disease or from changes in clinical practice.

The National Service Framework for coronary heart disease (DoH, 2000) and the joint British recommendations on prevention of coronary heart disease (JBR, 2000) propose that all patients with a 10-year absolute risk of coronary event of over 30% should be identified (by general practitioners and primary healthcare teams), and should be offered appropriate advice and treatment to reduce their risk (Brindle & Fahey, 2002). The government has committed itself to reducing overall chronic disease death rates by setting a target of reducing the deaths from IHD and stroke amongst people under the age of 75 years by at least two fifths by the year 2010 to 83.8 deaths per 100,000 (DoH, 2004). The reduction of chronic heart disease in the population focuses upon key lifestyle risk factors which include poor diet, lack of exercise, and smoking, the latter estimated to be attributable to 20% of reported chronic heart disease deaths.

5.4.1.4 Diabetes

Diabetes (type 1 & 2) was reported by 14 (7.7%) of prisoners in the study. Type 2 diabetes, (NIDDM), which is mainly controlled with diet and oral medication, had been diagnosed in 11 (6%) of cases and type 1 (IDDM) in 3 (2%) of cases, the latter being controlled with various insulin derivatives and regimes. This compared to 9.8% in men aged 65-74 years and 8.4% in those aged >75 years in the general

population (BHF, 2000), 8% in those aged 55-64 years and 11.5% in those aged 65-74 years (Nat Cen 2003). Fazel et al. (2001) reported similar rates (8.4%) in their study of prisoners (N=203) aged >60 years, whilst Colsher et al. (1992) in their study of older (aged >50yrs) prisoners (N=119) reported a marginally increased (11%) prevalence rate.

Diabetes is characterised by high blood glucose levels (hyperglycaemia). Untreated, hyperglycaemia is associated with damage and possible failure of many organs especially the eyes, kidneys, nerves, heart and blood vessels. Diabetes substantially increases the risk of cardiovascular disease (CVD). Men with type 2 diabetes have up to a four fold greater annual risk of coronary heart disease and worsens the effect of other risk factors for CVD such as dyslipidaemia, hypertension, smoking and obesity (Williams et al. 1995). It is a common chronic disease associated with considerably increased morbidity and mortality (Connolly et al. 2000) with crude and age-standardized prevalence of type 1 (IDDM) and type 2 (NIDDM) diabetes increasing during the past few decades (Gatling et al. 1998).

There are few direct estimates of the prevalence of diabetes in prison. Estimated prevalence of diabetes in the adult male sentenced prison population based on data extrapolated from the age-specific prevalence of diabetes in community populations affect between 0.6% and 0.8% of the prison population. In the age group 55-64 years the prevalence is estimated to be 0.9% increasing to 1.1% in prisoners aged >64 years. Because the population is predominantly young, insulin dependent diabetes (IDDM) is more common than non-insulin dependent diabetes (Home Office, 1998).

In one male prison just over one third (35%) of an eligible population of inmates attended a Well Man Clinic; Ages ranged from 21-62 years (M=32yrs). A total of 8% of prisoners were found to be diabetic, well above the expected prevalence for this age group. If this figure is representative of the whole prison population, it implies that diagnosed diabetes is 2 to 8 times as common in prison inmates as in the community (Biswas, Chalmers & Woodland, 1997). Petit et al. (2001) in a study of French prisoners (N=38 175) in 115 prisons (with a 69% response rate), reported 169 prisoners required insulin. Around 55% had access to personal blood glucose monitoring, 62% were not allowed to keep their own insulin, diabetic diets were available in 60% of prisoners, 55% had access to a diabetic specialist services in the previous year. There were 20 admissions to hospital with diabetic keto-acidosis and 14 for hypoglycaemia.

Results from the Health Survey for England (2003) confirm the prevalence of doctor-diagnosed diabetes (including both type 1 and 2) was 4.3% in males and < 1% until age 35 years after which it increased to 10% in men aged >75 years. Less than 1% of men have type 1 (1DDM) diabetes. Increased rates were associated with growing deprivation in both men and women aged between 35-74 years. The prevalence of diabetes showed some variation by socio-economic status, increased as equivalised household income decreased, and was lowest among those with the highest household incomes, although several studies have suggested that true prevalence rates are underestimated (Simmons & Williams, 1993; Williams et al. 1995).

Not all diabetes is diagnosed; as much as half of all diabetes may go undiagnosed (Diabetes UK, 2004). Lower than expected prevalence rates in the prisoner population may either be attributable to poor initial screening and subsequent

missed diagnosis, although this does not account for either imported risk factors, or poor nutritional status both of which are likely to increase prevalence rates. Equally 'research screening' was by interview/questionnaire and perusal of medical documents as opposed to any clinical investigations, (such as blood chemistry), may not have captured all diabetics, whilst annual routine well-man clinics are not routinely undertaken by the prison health service.

A recent position statement from Diabetes UK (Diabetes UK, 2004) identifies a number of care deficiencies with prisons, including: lack of care planning and case management; inadequate dietary guidance and inappropriate diet; lack of self monitoring facilities; lack of specialist health professional input, and unstructured medical follow up practices. The society describes these factors as negatively impacting upon the ability of individuals to manage their condition successfully in order to limit the development of acute metabolic conditions as well as the disabling long-term complications (neuropathy, glaucoma and poor peripheral circulation).

5.4.1.5 Respiratory Disorders and Smoking

Respiratory conditions rate as one of the highest physical health problems reported in both the prison and general population (Bridgwood & Malbon, 1995). Chronic Obstructive Pulmonary Disease (COPD - asthma, chronic bronchitis, and emphysema) was evident in just under half (43%) of prisoners in the study with both asthma and emphysema notably prevalent in their overall presentation and current clinical management. This compares with between 15 and 19% in the general population in males aged 55 to 74yrs (Nat Cen, 2003) and to 18.5% of prisoners (Aged >50yrs; N=119) with emphysema, and 9.2% with asthma in an elderly prisoner survey by Colsher et al (1992). In their study determining the health needs

of prisoners (N=203) aged >60 years, Fazel et al. (2001) reported COPD in 14 (6.9%) of prisoners and asthma in 11(5.4%). Thus, like hypertension and IHD, COPD was found to be higher in this survey compared to other prison surveys again raising the issue of smoking rates in this population.

Many prisoners in the study complained about a lack of disease knowledge, voiced mistrust in prison health provision and an apparent 'limited' supply of medication, in particular inhalers to relieve breathing difficulties. Respiratory disorders were acknowledged as being most difficult to combat especially when waking during the night and experiencing shortness of breath in the dark and claustrophobic environment of the cell with no available assistance to hand. In a recent survey HMIP, (2004) when asked to comment about an aspect of healthcare 2% of prisoners (N=227) identified the absence of medical cover at night.

5.4.1.6 Tuberculosis

Prisons pose particular problems in relation to tuberculosis. In the study population three cases of tuberculosis (one confirmed at HM Prison Kingston and two cases at HM Prison Albany) had been reported during the previous five years. The higher incidence of infectious and communicable diseases among prison populations, especially older cohorts, is a known factor contributing to the increase in medical expenditure in the prison system (Wahidin & Aday, 2005). Despite an extensive literature about tuberculosis in prisons outside the United Kingdom, especially in relation to countries with a high prevalence of the disease, there is a paucity of research on the disease in British prisons.

The World Health Organization (WHO, 2005) identified prison as a potential 'reservoir for infection' emphasising the need to control potential outbreaks by

reducing overcrowding and improving living conditions together with prompt diagnosis and adequate treatment. Contact tracing is also rendered more difficult by movement of prisoners and overcrowding results in a single case having many contacts. Mukerjee and Butler's (2001) description of an outbreak of TB in the United Kingdom, which originated in a remand prisoner, highlights the importance of communication between GPs, courts and prison doctors to ensure effective treatment of diagnosed active tuberculosis and prevention of spread.

To date outbreaks of the disease have occurred in other countries but no outbreaks have been reported in prisons in England and Wales (HPA/HM Prison Service, 2004). In the United Kingdom there are about 6,500 cases reported each year (DoH, 2004), (with an increase to 8,000 in 2005), with around 30% of notifications in people over 65 years of age (HPA, 2006).

5.4.1.7 Smoking

150 prisoners (84%) in the study were heavy/moderate consumers of tobacco, higher than in both the male prison population and in the community, this despite being unfit to attend 'work' because of either ill health or retirement and consequential limited financial means. Only five prisoners (<2.8%) had requested nicotine replacement therapy to assist with stopping smoking.

Just over three quarters (77%) of the male sentenced population are smokers (ONS, 1998), under a quarter (24%) heavy, over one third (34%) moderate with less than a fifth (19%) light. Just under a quarter (23%) were ex or non-smokers. Fazel et al. (2001) in their study comparing the health of elderly male prisoners aged >60 years (N=203) with the general population confirmed less than half (45-48%) to be non-smokers with current smokers (54%) consuming just over 15 cigarettes per day.

Colsher et al. (1992) in their survey of older male sentenced prisoners (N=119) aged >50 years reported a little under three quarters (70%) were cigarette smokers, and less than one fifth (19%) were former smokers. In a study of remand and medium-term prisoners Lester, Hamilton-Kirkwood and Jones, (2003) reported 75% of those interviewed smoked cigarettes, with MacAskill and Eadie, (2002) reporting similar rates following an evaluation of a pilot project on smoking cessation in prisons. Thus, the current study shows higher levels of smoking than in all other community or prison populations including studies of elderly prisoners (Fazel et al. 2001 & Colsher et al. 1992).

Smoking prevalence varies between different socio-economic groups with a negative association between smoking and various measures of socio-economic status well documented in previous research. Within NS-SEC of household reference person, 20% of men in managerial and professional households currently smoked compared to just over one third (35%) in routine and semi-routine households, with a marked tendency for cigarette smoking prevalence to increase as equivalised household income decreased.

The Government White Paper 'Smoking kills' (1998) identified smoking as the single greatest cause of preventable illness (cancer; heart disease; COPD, & hypertension) and premature death in the United Kingdom, and one of the underlying determinants of health inequalities, although analysis of smoking prevalence in the general population since 1994 suggests there has been a gradual decline in the proportion of adults currently consuming tobacco. In a household survey (HSE 1994), 29% of men aged between 45-54 years reported smoking with the percentage marginally reducing to 26% between the ages of 55-64 years, and in care home residents, 44%

of males aged between 65-74 years were smokers. At the start of the millennium, the Health Survey for England, (2000) reported smoking by social class (all ages) to be 42% in lowest and 21% in highest. Subsequent findings from NatCen, (2003) confirmed these figures had fallen to 25% and 20% respectively with 28% of men ex-regular cigarette smokers. In 2004 the Public Service Agreement (PSA) set the objective of reducing adult smoking rates to ≤21% 2110; with a reduction in prevalence among routine and manual groups to ≤26%.

Thus, the very high levels of smoking in this population might, at least in part, explain the higher levels of smoking related diseases i.e. hypertension; COPD and IHD in this prison population compared with other prison population surveys.

Just under a quarter (23%) of men in the community who were either current or ex-smokers had received medical advice to give up smoking. Smoking cessation is thought to lower the risk of myocardial infarction by a half after two years, with several published accounts of smoking cessation projects (Greenwood, 2003; Murphy, 2003; Trevett, 2003, & Jenkins, 2002) confirming quit rates at four weeks as ranging from 56-100% for group work, 10-18% for one-to-one prisoner cessation intervention, and 88% for one-to-one staff intervention. Findings from a survey in a male prison (Cassidy et al. 1999) indicated that just under a half of those who smoked (43%) wanted help with addiction to smoking. A negative risk finding at HMP Albany was the apparent misuse of nicotine replacement therapy as 'currency', but this could be overcome with more clearly defined organisation.

5.4.1.8 Poly-pharmacy

Over half (58%) of prisoners in the study were prescribed four or more items of medication. Concurrent long-term usage of ten and more items of medication was

confirmed in 6% of the population and was strongly associated with multiple illnesses. The administration of medicines at HMP Kingston had attracted criticism with apparent confusion and resulting discrepancies by nursing staff especially at the weekend. Not being given medication on time and being prescribed generic medication was a frequent complaint together with an unexplained cessation of medication items at HMP Albany.

HMIP, (2004) in a thematic review of older prisoners aged >60 years (N=503) reported a little over four fifths (81%) were taking prescribed medication and in a separate survey (N=149), 19 (13%) of prisoners when interviewed stated they required medication. When asked to comment about any aspect of healthcare (N=391), just under two thirds (63%) said their needs were being met by the dispensing pharmacist/healthcare staff, 11% said they were not being met, with 12% only partly met. A total of 2% (N=227) have been given the wrong medication, 3% were unable to access prescribed medication prior to imprisonment and 7% highlighted long delays for medication.

Findings by Fazel et al. (2001) in their primary care survey identifying the unmet treatment needs of older prisoners (N=203) confirmed over three quarters of the population (77%) were prescribed medication most commonly for the cardiovascular (35%), musculoskeletal (28%) and gastrointestinal (21%) systems. A total of 9% were prescribed psychotropic medication. Inaccurately targeted and unaccounted medication especially for musculoskeletal and gastrointestinal was reported, with less than one fifth (18%) of psychiatric medication accurately targeted.

In a study examining the overall medical expenditure at one male prison in the United Kingdom with a population of just under 700 prisoners serving medium term

sentences, (generally <8yrs), Wahidin, (2005) confirmed that prisoners aged between 50-55 years consumed the majority of medications compared to those in age bands 56-60 years, 61-65 years, 66-70 years, 71-75 years, 76-80 years, and 81-85 years. Multiple drug usage was related to co-existing disease and its consequences.

In a survey of young prisoners 16-24yrs (ONS, 1995), just over a quarter (26%) of prisoners were prescribed an average of 1.6 medications per prisoner. A separate survey (N=500) reported 17% were currently receiving medical treatment. This included 9% who were prescribed oro-broncho inhalers for asthma, 7% who were prescribed antibiotics and 1% who were on long-term pharmacological management for conditions including diabetes, epilepsy and depression (Home Office, 1997).

The Health Survey for England (NatCen, 2003) reported 85% of men who reported either poor or very poor general health were more likely to report taking prescribed medication compared to less than one third (30%) of those who reported either very good or good health. Approximately three quarters (73%) of men with limiting longstanding illness (LLI) were more likely to report taking prescribed medication in comparison 17% of those without LLI. These results were similar after age adjustment. Based on those who were currently taking prescribed medication the average number of drugs taken by men with either very poor or poor health was 5.3 items compared to 2.2 items for those with either very good or good health. A similar pattern was observed when comparing those with LLI and those without any illness. The most commonly prescribed medication were for the cardiovascular (19%), central nervous system (12%), and (5%) for the endocrine system.

In a population based community survey, Cartwright, (1990) reported just less than one third (31%) of men aged 65-79 years were prescribed four or more items of medication. Veehof et al. (1999), in a retrospective cross sectional analysis of prospectively collected data (N=2185) reported older people (>64yrs) with coronary heart disease and respiratory disorders to be more at risk of adverse drug reaction, inadequate surveillance and repeat prescribing without face to face consultation.

Drug usage is frequently considered to be hazardous for the elderly because of the greater vulnerability/sensitivity of the elderly to drugs and multiple drug use (Jackson & Soothill, 1989). Simultaneous use of multiple drugs is widespread within community based populations, especially the elderly (Colley & Lucas, 1993), and whilst treatment with two or three types may not result in iatrogenic problems, studies have shown a significant risk when the number exceeds four items (Stewart & Cluff, 1972; Bergman & Wiholm, 1981). Simultaneous use of multiple drugs (polypharmacy) has also been associated with adverse drug reactions (ADRs), medication errors and an increased risk of hospitalization (Mannesse, Derkx & DeRidder, 2000).

Conventional wisdom would suggest that the risk of ADRs increases with advancing age, and whilst many studies have confirmed this view (Atkin & Shenfield, 1995; Lin & Lin, 1993; Hallas, Gram & Grodum, 1992; Colt & Shapiro, 1989) this effect disappears (Emre & Hanagasi, 2000; Walker & Wynne, 1994) especially when there is either a correction for the number of drugs taken or for the number of co-existing diseases (Leape, Brennan & Laird, 1991; Carbonin, Pahor & Bernabei, 1991). A study by Gosney, Tallis and Edmond, (1989), of care homes in the United Kingdom revealed 71% of males aged 65-79 years were taking five or more prescriptive items.

Despite the recommendations contained within the medical practice guidelines for doctors providing primary care in prisons, (PSI 05/3003), perusal of both prisoner medication sheets and medical records revealed that individual prisoner/practitioner medication audits were not undertaken on either a regular or frequent basis, although cessation of certain prescriptive items was implemented without prior discussion and agreement with the recipient. Other unresolved issues surrounding medication included non-compliance as evidenced by 'modes of administration', indiscriminate individual usage, and the all too frequent non-availability of prescriptive items or their equivalent (e.g. oral broncho-dilators and analgesia).

5.4.1.9 Functional Ability and Mobility

Functional disability when measured using the Barthel Index confirmed 6 (3.3%) of prisoners in the study unable to perform some of the tasks of daily living, 4 of whom were unable to climb stairs without considerable discomfort. Few prisoners reported their health condition hampered their physical activities and prevented them from engaging in either light work or domestic chores in their designated areas. The entire population was ambulant despite being challenged either through distance or difficulties with access and certain elements of prison architecture, with restrictions to mobility reported by 83 (46%) of prisoners, primarily related to respiratory embarrassment attributable to breathlessness upon mild exertion and early arthritic changes. Three prisoners (1.7%) used a walking stick. Climbing stairs, walking distances, wet, slippery floors, and more agile, inconsiderate younger men invariably posed a constant threat to personal safety.

Although the prison health service has recently introduced the Rapid Disability Rating Scale as a means of measuring functional ability, the scale was originally

developed as a research tool and its use as a clinical instrument has not been specifically explored.

Colsher et al. (1992) in their survey of older male prisoners (N=119) reported under half (42%) had gross physical functional disability, 11% with routine self-care dependency, just over one fifth (21%) with dependency in instrumental activities and just under three quarters (73%) difficulty in making isolated movement. Fazel et al. (2001) in their study (N=203) reported just under 10% were unable to climb stairs with just under one third experiencing difficulty with the most basic tasks of daily living. In a survey of older prisoners (N=149) aged >60 years, HMIP, (2004) reported 8% of prisoners stated having poor mobility, with 6% requiring ground floor accommodation for medical reasons.

The health survey for England (NatCen, 2003) reported just less than one quarter (23%) of men reported a long standing illness that limited their activities in some way.

5.4.2 Others indicators of health

5.4.2.1 Dental Health and Sensory Impairment

Oral health was assessed by the number of prisoners reporting having partial dentures and tooth decay. Over three quarters (78%) of prisoners in the study had partial dentures either ill-fitting or no longer worn, this despite a regular weekly dental surgery available at both prisons with just under half (46%) having multiple dental caries and poor oral hygiene. A previously elevated risk laden lifestyle (excessive use of tobacco products, the consumption of large amounts of alcohol, and illicit drugs) had, in many cases resulted in a high incidence of dental caries,

missing teeth, gum infections and chronic mouth ulceration. Although access to the dentist was good, years of not wearing dentures had resulted in an inability to fit newer ones. As a result meals were only half consumed because of the difficulty with chewing and swallowing problems together with late arrival at the hot-plate. A total of 11 (6%) of prisoners were edentulous.

HMIP, (2004) in a survey of prisoners aged >60 years (N=227) reported 22 (10%) of prisoners voiced concern about the long wait prior to seeing a dentist, but in separate survey (N=387) over half (52%) stated their dental needs were being met. Colsher et al. (1992) in their study of older prisoners (N=119) aged >50 years reported over two thirds (39%) were missing all their teeth, with over half the sample (59%) missing some teeth.

There has been no systematic assessment of the oral health status of prisoners in England and Wales. However, the prison population is drawn disproportionately from the lower socio-economic classes and it is therefore likely that the dental health of social classes IV and V most closely reflects that of the prison population. A dental survey conducted by the ONS, (1988) reported 59% of adults aged 55-64 years and 35% of those age 65-74 years were dentate with 47% having 1-5 decayed teeth and 6% >5 decayed teeth. Findings from a survey of oral health in prisoners at a single prison in the USA (Mixson et al. 1990) reported their dental health to be poor although as patterns of oral health are different in the USA it is difficult to draw conclusions for prisoners in England and Wales (Marshall, Simpson & Stevens, 2000).

Prisoners in the study viewed tobacco and alcohol to be the major contributory factors to poor oral hygiene together with traumatic injury, with the adverse impact upon dietary intake a further consequence of a previous 'high risk' lifestyle.

5.4.2.2 Vision

Vision impairment, as measured by visual acuity requiring prescription glasses of over at least 18 months duration, was reported by the overwhelming majority (92%) of prisoners in the study. Visual impairments ranged from difficulty with close vision to registered blindness, the latter as a result of retinal complications following a diagnosis of bilateral glaucoma and subsequent laser surgery. A number of prisoners felt their vision had been harmed by years of exposure to neon strip-lighting.

Loeb and Steffensmeier, (2006) in their study of older prisoners (N=51) aged >50 years reported over four fifths (84%) had vision problems. Fazel et al. (2001) in their study of older prisoners aged >60 years reported 6% of the population sample (N=203) had confirmed eyesight/hearing illness recorded in their medical notes, although 30 (15%) of prisoners reported chronic hearing/eyesight problems.

HMIP, (2004) in a survey of prisoners aged >60 years (N=399), reported just over (52%) of prisoners interviewed felt their needs were being met by the optician. In a separate survey (N=403) just under half (44%) complained of difficulties in accessing an optician, and 19 prisoners (13%) reported needing medical aids (glasses, hearing aid, wheelchair etc) in a further survey (N=109).

5.4.2.3 Hearing

A hearing deficit requiring either one or bilateral hearing aids was self-reported by a little over one third (36%) of prisoners in the study. The majority of those requiring hearing aids rarely complied with their usage and those who did complained of the unavailability of battery replacements. Prisoners with a profound hearing deficit were unable to use the telephone with a resulting further loss of communication with the outside world. Several had difficulty in clearly understanding the verbal communication of others and were correspondingly subjected to ridicule, perceived as being both old and decrepit and often victimised.

Findings from a survey of 118 prisons in England and Wales (Home Office, 1997) confirmed approximately 0.6% of the prison population (N=324) were known to have a disability with approximately 17% of prisoners interviewed known to have hearing problems. As the survey only identified prisoners whose disabilities were known, it is therefore likely to have underestimated less visible impairments such as hearing problems. Ackerman (1998) in his study exploring the needs of deaf prisoners argued that there were at least 70-100 deaf prisoners and many more with a serious albeit undetected hearing deficit.

Colsher et al. (1992) in their comprehensive survey determining the health status of older male sentenced prisoners (N=119) aged >50 years reported hearing deficits to increase with age, with 10% having a hearing aid, a little over one third (39%) self-reporting a hearing loss and just under one fifth (17%) having trouble hearing voices. In the same survey 8 prisoners (7%) were unable to read normal newsprint and recognize their friend across the street. HMIP (2004), in a survey of prisoners aged

>60 years (N=148) reported 3% of prisoners had problems communicating due to poor hearing.

In a Canadian community-based population study measuring the prevalence of vision impairment and hearing-related disabilities, Raina et al. (2000) reported visual and hearing impairments to be 10% and 17% respectively in people aged >65 years. A total of 10% of respondents aged 55-64 years, and just less one quarter (23%) of those aged >75 years reported at least one sensory disability. Hearing deficits were most commonly reported among older adults (13.5%) followed by vision impairment (7.1%). Approximately 3% of individuals had both visual and hearing impairments.

Several prisoners reported increasing difficulty with both interpreting their environment and instructions from prison officers, with poor lighting and noise a further impediment to impaired vision and restricted hearing. Vision and hearing are important for negotiating and communicating with the physical and social environment, hence vision and hearing impairments should be a source of concern among older prisoners. Improvements in both may enhance physical and psychological functioning whilst deterioration can be both amplified and aggravated by living in a highly restrictive prison environment. Unfortunately these impairments are often overlooked because older prisoners are likely to accept vision and hearing loss as inevitable consequences of normal ageing.

Prison health care professionals may equally have a tendency to regard vision and hearing problems in this cohort of prisoners as benign, and therefore not posing a risk to the elderly prisoner's physical, emotional or social function, despite the existence of literature demonstrating that factors such as reduced mobility and physical functioning (Salive & Guralnik, 1997; Branch, Horowitz & Carr, 1989),

reduced association and life quality (Weinstein & Ventry, 1992; Carabellese et al. 1993), and increased depressive symptoms and dependency (Dargent-Molina, Hays & Breart, 1996; Laforge, Spector & Sternberg, 1992), can be associated with hearing impairment.

5.4.2.4 Alcohol Consumption

Addictive behaviour is common in the prison population with many inmates reporting the use of or addiction to alcohol. Previous hazardous drinking was confirmed in 11% of the study population compared to just under two thirds (63%) in the male adult prison population and over a third (38%) in the general population (SEU, 2002). Three prisoners (1.6%) at HMP Kingston said they were under the influence of alcohol at the time of their index offence.

HMIP, (2004) in a survey of older prisoners aged >60 years (N=434) reported 4% of newly received prisoners acknowledged having alcohol problems when asked about specific problems. In the ONS (1998) prison survey, alcohol misuse among the male sentenced population, when measured by the Alcohol Use Disorders Identification Test (AUDIT), confirmed just under two thirds (63%) as having symptoms of alcohol dependence and harmful levels of alcohol consumption. Colsher et al. (1992) in their survey of older male sentenced prisoners (N=119) described the overwhelming majority (97%) having a history of alcohol consumption and just under half (45%) describing themselves as being previously heavy drinkers as evidenced by 4.2% having cirrhosis of the liver.

Surveys of male outpatients with AUDIT, found prevalence rates of alcohol dependence in Belfast and unemployed men in Norway respectively to be over a quarter (27%) and less than a third (30%). Cassidy et al. (1999), in a survey

assessing male sentenced prisoners' health needs reported just under one third (29%) identified a need for help with alcohol addiction and there was a 20% increase in the total number of prisoners completing alcohol detoxification from 1996/97 to 1997/98 (Longfield, 1999).

Explanations for lower prevalence rates in the study group older are possibly related to prisoner typology. Those who were sentenced at a relatively young age and have served many years of their sentence (aged in place) are likely to have recovered from any short-term hepatic dysfunction (more probably elevated liver enzymes), whilst those older prisoners who have been awarded long sentences in late middle age (neophytes) would not have incurred permanent liver damage (cirrhosis). Alcohol related problems were mainly confined to prisoners with multiple convictions (recidivists) having served several short sentences prior to their index offence.

5.4.2.5 Self-rated Health Status and Mortality Rate

Less than 10% of prisoners in the study, predominantly those within the 55-60 years age group rated their current health status as good. A little under two thirds (60.2%) reported their health as fair and under one third (30.9%) described it as poor, especially those aged >65 years, with an expectation of continuing decline in future years and a resulting loss of independence. Growing old, being infirmed and dying in prison was a source of significant concern.

The results from studies on health self-ratings have been inconclusive. In their study of elderly prisoners (N=203), Fazel et al. (2001) reported just over one third (36%) rated it to be either very good or good, 36% rated it to be fair and a little over one quarter (28%) rated it to be bad or very bad, with Marquart et al. (2000) and Aday, (1994) reporting similar findings, whereas Colsher et al. (1992) and Gallager, (1990)

found that most older inmates rated their health as either good or excellent. Loeb and Steffensmeier, (2006) in their study of older prisoners (N=51) aged 50 years and above reported just under three quarters (70%) of prisoners rated their health as either excellent or good, with 29% rating it to be fair or poor.

A survey of male sentenced prisoners (OPCS, 1995) reported three fifths rated their health as either very good or good, but less than half (48%) reported a long standing illness. Data on self-rated health status was not available in HMIP's (2004) thematic review of prisoners aged >60 years (N=149), although just under one third (32%) when asked about their health needs reported various illness including diabetes, heart and respiratory problems. More than 41% of prisoners reported that their health had worsened since imprisonment and one third reported no change in their health status.

Informants for the Health Survey for England (NatCen, 2003) assessed their general health using a five category scale. Very good general health was reported by just over a third (34%) of men, good health by 42%, fair by less than one fifth (18%), bad health by 5% and very bad by 2%. The prevalence of bad or very bad general health increased with age, from 2% of men aged 16-24 years to 16% of men aged >75 years. Just under half (44%) had one or more long standing illness with 17% having two or more with the prevalence of longstanding illness and limiting long standing illness increasing with age.

Only 4 prisoners predicted continuing good health, 62 (34.3%) predicted it to remain fair with 115 prisoners (63.5%) predicting their health to be poor. Continuing good health was viewed as being unlikely attributable to the ageing process and inadequate disease management, whilst only those with current acute illnesses

expected their overall health to improve with the passage of time. Colsher et al. (1992) reported 5% of prisoners in their study (N=119) was better since incarceration with just less than half (47%) describing it as worse.

5.4.2.6 Mortality Rates

As far as I am aware (given that a proportion of the population has been relocated and therefore difficult to trace), during the course of the research period, (a little in excess of three years) a total of four prisoners (2.2%) in the study died, all from natural causes (3 at HMP Kingston and 1 at HMP Albany); causes of death were confirmed as being pneumonia of rapid onset (x2), ischaemic heart disease and inoperable brain tumour. As Fazel and Benning, (2005) noted, a possible selection bias is that prisoners with terminal illnesses may have been released on compassionate grounds. Throughout the last 5 years mortality rates for life sentence prisoners have been relatively high (on average 12 deaths per annum), and during 2003 a total of 21 sentenced males >65 years died of natural causes whilst in prison (HMP/RDU, 2005).

In a study investigating natural deaths in prisons in England and Wales from 1978 to 1997, Fazel and Benning, (2005) reported 723 deaths, 44.3% of overall deaths (1631) during the 10-year period. There were 178 deaths in the age band 50-59 years and 149 deaths in prisoners aged >60 years, although the latter was reported separately. Common causes of death in prisoners <60 years were diseases of the circulatory system, followed by respiratory causes and neoplasms.

However, whilst most measures of morbidity and mortality increase with age, (Bridgwood et al. 2000), and prevalence rates of disability rise steeply in the oldest old, it would be unwise to assume that existing trends in older prisoners morbidity

and mortality rates will continue at current 'community' levels as it could be argued that both the health experience and health care provision of different age groups can vary considerably within a custodial environment.

5.4.3 Prison Healthcare

Prisoners in general have limited involvement with healthcare, lower socio-economic classes have more morbidity, but they also have poorer access to healthcare hence their views on healthcare provision should be viewed within this context. Just over one third (36%) of prisoners in the study were critical of health care provision, rating it be either poor or very poor with the overwhelming majority (82.8%) viewing the management of medical emergencies, chronic diseases, cessation of prescribed medication without consultation and access to medical intervention at night unsatisfactory. A number of prisoners considered the staff to be occasionally hostile hence a number of prisoners described visiting the healthcare centre as unwelcoming. Reporting sick and access to the prison medical officer was by a system of nurse triage (streaming), but had attracted criticism from various prisoners. Just under a quarter of those interviewed at HMP Albany lacked trust in the temporary nature of successive locum doctors. In the event of reporting sick several prisoners said they felt uncomfortable when speaking with different doctors, and in view of their hesitancy to relay accurate information were occasionally mis-diagnosed and under-treated. Lack of directly employed staff and the increasing number of agency nurses at the weekend attracted particular criticism together with inconsistent practice and a lack of compassion.

A total of 11 (6%) of prisoners maintained they had encountered difficulties when accessing appropriate secondary healthcare due to logistical and operational

reasons, (either when initially reporting sick or when referred to specialist health care). Several prisoners complained about being located on the 'upper landings/fours', the distance from the healthcare centre, and the pace of prison life. Fear of heart attack and dying alone especially during the night had created considerable anxiety in view of restricted access by nursing and medical staff.

A common complaint was non-attendance at out-patient appointments, attributable to staff shortages, budgetary constraints and unexplained 'lock downs' when all prisoner movements were curtailed. Across the prison estate in 2005/6 the average staff sickness rate was 12.2%, although this represents an improvement on the previous year's rate of 12.7% and 13.3% in the 2003/2004 (HMP, 2005/2006). In 1997/98, across the entire prison estate, 4243 appointments at NHS hospitals were cancelled, 9% for security implications, 41% attributable to staff shortages, 14% as a result of prisoner transfers and 37% for other reasons (Longfield, 1999). When asked about the concerns they may have about growing old in prison, a little in excess of 79 prisoners (43%) of the population expressed unease about the provision of appropriate medical care and maintenance of their well-being.

In a series of prison surveys, (HMIP, 2004) when asked what you would like to see changed 3% of those interviewed (N=307) said improved healthcare and a better attitude and consideration from staff toward older and disabled prisoners. In a separate survey (N=429) just under half the population described the quality of healthcare as good, although aspects of healthcare were viewed as good/very good by 11% of prisoners interviewed (N=227) and very bad by 6% in another. When asked to identify the most positive aspect of imprisonment (N=297) 2% of prisoners nominated healthcare. In a separate survey (N=420) ease of access to the prison

medical officer and nurse was described by 64% and 76% respectively, but 14% and 10% stated their needs were not being met.

The model of health care delivery in both the community and in prisons is that of primary care with referral to specialist services when deemed appropriate. Marshall et al. (2001) in their comparative study of prisoners and the general population's use of health services found that male prisoners consulted doctors three times more frequently than a demographically equivalent community population although direct comparisons between the use of secondary care by prisoners and community populations are more difficult. Bridgwood and Malbon, (1995) confirmed that just over one quarter (27%) of prisoners serving medium term sentences (≥5yrs) had consulted a doctor in the last year attributable to anxiety or depression although it was unclear why prisoners use health services together with their expectations.

The provision for adequate health services for prisoners has been a source of contention for many years, with the latest development, the forging of the joint partnership between the Prison Service and the NHS under a joint framework (DOH, 1999) having the potential for significant impact. This alliance carries with it the potential for substantially enhanced services for prisoners (Towl, 2000) drawing upon local needs assessments that will include the prisoner formally as part of the community. Securing NHS access for prison health care staff has been clearly identified as a key policy objective with discussions well advanced with NPIT. Several PCTs have organised stand alone links to their local prison which was only achievable when all security aspects had been agreed with both HMPS and the NHS

Although there are many criticisms of the services available in prisons, all prisoners regardless of age have access to a health professional without too much effort.

According to Feron et al. (2005) prisoners make on average 17 visits to the GP each year, which is 3.8 times more visits than the average person in the community, although the authors do not break down visits by age groups. The delivery of healthcare was provided within a framework of operational requirement, staff availability and the general rules and procedures that govern the overall functioning of the prison. Opportunities to care for ones health are limited by the restrictions prison life places upon the individual. They are not generally knowledgeable about health or self-care and information may not be available. Regardless of a prisoner's actual health status, imprisonment itself may provide the context in which inmates are more likely to worry about their health, which in turn increases the probability of seeking help thus a high rate of prison health services utilization becomes a common feature of prison life. On the other hand, Goffman, (1959) found that individuals living in institutions with chronic health conditions often attempted to make their limitations seem less significant, and frequently lived a story of 'normal life'.

There are many advantages in using the PCT's primary care expertise and structures to ensure that a sustainable primary care service is provided in the prison environment. The PCT and prisons can work together to develop a model which encompasses contemporaneous primary care development including new models of working and roles, nurse led chronic disease management in line with NSF standards and innovative use of information technology.

A further influential development has been the recent initiative by the World Health Organisation (WHO, 2002) recommending the adoption of a set of principles and common standards for achieving improved mental health among both prisoners and

staffing prisons throughout the whole of Europe. This enterprise, in combination with the guiding principle contained within the National Service Framework, is clearly of significance and in the event of being adopted is likely to have a positive impact upon the extent to which prisons fulfil the criteria of a healthy and safe environment.

5.5 Well Being

Regardless of length of sentence or type of offence, the experience of older prisoners generally is characterised by exclusion, (both actual and symbolic) low morale, and an over-whelming fear of deterioration in their physical health (Emslie et al. 2005; Codd & Bramhall, 2002; Yorston, 2001), with psychological distress associated with more negative health status perceptions and poor perceived health resulting in increased distress, thereby suggesting a bi-directional relationship. Likewise autonomy in meeting one's own health needs has been identified as a factor to limiting well-being in prison (Sim, 2002; Willmott, 1997), affecting physical as well as mental health, (Edwards et al. 2001; Cohen & Eastman, 2000; Waring, 1996), with overcrowding acknowledged as being a major stressor.

Following a comprehensive review of 90 studies Buskel and Kilmann, (1980) concluded that the associations between imprisonment and psychological well-being were interrelated with a range of prison specific variables but given the inconsistency across the studies this finding cannot be considered conclusive. Cross-sectional comparisons of long-term prisoners, at different stages of sentence have found minimal evidence for psychological deterioration (Rasch, 1981; Landau, 1976; Banister et al. 1973) with available data suggesting that whilst imprisonment tends to have an initial debilitating effect on emotional well-being this is both short-lived and transitory. Early signs of ageing may be amplified in older prisoners by the hostile

and challenging physical environment of the prison but this may of course reflect the current environment as opposed to any permanent changes.

Heredity and lifestyle, avoiding smoking, maintaining a healthy weight and diet, and exercising are all known factors that influence longevity and sustain well-being, but while instruments to assess physical, cognitive, emotional, and social functioning are available, each focuses upon a different aspect of health but does not necessarily reflect overall health status and well-being. The major determinants of health status are cultural, social and economic factors, independent of medical care input, but it is well recognised that co-morbidity, the co-presence of multiple pathological conditions in the same individual, has an deleterious effect upon well-being, with differences further determined by the individual's current life style and environment (Wallaghen et al. 2001). Non-gerontological studies at younger ages have identified that the psychological importance of work, social interaction, and goals in life, all contribute to life satisfaction (Kim & Feldman, 2000; Aquino et al. 1996; Daniel et al. 1996), whilst stressful life events are known to adversely impact upon health and well-being regardless of age (Macleod et al. 2002).

5.6 Key variables

A number of key variables associated with well-being were recorded in the study population.

5.6.1 Visits and Correspondence

A total of 37 (20.4%) of prisoners in the study had received between 1 to 4 visits in the previous 12 months, 39 prisoners (21.6%) had written between 1 to 4 letters, and 8 (<5%) had received between 4 to 9 letters. 144 prisoners (79.6%) had not received

any visits, with 142 (78.4%) having neither written nor received any correspondence thus having no contact whatsoever with the world outside the prison gates. This compared to just over one third (37%) of male sentenced prisoners (N=119) aged >50 years in a survey by Colsher et al. (1992).

For those who maintained contact with relatives visits were pivotal to sustaining those relationships, although intra-family abuses had invariably resulted in a high rate of divorce and loss of all family ties especially for prisoners at HMP Albany. Very few reported receiving their maximum number of permitted visits and many complained about the difficulties and expense involved for those who made the long journey together with the imposition and bureaucracy of the visiting protocol.

Social isolation was further highlighted at HMP Albany in view of its 'island prison' status in combination with an anachronistic and 'awkward' visiting policy whilst contact with the outside world at both prisons was limited, especially for older prisoners. Many families have reported encountering considerable difficulty when attempting to arrange/book visits across the Prison Estate (Social Exclusion Unit, 2002).

Over two thirds of prisoners, (68%) were held more than 50 miles from home, causing particular problems for their visitors, some of whom were themselves older people. In a survey of older prisoners (N=425) aged >60 years, (HMIP, 2004) just over one third (37%) were over 100 miles distance from their home area, 29% between 50-100 miles, under one quarter (24%), less than 50 miles, 8% were of no fixed abode and 2% were from overseas. At the end of September 2006, the average distance men in prison were held from their home or committal court address was 50 miles. Around 10,700 male prisoners were held over 100 miles

away (Hansard, 2007), whilst the number of prison visits by families has fallen by a third in the last in the past seven years despite a rise of more than 24% in the overall prison population (Prison Reform Trust, 2006).

Close friends and relatives form an individual's primary support group. Social support from significant others could be viewed partly as a form of social control, although social control can work both ways, as evidenced in certain subcultures when heavy alcohol intake and smoking may be reinforced (Ginn, Arber & Cooper, 1998). Findings from a longitudinal community population based study of older adults in a London borough, (Prince et al. 1998), confirmed that no contact with friends was the only social support variable prospectively associated with the onset of depression.

Prisoners are not always able to access or maintain their existing roles in society. During their time in prison nearly half of the general prisoner population regardless of length of sentence, lose contact with their families (NACRO, 2000), but a significant and potentially disturbing finding emerging from this study was the limited contact prisoners had with the world beyond the prison gates. HMIP, (2004) in a survey of older prisoners (N=420) reported four fifths (80%) of prisoners remained in regular contact with their family and friends. Economic and interpersonal hardships imposed upon spouses/partners and family members together with the practical difficulties associated with prison visiting (that can range from inconvenience to humiliation) exact a significant and occasionally decisive toll on many prisoners' already fragile connections with the outside world.

Just under one fifth (15%) of prisoners in the study frequently complained about a lack of access to telephones and the inability to use them due to sensory impairment

(restricted vision and hearing deficits) and monopolisation by younger prisoners. In 1988 the Prison service installed pay telephones in the majority of prisons and allowed prisoners to purchase phone cards. In 1991 this facility was extended to all prisons, with the exception of high security units, the latter being included in 1994. HMIP, (2004) reported 13% of prisoners encountered problems accessing the telephone in a survey of prisoners aged 60 years and above (N=420) but 11% used the telephone during association time and 1% viewed it as being a positive aspect of prison life.

The outside world, whatever the individual's unique circumstances, does have certain commonalities of social arrangements, delineations and expectations, but these elements are no longer valid in the world of the prison. One of the more consistent findings from the prison literature is the prevalence of late-life depression attributable to loss of contact with friends, (in particular intimate, confiding relationships), and that interaction with friends, rather than frequency of contact with relatives is positively associated with well-being (Bowling, Farquhar & Browne, 1991).

Given the infrequency of prisoner visits and there being no limit set on the number of letters either sent or received, or on their length, the volume of correspondence both written and received was surprisingly low, with over three quarters (79%) of prisoners having not written any letters and a little under 4% only writing four during the previous twelve months. Many of those interviewed had invested considerable time and effort in developing strategies to survive the entire prison experience, but acknowledged that prison destroys relationships with those, who at some stage, had been significant others. In several instances, this had resulted in a curtailment of

interpersonal candour for fear of exploitation, whilst others had found safety in social invisibility by becoming as inconspicuous and disconnected from others; trusting no one and leading an isolated life of quiet desperation. The dynamic is further re-enforced by the enormous strain that imprisonment places on familial and other personal relationships. This, in turn further exacerbates the risk of hopelessness' an established variable amongst lifers dynamic, is indicative of lifers suffering in their imprisonment as well as being imprisoned, and increases their probability of dying whilst in custody.

For a number of prisoners, especially those who are growing old and those serving long sentences such withdrawal and self-imposed isolation serve as a defensive reaction to the anticipated loss of this kind of outside social support. The loss of contact with friends and family outside the prison is potentially a major concern for any prisoner, but for 'long-termers' the fear that these relationships will be irrevocably lost creates a unique set of concerns (Johnson & Toch, 1982).

With ageing, deaths in the family had occurred with a number of spouses/partners too ill and frail to visit. Hence, prison staff should foster a culture that values prisoners and assists them in maintaining their skills and social contacts. The complexity of this undertaking for the Prison Service is highlighted within normalization theory (Wolfensberger & Thomas, 1983), which challenges institutional practices and advocates ordinary life opportunities. For the majority of prisoners a combination of altered family dynamics and the erosion of independence had resulted in changed perceptions of self-worth, further compounded by infrequent visits from relatives and friends. As a result of irrevocable losses in the traditional life cycle, the needs of older prisoners who will eventually become severely

institutionalised as they approach 'older' old age will continue to both challenge and alter present day prison resources.

5.6.2 Relations with Prison Staff

When asked about the quality of relations with prison staff less than half (48%) of prisoners in the study described them as poor, 48% as barely satisfactory, with only 7% of prisoners reporting good relations with prison officers. Being treated in an apparent indifferent and insensitive manner together with a lack of respect was a common complaint. In both prisons institutionalisation, as defined by Wolfensberger, (1978), was very much in evidence, whereby everything was done under a single authority, primarily geared to the needs of the institution, as opposed to those of the individual, with prisoners unable to influence when, where, what or with whom they would relate. Several prison officers did, on occasions, demonstrate gestures of kindness and expressions of emotional warmth.

In a survey of older prisoners (N=148) conducted by HMIP, (2004) less than one third (30%) viewed prison staff as being respectful, just over one quarter (28%) unhelpful, 11% unsympathetic to individual needs, and 5% as belittling. In a separate survey (N=183) 3% felt staff showed prejudice towards prisoners, 2% were apathetic, and 7% didn't care. A total of 7% felt staff should demonstrate a better attitude and only 1% was happy with how they were treated.

The experience of imprisonment does considerable harm to prisoners in both obvious and covert ways, due primarily related to the 'pains' of incarceration. Prisoners are coerced into repetitive routines, ensnared in a state of control by a set of rules inconsistently and arbitrarily enforced by prison staff. Prisoners and staff, at both, prisons clearly acknowledged the predicament arising from the increasing

elderly population and the requirement to create an environment and regime appropriate to this growing cohort. However the current doubts surrounding strategic planning and the identification of age-appropriate healthcare practices both clearly attested that a solution had yet to be agreed and implemented.

Staff-prisoner relationships are, as many have argued, central to prison life (Liebling & Price, 2001; Sparks, Bottoms & Hay, 1996; Home Office, 1984), with the experience of imprisonment qualitatively different when either relationships in general or individual interactions are both distant and poor (Bottoms, 1998). The Relationships Foundation has developed a 'Relational Audit' to asses the quality of relationships within various prisons but audits conducted in one Scottish prison in 1994 (Scottish Prison Service, 1994), and one London prison (Prison Reform Trust, 1997a) have been inconclusive.

Goffman, (1961) in his classic work Asylums, argued that staff asserting their superiority over residents through power and authority created an authoritarian structure that denied both basic rights and privacy, and in his history of institutions, Wolfensberger, (1978) argued for 'normalisation', a new and viable ideology that provided concepts and a model of services consistent with contemporary cultural values and scientific knowledge, which according to Reed, (1994) significantly influenced a more humanistic and philosophical approach to institutional practices.

5.6.3 Relations with Prisoners

Nine prisoners (5%) described having few prisoner friends, predominantly those aged >70yrs, with (86.2%) the overwhelming majority claiming to have no friends. Sixteen prisoners (8.8%) of those interviewed dismissed the notion of friendships. Prisoners generally viewed 'friendship' within the context of the prison environment

and as a consequence of common participation. When asked, several hesitated to use the term friend, preferring instead to use the description 'mate'. There was a tendency to make derogatory comments about fellow prisoners, to disassociate themselves from those who they perceived as being different, although identifying any differences proved problematic. Tampering with linen and blankets had been reported at HM Prison Albany on a number of occasions throughout the duration of my visits. Certain values and attitudes were clearly important but were primarily descriptions of the known 'cons code'.

Prisoners in the study reported the extent of interpersonal relationships was generally low although the 'oldest old' were more inclined to trust only each another and offer both practical and emotional support when needed. Several prisoners complained of unexplained moves to other wings within the prison, and away from familiar niches (Toch, 1992) essential to individual adjustment and the maintenance of normalcy. In a survey of prisoners aged >60 years (N=369) just over one third (38%) reported talking to other prisoners was their usual pursuit during association and 2% said they helped less able prisoners. In a separate survey (N=297), 4% said they were able to get along with other prisoners when asked about the most positive aspects of imprisonment (HMIP, 2004).

In their study of long-termers, Biggam and Power, (1997) found that apparent shortcomings in support from other prisoners often resulted in undermining well-being with a resulting increase in stress and anxiety levels. Loeb and AbuDagga, (2006) in their literature review of older inmates reported older prisoners were more likely to be loners, making them more vulnerable in a prison environment especially from bullying and violence.

There is extensive research literature which indicates that social relationships can have powerful effects on both physical and mental health with any beneficial effect of social support on the maintenance of well-being more apparent in males (Seeman, 2000). Previous studies (Brugha et al. 1987; 1993) have also suggested that older adults with a primary support group of three or fewer people are at greatest risk of psychiatric morbidity. In a London based community-based sample of people aged 60yrs and over, (Bowling, Farquhar & Browne, 1991) reported a positive association between the number of friends and well-being which was, however, not apparent in a sample drawn from a small town in Essex. Older adults repeatedly affirm themselves through inter/intra personal relationships (Rowe & Kahn, 1987) whilst previous literature has noted the prevalence of social isolation and loneliness is amplified either as significant others die or when they are relocated.

Older prisoners form a distinct cultural group within the overall prison population and have unique patterns and needs as a consequence of ageing within the confines of a total institution. However, two contrasting truisms relate to prison life; prison is full of tension and conflict hence prison life is predominantly about relationships (Liebling, 2004). The normal interactions in which most people in the outside world participate are altered to such an extent inside prison that a new culture evolves.

In their sociological studies of prison life, both Grapendaal, (1990) and Bondeson, (1989) described prisoner culture as utilitarian, oppositional, and exploitative. Given that social integration is rendered inaccessible for many elderly prisoners as a result of the existing prison regime or the inability to engage in normal social activities (visitations, association, prison work) it is perhaps not unsurprising that less than

four per cent of those interviewed described themselves as having a range of prisoner acquaintances, with the vast majority having only few if any friends.

5.6.4 In-cell Hobbies

Just less than one third (30.4%) of prisoners in the study pursued 'in-cell' hobbies. Pastimes included model making with matchsticks, painting in water colours primarily, and in one instance, embroidery.

HMIP, (2004) in a survey of prisoners aged >60 years (N=140) reported 16% of those interviewed had no in-cell hobby with only 2% having art and painting pursuits. In a separate survey (N=369) 12% of those interviewed remained in their cell during association of whom 7% listened to either music or the radio; 3% of prisoners described library services to be good. Results from two further surveys (N=429 & N=414) confirmed that on average 11% of prisoners spent 22hrs each day in their cells, 20% between 18-20hrs, 22% between 16-18hrs, and 15% spent at least 14hrs.

In general, prison activities are primarily designed for younger inmates thus heightening the extent of social isolation (through an absence of social integration) for older prisoners. Limited fresh air was a common complaint together with boredom and lack of stimulation and motivation. Although a number of prisoners at HMP Kingston elected not to view television preferring to function solely within the 'known prison environment', watching television was the favoured past time for many, referred to in some American jails as either 'the baby sitter of choice' or in others as 'electric Thorazine', (Hallinan, 2003).

5.6.5 Christian Belief

Previous research has suggested that religion can serve to offer hope, meaning, and optimism together with a sense of security especially for prisoners serving long sentences (McFadden, 1995) and in doing so make life more tolerable. The proportion of prisoners with a declared religious affiliation increases in line with age (Religion in Prisons, 1999/200). Koenig, (1995) in his study of older men in prison found that religious background, belief, activities, experience and intrinsic religiosity were important factors in maintaining well-being by reducing anxiety and subsequent depression whilst simultaneously enabling adjustment to prison.

Just over one fifth (21%) of prisoners in the study belonged to one of the Christian churches, and actively pursued religious pastimes. Three prisoners declared themselves to be Jehovah's Witness' and two had been converted to Buddhism. Finding a faith or rediscovering God had enabled several prisoners to survive, find security and give some value to the prison experience through a process of meaningful worship. Five prisoners spoke about being borne again Christians following a significant event whilst in prison. In some instances the acquisition of a new role, that of 'a devout Christian, had compensated for role loss, bestowed an amorphous status upon the individual, one that could not be either challenged or removed by authority. Attendance at the prison chapel was supplemented by affiliations to religious discussion groups and bible reading classes. However, with sentence progression religious fervour declined, suggesting it was a temporary coping mechanism.

HMIP, (2004) in a survey of prisoners aged >60 years (N=297) reported good chaplaincy/chapel facilities were viewed as one of the most positive aspects of

prison life by 13 (4%) of prisoners aged >60 years. In a separate survey (N=369), 28 prisoners (8%) said they normally attended chapel during association times with just under two thirds (63%) attending >five times each week.

5.6.6 Attendance at Gymnasium

Regular physical exercise has been shown to have many health benefits. Men carrying out physical activity for less than 30 minutes on one to four days per week (low physical activity) showed a higher prevalence of cardiovascular and ischaemic heart disease than those with a medium or moderate level of activity (NatCen, 2003). It is of course possible that people had reduced their physical activity as a consequence of cardiovascular disease.

A total of 16 (8.8%) of prisoners in the study attended the gymnasium on at least two occasions each week, with just under one fifth (17.7%) attending once every week. Six prisoners (3.3%) took physical exercise outside on approximately two occasions each week. Approximately two thirds (61%) of prisoners interviewed did not participate in any 'formal' physical activity during the course of each week. These findings are broadly similar to those reported by Meiklejohn, Sanders & Butler, (2003) in their study of physical health care in a medium secure unit, confirming that 70% of respondents (N=50) never participated in vigorous exercise.

HMIP, (2004) in a survey of prisoners (N=428) aged >60 years reported that just under one third (32%) of prisoners had no wish to attend the gymnasium, less than half (46%) did not attend, 11% attended on one or two occasions each week, and 10% on five or more. Just under one fifth (16%) did not go outside for exercise each week, 20% never went outside for exercise, less than one third (28%) on one or two occasions 15% three to five times, and 20% five times and more.

In a separate survey (N=140) when asked to comment about aspects of purposeful activity 8 (6%) of prisoners complained about not enough exercise outside but 11% said they walked outside during association subject to weather and staff availability. In a separate survey (N=307) 3% of prisoners when asked what changes they would like to see requested more outside exercise.

Many older prisoners in the study commented on the 'masculine' prison culture and its emphasis on either more vigorous or/and youthful activities, as evidenced by a pre-occupation for fitness and oversubscribed gymnasium sessions for younger inmates. Deprived of control over other aspects of their life prisoners often seek to compensate by exercising control over the corporeal. Sports or attendance at the gymnasium is one of the most conspicuous features of prison society, and can be a means of building a body that exudes a masculine aura, serving to enhance heterosexual masculinity and thus improving prestige and deterring attacks. Social integration and social participation are linked to healthy behaviours, particularly being involved in physical activity. Ageing precluded many of those interviewed from these pursuits although several regularly performed callisthenics in their cells and weightlifting in the gymnasium.

Physical ability and stamina in the older old group, (those aged >70yrs) had declined over time whilst those with respiratory disorders especially chronic obstructive pulmonary disease (COPD) were unable to participate in the majority, if not all physical fitness regimes. For some prisoners walking to the medical centre often resulted in profound breathlessness whilst others viewed themselves as being too old and not sufficiently robust to undertake any physical exertion. Imposed

restrictions for the remainder were generally attributable to arthritic changes and the consequences of limited cardiac output (IHD).

Lack of exercise combined with a multitude of poor health habits are known to contribute to declining health and well-being but whilst attendance at the gymnasium was generally rated to be of some benefit by prisoners, age appropriate levels of exercises were not always available whilst more easily accessible facilities would be needed to encourage greater participation in physical activities. Older prisoners complained of ridicule from younger inmates with the latter group invariably monopolising the sports equipment. Prisoners at HMP Albany underwent a 'sports health-check' prior to embarking upon any fitness regime in order to identify any physical symptoms and allay any fears regarding their ability to undertake physical activity.

Through Health Improvement Programmes, new opportunities have emerged for the provision of collaborative services and initiatives to promote physical activity and sport, and to address inequalities in healthcare, disease prevention and quality of life. Prison health care services, in collaboration with the Physical Education Instruction College at Lilleshall, the University of Central Lancashire, and Skills SECTOR Councils have recently established an accredited programme for Prison Service PEIs. The exercise practitioner's training and competencies will be matched to emerging national occupational standards, and developed in line with the Professional Register for Exercise and Fitness held by the Fitness Alliance (the Fitness Industry Association and SPIRITO). However, any benefits for more elderly prisoners will be limited.

5.6.7 Satisfaction with Prison Food

The quality and quantity of food, together with the restricted menu was a contentious and emotive issue for many prisoners. Less than one quarter of prisoners in the study considered the prison diet to be adequate, with 76% expressing dissatisfaction both in quality and diversity. In general, they complained that food lacked seasoning, was insufficiently prepared, unappetising and poorly presented. The food was generally described as tasteless and lacking in appeal and nutritional value. Several older prisoners complained about a lack of salt and meals which generally suited younger palates (rice and curry). Some meals were difficult to chew especially for those prisoners (a little over 78%) with either-ill fitting dentures and/or no teeth/dentures, and fruit did not form part of the daily diet.

A number of prisoners felt that although the food was probably acceptable prior to cooking, problems were more likely attributable to preparation and the cooking process. Food contamination was a constant source of concern for prisoners at HMP Albany as preparation was conducted off site at HMP Parkhurst. Many refrained from drinking tea for similar reasons. Dietary supplements for example, tinned pilchards and tinned fruit were purchased from the prison canteen often at extortionate prices, which resulted in a further reduction in available pocket money. Diabetics were not adequately catered for with an absence of sugar free squash and other appropriate confectionery. Special diets, for example low fat, were not in evidence and prisoners invariably had no option but to forego any clinical recommendation, most probably to the detriment of their health.

Dining periods at both prisons were generally both chaotic and rushed events, and times during which older prisoners felt their safety was compromised. Several

complained of insufficient time to complete meals and in many instances were often ridiculed by younger inmates.

HMIP, (2004), in a survey of prisoners aged >60 years (N=307), reported a total of 9% listed better food, 2% healthier food, and 2% for the canteen to be managed by the prison as opposed to outside contractors when asked about what they would most like to see changed. When asked what was the most positive aspect at the prison 4% of those interviewed said good food. In a separate survey (N=435) when asked about which areas of the prison they had felt unsafe, 4% stated at the hotplate during meal-times, with just over a third (37%) having been intimidated by another prisoner, of whom 5% had their canteen property taken.

Sim, (1990) in a study of prison healthcare identified diet as an important determinant of health which was low on the list of prison financial priorities. Nutritional assessment is not, however, a component of the initial routine health screening process on entry into prison despite the important role that it plays in the health status of the older prison population. A balanced diet is known to contribute positively to health status and well-being with older prisoners at greater risk for nutrient deficiencies than are their younger counterparts.

The effects of nutritional factors have been seen as important in the risk of heart disease (Calvaresi & Bryan, 2001). The complications of chronic disease are more common among older adults as well as the limitations that accompany the natural ageing process, both of which can affect nutrient intake, absorption, and utilization (Riedel & Jorissen, 1998). Two other non-health factors shown to possess a significant influence on individual well-being are, according to Godderis, (2006) nutrition and food security.

There is growing interest in the role of vitamin C not least because of its association with an increasing number of diseases. Population studies (Zhang & Farthing, 2005; Jacob & Sotoudeh, 2002; Meydani, 2002) have shown that individuals with high intakes of vitamin C have lower risk of a number of chronic diseases including heart disease, carcinoma, eye diseases and neurodegenerative conditions with the new higher Recommended Dietary Allowance (RDA) for vitamin C for men 90mgms. However, Lester et al. (2003), in a study of male prisoners (N=133) found that while the prison diet allowed for the consumption of at least five portions of fruit and vegetables daily, 62% of questionnaire respondents stated they ate less than three portions of fruit and vegetables daily. Non-intentional weight loss was more prevalent than weight gain in the majority of cases and prisoners complained of food lacking taste which in the absence of salt and other condiments was both unpalatable and bland. Nutrition assessment and intervention are worthwhile endeavours that may add years of 'independent living', reduce risk factors for certain diseases, and more importantly decrease medical expenditure for older prisoners (Harris et al. 2006). Specific food choices that would assist elderly prisoners meet their changing needs and avoid nutrient deficiencies are nutrient dense food, adequate fluid and fibre and supplementation of calcium, vitamin D and vitamin B12.

5.6.8 Complaints about Noise and Sleep Pattern

When asked if the level of noise in the prison was intrusive, 98 prisoners (54.1%) complained about excessive noise levels both during the day and at night. At HMP Kingston the level of 'metal noise', that is the slamming and aligning of internal gates prior to keys being turned in locks was omnipresent with distinctive echoing. Following lock-up each night no further contact with any other individual is possible with the exception of calling loudly through the restricted windows. At HMP Albany

the distance from the main entrance to the cell blocks is fairly long and requires careful negotiation through at least six locked prison gates. Unlocking and locking gates was a noisy procedure together with the often loud voices of staff and prisoners alike.

Prior to the 1980s, the emotional and psychological issues of older inmates were often discussed in the context of institutional adjustment (Gillespie & Gallaher, 1972), with anxiety and dependent characteristics assumed to be a response to aspects of the prison environment such as continuous noise (Krajicck, 1979; Panton, 1977).

In the study population when asked about their sleeping pattern 31 prisoners (17.1%) described it as good, 117 (64.6%) described it to be fair and 33 prisoners (18.2%) described a poor sleep pattern. Difficulty in getting off to sleep and early morning waking was common in prisoners aged >65 years.

5.6.9 Prison Work

Less than two thirds (61%) of prisoners in the study attended work. Of those unable to work just over half (51%) were considered to be medically unfit, with the remainder 'retired' due to risk factors associated with old age. Several in this group assisted other prisoners with domestic chores such as cleaning their cell and bed-making. Employment was generally welcomed and a number of inmates over the prison retirement age had continued beyond this threshold. Although the majority of work pursuits were mundane and not particularly creative, 'wages', it could be argued were commensurate with standards of prison living. The garden detail was heavily subscribed hence the lawns, flower beds, and ornamental pond were well tended almost manicured, and this despite many prisoners having no previous

horticultural experience, but were somewhat incongruous within the granite and dannet wire environment. A new regime had been introduced at both prisons December 2005, re-allocating Friday afternoon as being recreation (Appendix 13).

HMIP, (2004) in a survey of prisoners aged >60 years (N=339) reported over two thirds of prisoners were currently working, 15% would like to be working but 18% preferred not to work when asked if they would like to be involved in any activity. In a separate survey (N=140) 16% of prisoners interviewed said they had nothing to do but stay in their cell each day, although 11% identified having a job was the most positive aspect to imprisonment.

On average of 10,000 prisoners are employed in approximately 300 workshops across the prison estate in a diverse range of industries that include: clothing and textiles, woodwork, engineering, print and laundries (House of Commons, 2004/2005). The average rate of pay for employed prisoners is £8.00 per week. The Prison Service sets a minimum rate of pay which is currently £4.00 per week, but each prison has devolved responsibility to enable it to set its own pay rates (Hansard, 2007). Since payment of the state pension is suspended during sentence, prisoners of pensionable age who are unable to work may have negligible personal income. This raises additional questions for some about the extent to which older prisoners are socially excluded within the prison system.

5.7 Psychiatric Morbidity

5.7.1 Cognition

Four prisoners (2%) had a clinical diagnosis of DSM-IV dementia. This compared to two prisoners (1%) reported by Fazel et al. (2001) in their study determining hidden

psychiatric morbidity in a group of older prisoners (N=203) aged >60 years. In an 11-year elderly offender survey of referrals to a regional medium secure unit in England, Curtice et al. (2003), reported a 19% prevalence rate of dementia although it was found that forensic psychiatrists did not routinely use standardized rating scales for the assessment of cognitive functioning. It was suggested that mild cases of dementia may therefore not have been identified and that individuals at the very early stages of dementia, especially fronto-temporal dementia are not easily identified by clinicians unfamiliar with diagnosing dementia hence it is possible that many cases are missed. Other possible explanations for the low prevalence of dementia in the prisoner population is, as noted by Fazel et al. 2001), either diversion away from the criminal justice system prior to sentencing, and/or the current method and procedure of health screening on reception into prison which has been shown to be ineffective at detecting specific mental health illnesses.

In a study of age-related factors among custodially remanded prisoners in HMP Brixton (N=1241) aged 16-80 years (M=33.5), Taylor & Parrott, (1988) suggested a total of no more than two or three cases of dementia within each of the older age groups. Hucker and Ben-Aron, (1984) reported that in neither their series of sex offenders nor of elderly violent offenders did organic brain syndromes appear with any greater frequency than among comparable age groups in the general population. Rosner et al. (1991) in a study of defendants (N=52; age range 62-88yrs), referred for assessment of their competence prior to standing trial reported just under one fifth (19%) were diagnosed with severe senile and arterio-sclerotic dementia, although caution should be taken in generalizing these findings to the overall population of older offenders.

Surveys in the United Kingdom (MRC CFA, 1999; Ely et al. 1996) have reported community rates of dementia in men to be 6% in those between 75-79 years of age, 13% in those aged 80-84 years, with a quarter of those aged >85 years having 'case level' dementia. When exploring the effect of different diagnostic criteria on the prevalence of dementia in a community based sample, Erkinjuntti et al. (1997) found that rates varied from 3.1% using ICD-10 criteria to 29.1% using DSM-IV, although both classifications require that dementia due to AD has an insidious onset and a gradual progression.

Cognitive function declines with age, although such decline is not inevitable and not always progressive. Most neuropsychological tests are affected by co-variables such as age, gender, level of education and intelligence (Collie & Maruff, 2000; O'Connor et al. 1989a & b), and require subjects to have intact language, sensory and motor abilities (Tombaugh, 1992) which can often be impaired in old age. Socio-economic status as measured by income or by occupation is known to be associated with cognitive function, (Cerhan et al. 2000) independent of age, mood, and education (Gallacher et al. 1999). Lower socio-economic status has been linked to lower cognitive function in later life and is known to be associated with an increased risk of MCI and dementia. In keeping with the general prison population (Teller & Howell, 1981) prisoners in the study were predominantly from social classes 3 and 4.

The mean MMSE score (excluding just 4 outliers with dementia) was 25 points which was comparable with age and education matched normative data (25.5 points) (Folstein et al. 1975). However, somewhat surprisingly, the mean ADAS-Cog score, whilst showing a good correlation with the MMSE score, was significantly lower (i.e. better in cognitive function) in the prison population compared with previously

reported normative data for this age group i.e. 10.7 points compared with 12.5 points. The most likely explanation is that the exclusion of prisoners with dementia (by diversion away from the criminal justice system or by later detection and release) is having the effect of decreasing the overall mean ADAS-Cog score in the prison population rather than a general increased cognitive function of this group.

5.8 Depression

Prisoners generally are a marginalized group who demonstrate high rates of morbidity in various measures of mental health (in particular depression) exceeding those of the general population (Coid et al. 2003; Regan, Alderson & Regan, 2002; Tarbuck, 2001). High levels of depressive episodes were self-reported in the initial 60 prisoners interviewed but this not always confirmed in the prison medical records. When measured with the GDS, just under half (48%) of prisoners in study sub-sample (N=121) scored within the mildly depressed band (11-20pts) and four prisoners (3%) scored in the severely depressed band (21-30pts). Two prisoners were prescribed anti-depressant medication. It should, however, be noted that this is a rate determined by sole use of the GDS which has its limitations since it is known to have less emphasis on physical symptoms than other scales and lower validity in a demented population (Burke et al. 1989). However, this rate is still higher in comparison to community based epidemiological studies using the GDS. Thus, in a general practice based survey of over 65 year olds, around 35% of the population fulfilled caseness for depression (D'Ath et al. 1994).

According to Mathews (1999), in excess of 90% of prisoners within the penal system originate from deprived backgrounds and demonstrate higher than average rates of psychiatric illness, predominantly depression. Prisoners in the study were generally

from social class 3 and 4, had left school, often prematurely, and with no qualifications. The United Kingdom ONS Survey (2000) on psychiatric morbidity in adults aged 60-74 years reported depressive illness to be more prevalent in the manual social class (3 & 4) with the highest rate in social class 5 (18%) and lowest (6%) in class 1 and 2 combined. Cross-sectional community surveys have reported associations between late-life depression and variables including disadvantage in income, housing status, and education, although determining the effect one variable independent of the others is always difficult.

HMIP, (2004) in a survey of prisoners aged >60 years (N=434) reported just under a quarter of the sample (23%) admitted feeling either depressed and/or suicidal on reception into prison, and in a separate survey (N=365) over half (55%) felt their needs were not being met by a counsellor.

There are, however, few studies examining the prevalence of depression in elderly lifers in prison. Maden et al. (2000) examined the lifetime prevalence of deliberate self harm in male prisoners but did not examine any relationship with depression.

Fazel et al. (2001) in their study determining hidden psychiatric morbidity in prisoners aged >60 years (N=203) reported just under a third of the sample (30%) had a depressive disorder according to GMS-AGECAT, with two fifths having had a past or present history of depression confirmed in their medical notes and 7% having a DSM-IV major depressive episode. Of those who achieved caseness for GMSS depression only 14% were being treated with anti-depressants at the time of interview, and in a separate study reported 5% inaccurate targeting of psychiatric medication for the same population sample.

Singleton et al. (1998) in a survey of psychiatric morbidity among prisoners using the revised Clinical Interview Schedule (CSI-R) reported a 33% prevalence of neurotic symptoms, which may not necessarily warrant health care intervention, but a 19% rate of mixed anxiety and depression and 8% prevalence rate of depressive episodes. The CSI-R has 14 different sections including sleep problems the latter reported by the majority of prisoners. Rates of GDS depression in the study population were therefore considerably higher in comparison to the male general prison population and DSM-IV depression reported by Fazel et al. (2001) and higher than rates reported in community populations.

When investigating the effects of imprisonment in a group of 81 Australian prisoners aged 18 to 73 years (M=35yrs), Gullone, Jones & Cummins, (2000) reported 38% as falling within the category of moderate to severe depression using the Beck Depression Inventory (BDI; Beck et al. 1961), but whilst the BDI represents the gold standard for self-rating depression scales it is not 'old age' specific and is generally utilized for mood assessment in younger adults.

Fazel and Danesh, (2002) in a systematic review of 62 surveys from 12 countries, (N=22, 790 prisoners) reported a 6-month prevalence of major depression in 10% of male prisoners The differences between sentenced and remanded groups were small with the more outlying results appearing to be attributable to methodological differences. In their study of older prisoners (N=51) aged >50 years, Loeb and Stefensmeier, (2006) reported 26% as being depressed (self-rated; using OMHPSI, Loeb, 2003) with Colsher et al. (1992) reporting symptoms of depression (15.4%), loneliness (7.1%) and anxiety (8.1%), but with psychotic symptoms less frequent. Brown and Brozowski, (2003) from data drawn from the files of all adults aged >50

years sentenced to a period of custody in an Ontario (N=1 871) correctional facility during the fiscal year 2001/02 reported a 4% prevalence rate of depression.

Despite considerable interest, there is no consensus regarding the prevalence of depression in later life. Beekman et al. (1999) in 34 community-based studies reported prevalence rates of major depression using DSM criteria to be more common in later life. Literature was analysed by level of caseness at which depression was defined and measured. Prevalence rates of depression varied from 0.4-35%. Arranged according to level of caseness, major depression was relatively rare among the elderly (weighted average prevalence 1.8%), minor depression was more common (weighted average prevalence 9.8%), while all depressive syndromes deemed clinically relevant yielded an average prevalence of 13.5%. Methodological differences between studies preclude firm conclusions about cross- cultural and geographical.

Copeland et al. (1987) using the GMS-AGECAT package reported community rates of depression as between 10% to 16% in adults aged >65 years. ONS, (1994) reported a 12% prevalence rate for neurotic disorders in the general adult population.

In a study of admissions to secure forensic services (Coid et al. 2002) reported on 52 patients who were aged 60 years and over, 50% had committed homicide, and depressive illness was amongst the most prevalent diagnosis (42%) but this represents a highly selective group of prisoners. Curtice et al. (2003) in an 11-year elderly offender survey of referrals to a regional forensic psychiatry service in England reported the presence of mental disorder in 44% of referrals of which just

over 6% were diagnosed with depression. Thus these are very selected studies for direct comparison.

Data from the United States Epidemiological Catchment Area (ECA) Study (Weissman et al. 1988), on the prevalence of major/severe depression suggested a lower rate for those aged >65 years (1%), than for those aged 45-64 years (2.3%). This relatively low prevalence rate among the older population was subsequently confirmed in a Canadian study using similar methodological approaches (Bland et al. 1988), although these findings, do however, conflict with the general impression that the frequency of depressive symptoms and broader depressive illness either increase (Ernst & Angst, 1995; Tannock & Katona, 1995; Kanowski, 1994), or remain stable (Henderson et al. 1993) with ageing. It may well be that older people report as many lifetime depressive symptoms as younger adults, but are more likely to attribute symptomatology to physical causes and in doing so are excluded as a basis for diagnosing depression. Estimates suggest that up to 70% of all new cases of depression arising in older people may be caused by disability associated with ill-health (Reynolds & Kupfer, 1999).

Overall, the current study, although using different methodologies, confirms high levels of depression in the aged prisoner population compared with community population surveys.

5.9 Relationship between Variables

5.9.1 Demographics and Criminogenics

In the study population there was no significant relationship between the lengths of sentence awarded and current prisoner age; current marital status or years of

education, although those unemployed prior to prison were more likely to have shorter sentences.

5.9.2 Length of Sentence Served.

There was no significant relationship between length of sentence served and age; years of education or the absence of pre-prison employment. However, prisoners who were divorced were more likely to have longer prison sentences than those who were married ($p < 0.0001$) no doubt reflecting the increasing likelihood of divorce following long sentencing.

A separate analysis was performed by categorising prisoners into those who had served sentences ≤ 5 years and ≥20 years. As anticipated there was a large difference in the mean length of sentence between the two groups with no overlap between the two groups in terms of length of sentence served.

In keeping with the previous analysis there was no significant difference in education years between prisoners who had served ≤ 5 years with those who had served ≥ 20 years. No relationship was found between length of sentence served and employment prior to imprisonment or service in the armed forces (Both cases $p > 0.1$). Prisoners who had served sentences ≥ 20yrs were more likely to be divorced than those having served sentences ≤ 5yrs ($p = 0.03$).

5.9.3 Previous Convictions

There was no difference in current age between prisoners with previous convictions compared to those without and no relationship between the presence of previous convictions with previous employment or marital status. There was, however, a significant relationship between education and reduced recidivism in those prisoners with no previous conviction having greater years of education.

5.10 Demographics and Physical Health

In the study population hypercholesterolaemia was associated with increased age. This is comparable to the findings from the Health Survey for England, (NatCen, 2003) which reported that the prevalence of raised cholesterol more than doubled between those aged 16-24 years (26.4%) and those aged 25-34 years (59.8%); it then continues to rise to 81.0% in those aged 45-54 years decreasing again to 63.9% in those aged >75 years.

In the study population hypertension and ischaemic heart disease (IHD) were also associated with increased age. In a previous survey (ONS, 1996) the overall prevalence of hypertension (or on treatment) was just under a third (31.7%), increasing steeply with age so that by the age of >75 years two thirds of men were hypertensive with less than half on treatment compared to over one fifth of older adults (aged >65yrs). NatCen (2003) reported mean systolic blood pressure (SBP) as being 131.4mmHg in men increasing with age, with a mean diastolic pressure (DBP) of 74.3 mmHg increasing with age up to 53 years and then decreasing from age 55 years onwards. Likewise, IHD was also associated with increased age as shown in other community based studies (BHF, 2000).

Reduced mobility was also associated with increased age. Participation in physical activity has been associated with reduced risk of mortality, as well with maintenance of functional ability among older people (Lennartson & Silverstein, 2001) and may promote perceptions of psychological well-being among older prisoners. NatCen, (2003) reported men carrying out physical activity for less than 30 minutes on one to four days a week (low physical activity) showed a higher prevalence of IHD than those with a medium of moderate level of activity.

No significant relationships were found with smoking or chronic respiratory disease and increased age. Findings from NatCen, (2003) confirm a non linear relationship with age with 27% of men in the general population with the lowest (9%) in those aged >75 years and the highest in men aged 45-54 years smoking the most heavily, with just under half (48%) smoking 20+ cigarettes per day. The OPCS (1994) survey of older adults reported the prevalence of chronic respiratory disorders to be 12% in males, whilst a further survey (HSE, 2000) reported rates to have increased to 15% in males aged 55-64 years rising to 19% in those aged 65-74 years.

Somewhat surprisingly there was no significant relationship with poor hearing and visual impairment and increased age. However, sensory disabilities are acknowledged elsewhere to dramatically increase with age and may seriously compromise an older person's ability to carry out routine daily activities (Raina, Wong, & Massfeller, 2004; Wallhagen et al. 2001) together with altering their perception of the surrounding environment.

There was no significant relationship with poly-pharmacy (≥4 items of medication), and increased age. The Health Survey for England (NatCen, 2003) reported 40% of men taking at least one prescribed medicine with the proportion increasing with age, from just over one fifth (22%) in those aged 16-24 years to 86% in men aged >75 years. In this elderly prison population with high levels of polypharmacy it may be that the threshold for polypharmacy is reached early and so any age related effects are lost.

There was no significant relationship with diabetes and increased age, most likely reflecting the small numbers (14 of 181 prisoners) detected.

Current marital status and pre prison employment were not associated with the presence or absence of indicators of poor health.

Significant relationships were found between years of education and the presence or absence of a number of indicators of poor health including hypercholesterolaemia; ischaemic heart disease; hypertension; polypharmacy; poor mobility and smoking. Those with qualifications reported significantly fewer current ill health problems than those without.

5.11 Demographics and Well Being

In the study population few measures of well being (apart from complaints about the noise) were associated with increasing age. Likwise, no significant relationships were found between measures of well-being and education years, marital history, or previous employment. This suggests that if indicators of well being are associated with the length of sentence served then age is unlikely to be a confounder (see 5.16).

5.12 Demographics and Cognition

As anticipated (Folstein et al. 1975; Rosen et al. 1984) there was a clear relationship between increasing age and poor cognitive function as measured by both the MMSE and ADAS-Cog. Likewise as shown elsewhere educational attainment was generally found to be associated (positively) with cognitive function measured in later life (Cerhan et al. 2000; Launer et al. 1993; Ganguli et al. 1991).

5.13 Demographics and Depression

In the study population there was a low positive correlation between increasing age and depression. However, the strength of evidence for a relationship between depression in older age and life events varies depending on the methods used to assess life events. Compared with the general population of similar age, elderly prisoners, those aged >60 years, have about two-fold to four-fold excesses of major depression (Heskin et al. 1973) although there is only limited research to indicate to what extent this excess is caused, the consequence of or both of imprisonment. Fazel et al. (2001) when determining the prevalence of psychiatric morbidity in elderly sentenced prisoners found no association in GMSS depression with increasing age.

In this study marital status and having children were not associated with depression. Fazel et al. (2001) reported being currently widowed, divorced, or separated were not associated with an increased risk of being assigned a diagnosis of depression. Adverse socio-economic circumstances, lack of social support, recent life events have all been implicated in depression (Prince et al. 1997), and in a series of community surveys of older people, (Kawachi & Berkman, 2001; O'Hara, Kohout & Wallace, 1985) reported 17% of divorced or separated men having the highest rates of GDS depression. However, prisoners in the study had generally been divorced at a comparatively early stage of their sentences and in many instances had been married for only a relatively short period of time prior to their index offence. Thus, it is likely that the effects of marital separation were likely to have occurred many years before their current mood assessment.

Employment prior to imprisonment including previous service in the armed forces was not associated with GDS depression. Those who had previously served in the armed forces were over represented (35%) but this cohort would, at various stages of their service career, have been separated from family and friends often for long periods.

There was a weak negative correlation between years of education and GDS depression. Those with qualifications had lower rates of GDS depression, compared to those without any qualifications. In support of this finding Meltzer et al. (2002), when examining the social circumstances of older adults, reported the rates of depressive illness to decrease with level of education qualifications attained, being lowest among respondents with qualifications at 'A' level or above.

5.14 Criminogenic Variables and Physical Health

With the exception of smoking, there were no statistical differences in the length of sentence served and the presence of IHD, hypertension, COPD, diabetes, poly-pharmacy, and poor mobility. There were also no statistical differences in the length of sentence served and prisoners with vision impairment, hearing deficit and dental health.

Likewise, a separate group analysis of prisoners with sentences currently serving ≤5 years with those serving ≥20 years revealed no statistically significant relationships with the presence or absence of any health indicators.

Logistical Regression was used to control for possible confounds of age and years of education using length of sentence served as the main predictor variable and the presence or absence of hypercholesterolaemia, hypertension, ischaemic heart

disease (IHD), Chronic Obstructive Pulmonary Disease (COPD), diabetes, polypharmacy and smoking status as outcome variables. Analysis of the effects of age and education in years were introduced as separate predictor variables to assess possible confounding with the length of sentence served.

As in the univariate analysis, none of these health indicators showed any significant relationship with the length of sentence served after taking into account the age and/or education of the prisoner. As in the univariate analysis, age was associated with hypercholesterolaemia; hypertension (trend p = 0.1) and ischaemic heart disease independently of education and length of sentence. As in the univariate analysis education was associated with a reduced presence of hypercholesterolaemia; hypertension (trend p = 0.07); ischaemic heart disease; polypharmacy and absence of smoking.

In support of these findings Falter (1999), when examining the health care needs in a random sample of 1,051 long term prisoners aged >50 years (with a mean age of 57yrs), reported frequent health care utilization because of hypertension, heart disease, diabetes and other chronic health conditions. Greater healthcare utilization was also associated with disease burden and increasing age, as shown in this study, but there was no association with either length of sentence served or remaining. Prisoners, it could be argued have some influence over their own cardiovascular risk through their choice of diet, smoking, behaviour and exercise, although diet and exercise are predominantly controlled by the institution. Many activities aimed at preventing ischaemic heart disease such as smoking cessation programmes, are available in prisons. But the overriding rate limiting step may be the level of education of the prisoners which may limit not only their life style choices directly

through a lack of appreciation of the health consequences or by acting as a proxy for low social class may have put them into a high risk category before they even entered prison.

5.15 Previous convictions

With the exception of smoking, where two thirds of prisoners with a previous conviction smoked compared to just over one third (38%) with no previous conviction there was no significant difference in the presence or absence of these health variables with previous time spent in prison. This strongly supports the notion that smoking and its consequent health risks may well be an "occupational hazard" associated with recidivism and long term imprisonment.

5.16 Criminogenics and Well Being

When examining older people's well-being as a function of their environment, Warr et al. (2004) concluded that mood was mediated by perceived environmental characteristics, whilst Norberg and Melin, (2003) proposed that inappropriate sensory stimulation, such as incomprehensible noise or shouting (a common feature within custodial settings) could also lead to withdrawal and a subsequent depressed mood, with a progressive lessening of response to the environment. In the study population complaints about prison noise were associated with well-being.

As might be anticipated in the study population there was also a clear relationship between the length of sentence served and the amount of contact with the outside world. Thus, prisoners who had contact with the outside world had served significantly shorter period of time in prison. Prisoners with Christian beliefs had also

been in prison for a significantly shorter length of time in comparison to those prisoners who did not report Christian beliefs. Neither of these effects were confounded by age and appeared to be a direct result of the length of sentence served.

Prisoners in the study did not expect their overall health and well-being to improve with the passage of time and identified ageing as opposed to either length of sentence served or length of sentence remaining as a major health influencing/related factor.

Self-rated meaningfulness of life and better subjective health were significantly related to regular and relatively intensive physical exercise both at the gymnasium and in the prison grounds, although more obvious among the younger aged cohort 55-60 years. Psychological well-being seemed to be an important predictor for staying physically active at advanced ages. Ruusakanen and Rúoppila, (1995) reported similar findings when examining the relationship between physical activity and psychological well-being in people aged 65-84 years in a cross sectional study among two representative community-based samples.

5.16.1 Criminogenics and Cognition

Although it is not possible to statistically compare data from the prisoner population with those of the general population, in comparison to published age and education adjusted norms this population of elderly life sentence prisoners, revealed marginally inferior MMSE scores, and a significant difference in ADAS-Cog scores, but no effect of length of sentence served on cognitive performance even when controlling for age and educational years.

In support of this finding when using the Minnesota Multiphasic Personality Inventory to explore the relationship between imprisonment specific variables (i.e. length of sentence, duration of sentence served) upon psychological functioning in a group of long-term prisoners (N=175) at different stages of sentencing, Banister et al. (1973) reported non-significant differences in cognition between prisoners who had served an average of 11 years and those who had served less time.

When measuring the effects of long-term imprisonment on cognition in a group of 24 'long-termers' using a questionnaire to assess concentration and memory performance following a 42-month interval, Lapornik et al. (1996) identified cognitive impairment which they subsequently interpreted as being a direct consequence of imprisonment in the absence of more comprehensive and detailed data. But, in a series of studies Hood et al. (2002); Brugha et al. (2005); Singleton et al. (1998); Fryers et al. (1998), concluded that that long-term prisoners, when compared to the general population, may be relatively impervious to the negative social and emotional effects of imprisonment due to their sociopathy and psychopathy although health specific variables and education levels were not included in any of the data collected.

ADAS-Cog scores were lower in the prisoner population but there were no effects of prison related or social related variables (length of sentence served; previous time in prison; previous convictions; in-cell hobbies; attendance at gym or education programmes; being in prison work; friends in prison; good or bad relations with staff; satisfaction with food; complaints about noise; number of visits; letters sent or received) on cognition as measured with either the ADAS-Cog or MMSE.

5.16.2 Criminogenics and Depression

There was no significant relationship between the prison sentence served and GDS depression or probable length of sentence remaining. The theoretical ground for suggesting a putative link between depression and the direct effects of imprisonment is strong with cross-sectional surveys of prisoners consistently finding a higher prevalence level of both anxiety and depression (Power, McElroy & Swanson, 1997; The Howard League, 1999), typically higher in the early stages of a sentence as evidenced by Heather, (1977) who found a negative correlation between symptoms of length of imprisonment, and suggesting this reflects an initial impact of imprisonment. Mackenzie and Goodstein, (1985) also found that long-term prisoners in the early stages of their sentence had lower self-esteem and were more depressed and anxious, although findings on self-esteem have not, according to Bowling, (1994) been consistent due to methodological and definitional problems.

Prolonged sentences gradually compromise adult competency, (Emslie et al. 2005; Birmingham, 2004) and the experience of long-term prisoners is predominantly characterised by exclusion hence it is possible to envisage imprisonment, combined with the prospect of serving a long sentence, impacting adversely on mood. GDS scores were, however, unrelated to length of sentence served.

There is limited research determining the aetiology of depression/depressive illness in both the more recently sentenced and those who have served a significant proportion of their sentence. Fazel et al. (2001) in their study determining the prevalence of psychiatric morbidity in elderly sentenced prisoners aged >60 years (N=203) reported no association between GMSS depression and length of time spent in prison, - (<than 12 months, 12-47 months, >120 months). However,

Sapsford, (1983; 1978) showed a positive association between time served and affective flatness in a group of 'long-termers'. In contrast to previous studies among short term prisoners (Mackenzie & Goodstein, 1984; Wormith, 1984), which suggested high rates of depression during the first part of incarceration that progressively increased throughout the duration of their sentences, there was evidence to suggest that in the study population, levels of depressive illness in prisoners who had served ≤5 years were sustained in those who had served ≥20 years. There was no relationship between expected date of release and time left to serve and mood.

In order to control for possible confounding variables a multiple regression approach was used to assess further the relative contribution of age, education years and length of sentence served to the GDS score. The analysis showed that age, education and length of sentence served did account for a significant amount of the variance, however, the only predictor variable that accounted for a statistically significant amount of variance was age (p = .036). No relationship was found between the number of previous convictions and (GDS) depression.

5.17 Relationship between Physical Health, Cognition and Depression

5.17.1 Physical health and Cognition

Older prisoners tend to have more physical and mental heath care needs than younger prisoners and than their similarly aged peers in the community (Yorston & Taylor, 2006). Stressful life events and physical illness retain a substantial causal relationship with cognitive decline (Tennant et al. 2006; Minardi & Blanchard, 2004; Parker et al. 1997; Orrell & Bebbington, 1995; Christensen, Jorm & Henderson, 1994) and in addition to effects of ageing and differentiation between normal ageing

and pathological conditions, it would be reasonable to assume that institutionalisation and loss of contact with the outside world could further disadvantage this relatively unhealthy group of elderly prisoners in terms of brain function. Chronic stress is known to be associated with factors such as high blood pressure (Brayne, 2001), with stress and key hormones secreted during stress now viewed as being relevant to many aspects of health especially in older age (Whalley, 2001).

With the exception of IHD there were no significant relationships between the heatlh variables examined and cognitive function. Thus, the presence or absence of IHD was associated with a reduction of cognitive scores at assessment when measured using the MMSE. While both IHD and cognitive impairment are common medical conditions in older adults, a growing body of literature suggests that IHD may be an independent contributor to poor cognitive functioning (Acanfora et al. 1996; Almeida & Tamai, 2001; Putzke et al. 2000; Trojano et al. 2003). Impairments in attention and memory as well as in global cognitive function have also been described in heart failure patients (Antonelli Incalzi, 2003). This association is clinically relevant because cognitive impairment may render patients incapable of compliance and lifestyle regimen required for the management of heart failure.

5.18 Well Being and Cognition

Prisoners who had lost contact with the outside world through a combination of no visits and a lack of written or received correspondence had significantly inferior scores when measured with the MMSE than prisoners with some contact with the outside world, and there was a similar pattern when assessed using the ADAS-Cog. This may reflect increasing difficult in maintaining correspondence with increased

cognitive impairment that is independent of previous educational abilities since this relationship was present when correcting for years of education.

5.19 Physical Health and Depression

In the study population, the number of chronic illnesses was related to depressive illness, as indicated by higher GDS scores. Hypercholesterolaemia, hypertension, ischaemic heart disease, and being prescribed more than 4 items of medication (excluding antidepressants) were all related to higher rates of GDS depression, and importantly these effects were not confounded with age or length of sentence served.

There was a clear and strong relationship between physical health and psychiatric variables, and depression. Those with previous psychiatric illnesses (including depression, anxiety and alcohol/substance abuse) had significantly higher GDS scores than those without, but a history of depression *per se* somewhat surprisingly, had no more effect than any other prior psychiatric diagnosis. This despite previous depressive illness being acknowledged as a strong predictor of future depressive episodes, and a known high prevalence of depressed mood states especially in those of lower socio-economic status (Klerman & Weissman, 1989).

Fazel et al. (2001) in their study of psychiatric morbidity in prisoners aged >60 years (N=203) reported the risk of being diagnosed with GMSS depression was greater in those with 'bad' or 'very bad' self-reported general health. The risk of being diagnosed with GMSS depression at interview was greater in those with a past history of psychiatric history with only 12% of 60 prisoners diagnosed with

depression being treated with anti-depressants suggesting treatment needs are unmet in many instances.

The cross sectional nature of this study does not permit an analysis of the direction of the association between depression and poor physical health.

Depression may lead to an increase in poor physical health. Thus, prospective studies have suggested that depression may be a risk factor for the development of hypertension (Jonas et al. 1997; Bruce, 1999; Wells et al. 1993). There have also been suggestions from clinical populations of specific associations between late-life depression and diseases such as stroke (Eastwood et al. 1989) and Parkinson's disease (Cummings, 1992), with respiratory disease and arthritis also found to be associated by the majority of surveys (Beekman, 1996; Lindesay, 1990; Palinkas et al. 1990a&b; Berkman et al. 1986; Murrell, Himmelfarb & Wright, 1983). According to Stansfield, (2002) depression, independent of other mediating factors, is likely to induce biochemical changes that can be long-lasting.

Likewise physical illness may be associated with increased depressive illness. Booth, (1989) and Dugger, (1988) anecdotally reported older inmates to be at high risk for developing depression especially those who were experiencing ill-health and age-related changes and loss. Phifer and Murrell, (1986); Rabkin and Struening, (1976) and Paykel, Prussof and Myers, (1975) have all commented on the strength of the cross-sectional relationships between early health variables and depression in older age.

Consistent with findings reported following a series of community based studies examining the effect of specific chronic diseases on mood and cognition, (Harris et

al. 2006), the burden of physical health morbidity clearly had a cumulative negative effect on prisoners' mood.

In this study the prevalence of depression, although high, was the same irrespective of the length of sentence served. This implies that the same factors that cause depression are present before prison sentencing or early in the prison sentence. Poor education, either directly (or indirectly as a proxy for poor social status) is a likely contributor to the chronic poor health of this population group and early indicators may well be present before the start of sentencing.

Alternatively, other factors early on in sentencing may be risk and perpetuating factors in the development of depressive illness. During the early stages of imprisonment following sentencing prisoners are exposed to periods of stress in the form of certain types and threatening life events that are well recognised precipitants of depressive episodes (Farmer et al. 2000). Elevated cortisol is a frequent finding in depression, and it has been proposed that this may be caused by both acute and protracted exposure to stress (Seckl & Meaney, 2004). Subjective continued stress, medical burden, low self-esteem, not feeling safe, and having limited social contacts are now acknowledged to increase depressive symptoms in general, particularly when combined with lower functional status (Oxman et al. 1992).

When examining the environmental and psychosocial determinants of depression based on Lawton's environmental docility thesis, Knipscheer et al. (2000) concluded that being able and feeling able to influence one's environment increased proactive behaviour and in doing so decreased depressive symptomatology in older adults with low functional status. Lazarus and Folkman, (1984) maintained that psychological distress (anxiety and depression) primarily emanates from the

environment and can more easily be understood and treated in a social context. In this study population lack of social support and social participation were more evidently associated with the maintenance rather than with the onset of depression.

It therefore follows that those personal, environmental, and situational variables influencing the onset, course, and outcome of psychological disruption need to be identified and described to positively influence well being and reduce both distress and depression. Although environmental manipulations may improve the quality of prison life, and have the attraction of being easier to change than either the psychological makeup of the inmates or attitude of prison personnel, it is of course unlikely that depression is solely a consequence of the prison environment.

5.20 Well Being and Depression

In the study population there was no relationship between GDS scores and a number of indicators of well being including: previous experience in prison; attendance at behaviour programmes; in-cell hobby; relations with prison staff; friends in prison; attendance at gymnasium; satisfaction with food; complaints about noise, and prison work.

Prisoners satisfied with health care had significantly lower levels of depressive illness (as indicated by significantly lower GDS scores) in comparison to those dissatisfied with health care. Perception of previous, current and future health status were all significantly inversely related to depressive illness with sleep pattern revealing a similar trend. However, it is possible that retrospective rating of their physical health could have been influenced by their present mood.

Despite several commentators maintaining that prison life has little effect upon psychological well-being (Gullone, Jones & Cummins, 2000; Bukstel & Kilman, 1980) there is some evidence from other studies that psychological factors are contributory factors in the aetiology of chronic health disorders (Goldberg, Larson & Levy, 1996).

5.21 Cognition and Depression

Prisoners with reduced cognitive functioning as measured with the MMSE demonstrated increased levels of depression as indicated by GDS scores. In community samples and long-term care settings, mood, cognitive decline, and secondary organic disorders appear to predominate in later life as contrasted with the high prevalence of substance misuse, anxiety and personality disorders among younger persons (Harper, 2000; Forsell & Winblad, 1998; Wilson, 1997; Forsell, Joem & Winblad, 1994; Saunders et al. 1993; Zarit & Whitlatch, 1993). Cognitive impairment has frequently been found to be associated with depression (Rabins & Pearson, 2000; Fuhrer et al. 1992).

5.22 Ecological Assessment

The difference in views between prison officers and prisoners was particularly evident in relation to the prison environment and functions of custody, care and control, although both prison staff and prisoners encountered difficulties in maintaining their solidarity and adherence to either the prison officers' mandate or the 'cons code'.

Health issues originated from inadequate screening on reception into prison and were further compounded by poor chronic disease management coupled with prison

moves. Prison healthcare staff were not fully conversant with elderly specific approaches to overall clinical and social needs assessment and care practices.

Staff attitudes and beliefs towards prisoners were generally viewed as both negative and indifferent, and frequently unhelpful. Prison officers held ambivalent views of older prisoners considering them to be manipulative and subversive.

Relationships/inter-actional styles were predominantly superficial. Prisoners complained of a lack of respect and being spoken to in a patronising manner by prison officers especially those from the 'old school'. Prison staff acknowledged making little time for older prisoners (especially historical sex offenders) but identified a requirement for training specifically relevant to the needs of older prisoners.

Prisoners' personal plans were disrupted by indeterminate sentences and in the event of release by the imposition of the bail hostel and being resettled away from their home area. Prison staff generally displayed a lack of interest in resettlement and were primarily concerned with ensuring problems were kept to a minimum throughout the duration of their shift. Environmental issues were predominantly attributable to the prison architecture and a lack of facilities for older prisoners.

5.23 Satisfying the standards in the NSF for Older People

Recent government policy documents, National Service Framework for Mental Health, (DOH, 1999); The NHS Plan, (DOH, 2000); National Service Framework for Older People, (DOH, 2001a) and Final Report by the Workforce Action Team, (DOH, 2001b) have increasingly emphasized the need for improved mental health education and training, including knowledge about screening tools for depression,

regular medication review, and assessment of suicide risk. Issues for consideration should include:- The overall quality of the prison regime and the opportunity afforded for meaningful activity for prisoners; the extent to which prisoners feel safe and protected from intimidation or bullying; the degree to which the physical environment is safe and restricts opportunities for self-injury; the availability of quality services for prisoners with mental health disorders; the extent to which prisoners are able to maintain family ties; the extent to which prisoners are able to disclose and discuss their problems, and the ability of staff to identify prisoners at heightened risk and to offer appropriate management and support.

5.23.1 Standard 1

Given their chronic physical health profile at the time of sentencing, and as their physical and mental health further deteriorates, balancing security and clinical needs will pose a significant challenge for the prison service. As prisoners age and become increasingly frail (less robust), their autonomy is further reduced with the extent of this compounded loss ranging from a total removal of responsibility to being subsumed by the existing regime, and a resulting restriction of control and reduced access to social support and activities.

In order to satisfy continuing professional requirements as a matter of good practice, and where necessary to maintain accreditation/registration with relevant professional regulatory body, all healthcare staff must receive the necessary ongoing training and development.. National Occupational Standards and an National Vocational Qualification (NVQ) level three award have been established for custodial healthcare, developed by the Custodial Care National Training Organization, which have been designed to educate and explore the current and future work roles of

nurses and other staff employed in the delivery of nursing care within a custodial environment. In addition, Prison Health commissioned the Centre for the Development of Health Care Policy and Practice, University of Leeds to develop a modular distance learning package on leading and managing healthcare in prisons. The pilot scheme was completed in 2003 with the programme having been accredited and validated through the University of Leeds. Subsequent cohorts have undergone training and evaluation during the last two years.

5.23.1.1 Older Prisoner Policy

The impact of the prison environment on the impaired functional ability and dependency needs of many older prisoners is causing concern. A joint report (DoH/HMPS, 2001) stated that the needs of those with disabilities should be assessed, and that they should receive access to the same range of professional services as groups in the community. A recent thematic review of older prisoners in England and Wales acknowledged that prisons have been designed with younger, more able-bodied people in mind (HMIP, 2004). The review highlighted the need for individual assessment in accordance with guidance from the National Service Framework for Older People (DoH, 2001) but found little evidence that assessment and provision of care was being undertaken.

Regardless of mobility levels and other imposed functional restrictions there was no clearly defined existing policy regarding their location on the wings, hence several prisoners were inappropriately placed on either the top landings (upper floors), and in the case of HM Prison Albany some distance from the healthcare centre, workshops, prison canteen and designated visitors room.

5.23.2 Standard 7

The application of the Mental Health Act (1983) is not permitted in prison. This applies equally to patients in prison awaiting transfer to a psychiatric hospital for either assessment or treatment under the compulsory powers of the Act. Treatment without consent is only to be administered under common law in certain circumstances and in accordance with a practice accepted at the time by a reasonable body of medical opinion, skilled in the particular form of treatment and to professional standards of practice. Effective policy implementation and service improvements will require strong strategic partnership, both directing and being informed by operational issues. Recent claims by both the Home Office and the Department of Health suggesting that both services were on track to reach equivalence in the delivery of mental health care to older prisoners would, in my opinion, be mistaken and somewhat premature.

5.23.3 Standard 8

A small proportion of prisoners (<8%) had previously been itinerant with either no fixed abode or permanent address and had not been registered with a general practitioner (GP). For those who were, GP notes were not automatically forwarded following sentencing, but could be requested by prison healthcare staff with approval from the individual. Health does not assume priority within the prison regime hence medical notes were often 'lost in the system' due to relocation and other administrative delays. In some instances, prescribed medication had not accompanied the individual from the transferring prison with a corresponding disruption in pharmacological management and care practices. Several prisoners complained their medication had been downgraded to unacceptable alternatives

prior to any formal clinical assessment and in other instances had been abruptly discontinued. Undetected illness at the initial screening may remain untreated for some considerable time, often until an acute exacerbation occurs with a consequential impact upon available health resources.

Assessment of health status on reception into prison is therefore pivotal to determining accurate diagnoses and the care the prisoner will ultimately receive (Birmingham, Mason & Grubin, 1997; Duffy, Lenihan & Kennedy, 2003; Birmingham & Mullee, 2005). Perusal of prisoner medical records revealed that it was not uncommon for the initial assessment to be undertaken within restricted time constraints in the form of a self-rated/reported questionnaire and interpreted by staff with limited knowledge (Gavin, Parsons & Grubin, 2003). Equally for those prisoners with limited intellectual ability providing an accurate medical history in the form of a questionnaire was challenging. Nevertheless, self-reported illnesses were generally confirmed in prisoner medical records although any continuity of previous 'community care' had, in many instances, been either disrupted or abandoned on being transferred to prison. Professionally relevant standardization would be an appropriate aim for the future development of assessment schedules, given the variety of different staff with different training and socialisation experiences that would be expected to undertake the assessment of need.

There was a minimal focus on preventative health programmes in contravention of the recommendations contained within guidance on public health and findings from a comprehensive and extensive survey by Cattan and White, (1998) reviewing evidence based health promotion interventions targeting social isolation and loneliness among older people.

5.24 Summary

Contrary to the hypothesis, findings from this study suggest that ill health is imported rather than a direct consequence of imprisonment and would be in keeping with previous research in the general prison population. Whilst it could be reasonably assumed that the prison environment had not facilitated 'recovery' it may in some instances (e.g alcohol dependence) have prevented further deterioration albeit by the imposition of confinement and a more structured, if austere lifestyle. Irwin, (1980) argued that for prisoners who were caught in destructive social web or were being swept along and out of control, imprisonment could offer beneficial 'respite', during which they could extricate themselves from previous destructive dynamics.

The number of elderly life and indeterminate sentence prisoners in England and Wales has inexorably increased over the last decade partly attributable to our society's increasing proclivity for using prisons and as a result of changes in criminal justice policy. As the recent politically driven proposed changes to sentencing policy suggest and the unprecedented rise in the prison population, (at present a little over 80, 000 and rising), the so-called 'greying' of the prison population is to some extent an acknowledged collateral consequence of the criminal justice policy. Harsher sentencing policies have resulted in an increase in the number of prisoners serving whole life sentences, life sentences, indeterminate sentences and sentences in excess of 20 years.

Older prisoners are more likely to be serving long sentences compared to their younger counterparts (Howse, 2003), with one fifth of all older prisoners under sentence 'lifers'. The combination of presumed gravity with risk (Kemshall, 2003), together with evident difficulties in finding safe and appropriate resettlement

opportunities has predictably resulted in extending the length of time actually served, especially for life sentence prisoners and sex offenders. At a minimum a substantial proportion of older prisoners have been convicted of serious offences and have received lengthy indeterminate or life sentences, and whilst only a handful have 'whole life' sentences a substantial proportion will enter advanced old age in prison and some will die before completion of their sentences.

Analogous with the general prison population elderly life/indeterminate sentenced prisoners are a vulnerable group with many having experienced high levels of social exclusion which generates high levels of health need (Social Exclusion Unit, 2002; Lindquist & Lindquist, 1999). They present to services with significant psychiatric and physical health morbidity (Cunningham, Rawaf & Collins, 2002; Earthrowl, O'Grady & Birmingham, 2003; Murray, 2004) while several academic studies (Fazel, 2004; Frazer, 2003; Reed, 2002; Eastman, 2000), and two recent reports by the HM Prison Service, (2002a&b) have concluded that both the health and social care of older prisoners are not being satisfactorily met. This ongoing debate, according to Osborne and Thomas, (1991) invariably focuses upon the dual responsibility of social necessity/good and the conflict between health care and security functions germane to clinical practice. Scull, (1984) argues that the increased stress created by imprisonment combined with the dependent relationship on prison staff and inability to implement simple healthcare remedies results in the paradox of 'responsibility without power' whereby the organizational goals of the prison conflict with the health needs of the prisoner.

In his final annual report for 1999-2000, prior to retirement, the former Chief Inspector of Prisons, Sir (now Lord) David Ramsbotham voiced his concerns about

the totally inadequate care for the increasing numbers of elderly prisoners, whose health and care needs he maintained exceeded those of the general population (HMCIP 2001). His successor, Anne Owers, in her first annual report, two years later (HMCIP, 2002) documented the damaging effects of the dramatic rise in the overall prison population, describing the majority of prisons to be less safe than they were the year previously, (2001) and also less decent places. She identified the Prison Service's greatest strength, (but also its Achilles heel some commentators would argue), as being its ability to cope, manage crises and absorb problems, but any gains achieved by the Service had, she maintained, been effectively eroded by the harmful consequences of overcrowding, lack of training for prison officers, and an increasingly ageing prison population. In her second annual report 2003-2004 (HMCIP, 2005) she referred to prison healthcare maintaining there had been a considerable improvement from a previous shamingly inadequate service to one that increasingly bore comparison to practices outside, but noted healthcare staff to be struggling with the scale of the ongoing task.

The overall health of prisoners in this study when compared to that of the general prison population was inferior and their use of prison medical services correspondingly higher. This population of elderly prisoners clearly demonstrated a high burden of chronic ill health, high levels of depressive illness together with a high prevalence of risk factors for future ill-health. With ageing and disease progression they are at significant risk of future functional decline and increasing levels of psychiatric morbidity. However, the overall health status of prisoners appeared unrelated to the length of sentence served.

Findings from the research are, however, based on a cross-sectional design and therefore leave unanswered the question of direct causality. Scales (Geriatric Depression Scale) which measure depressed mood do so at a symptomatic level with the general assumption that there is a linear relationship between the score and the severity of the illness. Depression in elderly men can be easily missed, as elderly men tend not to complain of mood symptoms, even when asked, and they adopt a somewhat stoic demeanour in the face of life difficulties (Georgotas, 1983).

The MMSE and ADAS-Cog are non-automated tests the latter primarily assesses aspects of memory which, according to Holmes and Gilbody, (1996) has resulted in other important cognitive deficits being overlooked. Findings from the study clearly illustrated a significant difference between the ADAS-Cog scores of the sample population and published norms, whist the MMSE scores revealed a small lower performance. Categories such as mild cognitive impairment (MCI) have been influential in drawing attention to 'isolated memory impairment' and its potential risk of developing into Alzheimer's disease, but whilst a small proportion of the population fell into this category this can only be confirmed by longitudinal studies. Nevertheless, the overall results clearly have implications for the Prison Service, especially when considering the acknowledged prodromal features of dementia and an apparent lack of elderly provision within the current prison healthcare system.

For elderly prisoners, age-related problems are compounded by vulnerability, especially those which have been compounded by years of neglect either prior to or during imprisonment, a recognition that time is running out, and facilities that are poorly equipped to deal with gerontological illnesses. As noted by Fazel et al. (2001), within the prison environment diagnostic indicators may initially be disguised and under-recognized in view of 'prison milieu' and the cumulative effects of ageing in a

restricted socio-cultural environment. Low detection rates by prison staff may be attributable to inadequate training, suspicions of malingering, being overlooked because of limited resources and the cramped environment. Coid et al. (2003) in a survey of psychiatric morbidity of prisoners in solitary cellular confinement expressed increasing concern that behavioural disorders secondary to psychiatric morbidity may be perceived and dealt with by prison staff as a disciplinary problem instead of as an illness-related behaviour.

Prison Officers have a long and varied history of delivering healthcare within penal institutions, but a recurring theme by prison healthcare critics has been the regime's failure to negotiate an appropriate pathway between the twin commitments to care and control. In the new era of NHS equivalent service provision determining what constitutes an appropriate framework of care practices will require considerable forethought, although the foundation of psychosocial health in older people is, according to Adams and Clark, (1999); Kitwood, Buckland and Petre, (1995), the maintenance of self-esteem and emotional well-being. Providing care for this group is likely to have significant unrecognised resource implications for the NHS.

The Prison Service of England and Wales has not yet developed a national strategy for older prisoners, despite concerted calls from a number of influential bodies including HMCIP (2004b), Prison Reform Trust (2003a), and HMIPP (1999). On the other hand in its defence, it could be argued that the Service is constantly required to respond and adapt to change, albeit in a reactive manner, (81,000 prisoners, 40,000 staff, 146 prisons), striving to satisfy an ever increasing range of standards (according to pre-specified criteria such as the Key Performance Indicators; KPIs), including the relatively new but unique challenge of accommodating a progressively

more ageing population, whilst providing, when necessary, equivalence of care and standards of care practice to that provided in the National Health Service.

The National Service Framework (NSF) for Older People (DOH, 2001), is one of the few policy documents in the United Kingdom to refer to older prisoners. It highlights the requirement for the NHS and Prison Service to work in tandem/partnership thereby ensuring that prisoners have access to the same range and level of health services as the general public and acknowledges that older people have a wide range of health and social care needs, both when in prison and on release. However, it uses 65 years as the starting point for the planning for the older age services even though Age Concern provides services to people from 55 years and over and older people forums begin at age 50 years. Equally, it is widely acknowledged that elderly prisoners have a biological age which is generally acknowledged by informed clinicians to be approximately ten years in advance of their chronological age.

Taylor, (2003) in a recent letter to the Journal of Community Care, reported that a growing number of charities were calling for alternatives to imprisonment for older prisoners, and although the Chief Inspector of Prisons in her thematic review (2004) pledged that a new unit for 15 old and infirm prisoners was to be commissioned at HM Prison Norwich a completion date is yet to be announced. Boateng's (2000) condemnation of medical services at HMP Brixton, which he described as being grossly inadequate, bore remarkable similarities to those raised by Tumin, (1990) following his inspection of a neighbouring establishment virtually a decade previously. Despite having entered the twenty first century it would appear that little has changed. Examining the prisoners' perspective of access to healthcare and

experiences at different stages of sentencing will enhance and enable the provision of equitable service provision by determining why prisoners use health services, when they use the services and how best those services can met their needs. By increasing the present knowledge base further consideration can be given to how best mainstream NHS service provision and how standards can be translated into a prison setting which in turn will form the basis of a best practice guide.

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Appendices

Appendix 1 Assessment Schedule

Prison Medical Records - Assessment Schedule

Assessed By:..... Date:.....

Name:..... Age:.....

Date of Birth:.....

	Y	N
Clinical Suspicion of Dementia/Depression:.....	☐	☐

State Reason/s:.....

.....

Current Medication and Doses:

1.
2.
3.
4.
5.

Last Completely Well:.....

Time Course of Decline:	Gradual	Sudden	Fluctuating
	☐	☐	☐

Significant Medical History and Physical Finding:

Hypercholesterolaemia, ischaemic heart disease, hypertension, cardiovascular disease, respiratory disease, musculoskeletal disease, endocrine disease, gastrointestinal disease, neurological disease, carcinoma, impaired vision (cataracts), hearing deficit, smoking/non-smoking.

Significant clinical investigations/results:

Significant Mental Health Findings/Mental State

Previous psychiatric history, depression/anxiety/stress, emotional state, communication, sleep pattern, cognitive function, other behaviours)

Date

Screening Tool ☐ ☐ ☐ ☐

Healthcare Staff's View:

Clinical Impression:

Date of Conviction/Length of sentence/Time in Remand/Estimated date of release:

Any other relevant information:

Suggested review date:

Researcher.....Date.....

Appendix 2 Semi-structured Interviews (Prisoner)

Topic Guide for Semi-Structured Interviews (Prisoners)

General Issues

Introduce myself
Any other questions prior to commencement
Nature of the alleged index offence
Time spent on remand/in prison
Length of sentence/length of sentence served
Parole/Estimated Release Date/Life Licence
Most difficult aspect of being in prison
The environment
The regime
Comparison to other establishments
Consistency of staff
The role of the Governor
Hopes for the future
Relationships with prison staff/prisoners
Visits, communication and correspondence

Clinical Issues

The relationship between custody/care and control
Perception of health status - past, present and predicted
Access to healthcare
The role of the prison healthcare officer
Could prison healthcare be improved?
Initial and ongoing health screening
The needs of the older prisoner
Location on the wings

Appendix 3 Semi-structured Interviews (Prison Staff)

Topic Guide for Semi-Structured Interviews (Prison Staff)

General Issues

Attitudes towards life sentence and vulnerable prisoners
Attitudes towards the ageing lifer
The composition of life sentences
Risk assessment
The role of the Governor
Job satisfaction
Automatic release for lifers aged 75yrs+

Clinical Issues

The tension (if any) between custody/care and control
Understanding elderly care
Environmental issues
The role of the prison healthcare officer
Priorities in healthcare provision
Prison healthcare - strengths and needs
Could prison healthcare be improved? - if so how?
Views of screening processes
The purpose of health screening
The needs of the ageing prisoner
Equivalence of healthcare
National Service Frameworks
Clinical Governance
Clinical Supervision

Appendix 4 Agreement - Albany

ANM/tsd/A.K.

03 January 2003

Mr C Telling
Clinical Manager
Medical Centre
HM Prison Albany
Newport
Isle of Wight
PO30 5RS

Dear Mr Telling

Re: Health screening in life/indeterminate sentence prisoners aged 55yrs and over

Further to our most recent discussions and your request regarding the above proposal, I confirm that the following was agreed:

When visiting HM Prison Albany in the role of research student, I am a member of the University of Portsmouth, (Department of Psychology), and therefore bound by ethical procedures, which includes maintaining ownership of all data arising from the research, together with a requirement to preserve confidentiality.

In my secondary role as qualified practitioner, I would be pleased to comply with your request to write a clinical report on each participant. Both requirements are subject to approval by the Director of Prison Health Care and are to be made explicit to all stakeholders and reflected in the Informed Consent Proforma.

I acknowledge the reciprocal value of conducting applied research, which has current practical implications, particularly within a health setting, but equally I am anxious not to embark upon any course of action that does not have overall approval from either the participant, HM Prison Service or the University of Portsmouth.

cont.

In the event of fulfilling all the above criteria, I will:

Undertake the screening of all life/indeterminate sentence prisoners aged 55 years and over at HM Prison Albany using the MMSE; ADAS-Cog, Geriatric Depression Scale and Barthel Index.

Produce a formal clinical report following each interview, detailing my clinical impression and results following testing together with any recommendations for either further repeat screening or referral to specialist healthcare.

I look forward to hearing from you in due course.

Yours sincerely

Nicholas Murdoch
Research Student

cc Director of Prison Healthcare

Appendix 5 Agreement - Kingston

ANM/tsd/A.K.

03 January 2003

Mrs G Ripiner
Clinical Manager
Medical Centre
HM Prison Kingston
122 Milton Road
Portsmouth
PO30 5RS

Dear Mrs Ripiner

Re: Health screening in life/indeterminate sentence prisoners aged 55yrs and over

Further to our most recent discussions and your request regarding the above proposal, I confirm that the following was agreed:

When visiting HM Prison Kingston in the role of research student, I am a member of the University of Portsmouth, (Department of Psychology), and therefore bound by ethical procedures, which includes maintaining ownership of all data arising from the research, together with a requirement to preserve confidentiality.

In my secondary role as qualified practitioner, I would be pleased to comply with your request to write a clinical report on each participant. Both requirements are subject to approval by the Director of Prison Health Care and are to be made explicit to all stakeholders and reflected in the Informed Consent Proforma.

I acknowledge the reciprocal value of conducting applied research, which has current practical implications, particularly within a health setting, but equally I am anxious not to embark upon any course of action that does not have overall approval from either the participant, HM Prison Service or the University of Portsmouth.

Cont.

Mrs G Ripiner

In the event of fulfilling all the above criteria, I will:-

Undertake the screening of all life/indeterminate sentence prisoners aged 55 years and over at HM Prison Kingston using the MMSE; ADAS-Cog, Geriatric Depression Scale and Barthel Index

Produce a formal clinical report following each interview, detailing my clinical impression and results following testing together with any recommendations for either further repeat screening or referral to specialist healthcare

I look forward to hearing from you in due course

Yours sincerely

Nicholas Murdoch
Research Student

cc Director of Prison Healthcare

Appendix 6 Participant Information Leaflet

Participant Information Leaflet

1. Study Title:

2. Invitation:

You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done, and what it will involve. Please take time to read the following information carefully and discuss it with the Medical Centre Manager if you wish. Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

3. What is the purpose of the study?

The rate of chronic illnesses in the general population is likely to be found within the prison lifer population. Elderly, life and indeterminate sentence prisoners are part of the NHS community and the modernisation and development of health provision for older people must therefore include services for this group. The quality of health care is critical on disease recognition and early identification, and is ultimately dependent on the skills of health care staff, with any changes in services or policy dependent upon appropriate training. Early intervention may prove to be equally beneficial especially in view of more recent clinical advances in the treatment of specific disorders. This study will assist in the provision and design of appropriate healthcare arrangements.

4. Who is organising the study?

The study is part of an academic project based at the Psychology Department, University of Portsmouth and in collaboration with HMPs Albany & Kingston as part of a health-screening project prior to the NHS assuming responsibility for prison healthcare in April 2006.

5. Why have I been chosen?

You have been chosen because of your age and prisoner status.

6. Do I have to take part?

It is entirely up to you whether you decide or not to take part. If you decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part, you are still free to withdraw consent at any time and without giving a reason. This will not affect you in any way.

7. What will happen to me if I take part?

If you agree to take part in this study I will want to ask you some questions and look at your medical records to get information about any previous illnesses you have suffered. I will visit you on several occasions over a period of twelve months. Each visit will take about 45 minutes of your time.

8. Are there any disadvantages/risks in taking part in this study?

No disadvantages or risks are anticipated.

9. What are the possible benefits of taking part?

No individual benefit will come as a result of participation in this study.

10. Confidentiality – who will know I am taking part in this study?

The information collected about you during the study will be confidential. Your name will not appear on any reports or publications that result from the study. You shall be identified in study documents by a unique subject identification number, your initials and date of birth.

11. Ethical Approval

HM Prison Service ethics committee has approved this study

12. What will happen to the results of this study?

At some point after the overall study has finished the results will be reported in an academic document and copied for HM Prison Healthcare purposes.

13. Contact for further information

If you have any questions at any time about the study, please do not hesitate to contact the Healthcare Centre Manager.

Appendix 7 Informed Consent

PARTICIPANT INFORMED CONSENT

Thank you for reading the information about the research project. If you would like to take part, please read and sign this form.

Department:...University of Southampton, Post Graduate School of Medicine

Study Number:.....

Person identification Number for this study:.....

Title of Project:.....

Name of Researcher:...A N Murdoch.....

Name of Supervisor:...Dr Clive Holmes.....

Contact details for researcher:

Tel:.....

1. I confirm that I have read and understand the information sheet dated .....for the above study and have had the opportunity to ask questions. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without my legal rights being affected. ☐

3. I give permission for the researcher to look at my health records to get information on any previous illnesses I have suffered. I understand that this information will be kept confidential. ☐

4. I agree to take part in the above study. ☐

5. I understand the procedures to be used and consent to the data being used for research. ☐

6. I understand that all data from the research will be stored for five years. ☐

7. I understand that I am unable to obtain the scores from any health screening tools ☐

8. I understand that the researcher will write a clinical report following the procedure and this will be filed in my medical records ☐

(please initial box)

Name of participant ..... Date..... Signature.....

Researcher ..... Date ..... Signature.....

1 for participant 1 for researcher

Appendix 8 Overall Assessment Schedule

Overall Assessment

Age & Sentences

Age at interview
Age first went to prison
Number of previous convictions
Number of prison terms
Length of sentence
Years served to date

Criminogenic Status

Has attended any offending behaviour programmes: yes/no
Willing/unwilling to attend obps
Works in prison yes/no

Key characteristics

Race: Black/white
Status: Single/Married/Divorced
Number of children
Contact with relatives yes/no
Receives visitors yes/no

Education

No educational qualifications: yes/no
'O' levels: yes/no
Higher education: yes/no

Tobacco & Alcohol use

Smokes/Non-smoker
Has health problems related to smoking: yes/no
Alcohol consumer/Non-alcohol consumer
Has health problems related to alcohol: yes/no

Health Assessment

Number of reported illnesses in previous twelve months
Health status prior to imprisonment: good/fair/poor
Current health status: good/fair/poor
Health worse now than five years ago: yes/no
Predicted health status in next five years: good/fair/poor
Mobility level: intact/restricted
Prescribed medication > 4 items

Health conditions

Wears prescription glasses: yes/no
Has glaucoma
Is blind in one/both eyes
Has cataracts: yes/no
Has dentures: yes/no
Hearing: intact/impaired
Has diabetes: yes/no
Has cholesterolaemia: yes/no
Has hypertension: yes/no
Has ischaemic heart disease: yes/no
Has angina: yes/no
Has arthritic changes: yes/no
Appetite: good/poor
Requires a special diet: yes/no
Sleep disturbance: yes/no

Cognitive screening tests

Uncooperative to testing: yes/no
ADAS-Cog score
MMSE score
Has organic brain disease: yes/no
Mood stability: yes/no
Tearful: yes/no
Has clinical depression: yes/no
Demonstrates cognitive impairment: yes/no

Is in denial: yes/no

Concentration ability: good/fair/poor

Attentive span: normal/short

Motor activity increase: yes/no

Tremours: yes/no

Concerns

Health status: good/fair/poor

Healthcare provision: good/fair/poor

Boredom: yes/no

Fear of growing old in prison: yes/no

Fear of dying in prison: yes/no

Prison regime: good/fair/poor

Attitude of prison staff: helpful/unhelpful

Uncertainty: yes/no

Visitors: yes/no

Institutionalized: yes/no

Fear of being released: yes/no

Lack of choice: yes/no

Lack of status: yes/no

Lack of respect: yes/no

Excessive time banged up: yes/no

Food: good/fair/poor

Appendix 9 Typical Clinical Report - Albany

Clinical Report 1

CLINICAL-IN CONFIDENCE

Name: H.M. **Date of Birth**: May 1930 **HM Prison Albany**

Mr H, aged 73 years, underwent cognitive evaluation using the Mini Mental State Examination (MMSE) and the Alzheimer's Disease Assessment Scale-Cognition (ADAS-Cog), together with mood assessment using the Geriatric Depression Scale (GDS), at HM Prison Albany 19 December 2003.

His clinical history is well documented, revealing an individual with mild learning disabilities who suffers from epileptiform seizures and bouts of depression with associated anxiety. His physical health is only fair having undergone a partial gastrectomy several years ago and accompanying duodenal ulceration. He has a left-sided inguinal hernia, is a non-smoker, wears glasses (x2) and dentures, and is currently awaiting hospital admission for removal of bilateral cataracts.

He is a post tariff life sentence prisoner although he disputes the nature of his last index offence, maintaining it to be arson as opposed to a sexually orientated crime, which may be of little relevance. Following his planned operative procedure early in the New Year and subsequent discharge from hospital he told me he was scheduled for relocation to HM Prison Usk in order to undertake a special treatment programme. He acknowledged that his final release date was, as yet, undecided but probably not imminent.

His current prescribed medication is listed below, reflecting an individual with multiple health care needs.

Clinical Impression

Mr H is diminutive in stature, slightly built and able to mobilize independently. He was pale in appearance with parchment like skin, had thinning white hair and an untrimmed white beard. He was wearing thick glasses and was appropriately dressed. He spoke with a pronounced Nottingham accent and demonstrated pressure of speech, often straying from the initial topic of conversation in order to justify his behaviour. From the outset he attempted to dominate the entire proceedings bemoaning his plight and that of some others, together with expressing dissatisfaction about attendance at his forthcoming treatment programme. He described an unhappy childhood and episodes of post- ictal fugue following epileptiform seizures when he was unable to recall any events for several hours, possibly claiming amnesia as a rationale in defence of his crimes.

He alluded to a 'miracle' in his early adult life, following which he became literate and 'found God'. He grudgingly acknowledged his previous crimes albeit attempting to lessen their severity, '....I know what I did was wrong', but was reluctant to accept the true nature of his offences. He told me he had been selected for the ministry following another miracle and was currently awaiting his calling. The grandiose nature of his religious delusions could, I suspect easily serve as a prelude to a more protracted psychotic episode. He disliked HM Prison Albany, especially the regime and maintained that other establishments in which he had been imprisoned were more flexible. He stated that other prisoners viewed him as being supportive and 'easy to speak to' and he said that he prayed for several specific inmates on a regular basis.

He appeared to possess no insight whatsoever into his criminogenic behaviour, was manipulative, and whilst acknowledging the probable consequences arising from not embarking upon the SOTP, seemed almost unconcerned/indifferent at the prospect of not being considered for early release. Remaining in prison had possibly become his raison-d'être.

He described his appetite as poor, albeit variable, although he has maintained weight, but occasionally suffered some abdominal discomfort. His physical health was noted to be only fair and he was uncomplimentary about prison healthcare provision. His overall vision has been deteriorating over several years, but his peripheral abilities have been reducing more recently which in turn has caused him some concern. His sleep pattern was possibly erratic, but the early morning waking he referred to is fairly common in older adults.

Mr H's mental health has been relatively stable throughout his time in prison. He was either unable or unwilling to maintain eye contact during conversation, demonstrated a restricted vocabulary range and often repeated the initial stages of the discussion. His non-verbal communication was generally inappropriate, and he occasionally demonstrated incongruity of affect. He disliked the isolation of his cell preferring to spend time with other prisoners, viewing himself as being their Saviour, although he may of course have another agenda. He spoke about his close friendship with a younger prisoner whom he felt was depressed and in need of more support. He described a cyclothymic mood pattern and although he did not present as being clinically depressed I noted he was prescribed anti-depressant medication.

He was lucid, orientated in time, place and person but with a short attentive span and limited concentration abilities.

His overall comprehension was satisfactory with intact cognitive skills. He was able to recount episodes from his earlier life but was inclined to apportion blame to others in the event of encountering problems. His superficial, simplistic approach to the overall interview was one I suspect he had adopted during the course of his life often to the detriment of others. I did not detect any compassion or empathy for others involved.

In summary

Results following the administration of the ADAS-Cog confirmed Mr H to have some difficulty with recall, together with naming objects. He scored reasonably well on the remaining tasks, but demonstrated short-term memory deficits and restrictions in spoken language ability, spontaneous speech and impairment in overall comprehension.

He encountered significant difficulty with word recognition possibly attributable to either illiteracy or word blindness. He scored 25 (max 30) when tested with the MMSE. Testing with the Geriatric Depression Scale resulted in a score of 21, (max 30), that would indicate him not to be depressed (0 -10 = not depressed; 11-20 = mild depression; 21-30 = severe depression). At present he does not demonstrate any clear indication that would suggest the presence of organic brain disease although he should undergo further testing in six months time in view of his established psychiatric history. When considering his age, his physical health is generally good although he will continue to require on-going medical review throughout the remainder of his sentence.

His current medication is as follows:

Sertraline - 50mgms daily
Sodium Valproate - 200mgms tds
Pantoprazole - 40mgms daily
Bendrofluazide - 2,5mgms daily
Paracetamol - two tablets prn

Appendix 10 Typical Clinical Report - Kingston

Clinical Report 2

CLINICAL-IN CONFIDENCE

Name: F.O. **Date of Birth: April 1935 HM Prison Kingston**

Mr O, aged 68 years, underwent cognitive evaluation using the Mini Mental State Examination (MMSE) and the Alzheimer's Disease Assessment Scale-Cognition (ADAS-Cog), together with mood assessment using the Geriatric Depression Scale (GDS), at HM Prison Kingston on 10 March 2004.

His clinical history is fairly extensive and well documented, comprising a multiplicity of physical health disorders, some of which are long-standing, and mental health issues predominantly mood related. He is moderately emphysematous, known to experience angina, is hypertensive with poor circulation and has hypertrophy of the bladder neck. Other health problems include effusion of the right knee with a consequential restriction to his gait. He is increasingly experiencing episodic breathlessness and retro-sternal pain, which he maintains are attributable to uncontrollable coughing bouts. He smokes, wears glasses and has no teeth.

He was sentenced to life in 1990 with an indeterminate release date and is currently eight years over tariff.

His current prescribed medication is listed below comprising non-steroidal anti-inflammatory agent, potassium sparing diuretics, ACE inhibitors, prophylaxic measures for angina, beta-blockers and broncho-dilators.

Clinical Impression

Mr O is an aged, haggard looking, medium-built individual of average height with moderate emphysematous features. He has close cropped, thinning grey hair, tremulous hands with nicotine stained fingers, broken, dirty fingernails, and has part of his left index finger missing. He was appropriately dressed for interview but was unshaven, looked ill-kempt and downcast. He told me he felt unwell and was due to see the Medical Officer later in the morning in view of the recurring problems with his knee.

He spoke fairly quietly with a Newcastle accent but had lived in Hertfordshire for many years of his adult life. He described his overall health state as currently poor, and having significantly deteriorated since being in prison. Coughing bouts persistently interrupted proceedings and he appeared to experience significant discomfort.

He left school aged 15 years with no formal qualifications and subsequently had a number of unskilled jobs. He has never married but had formed a close relationship lasting many years with a woman who now lives in South Yorkshire, and in the event of his release he would like to resume contact. Despite him being officially retired he worked part-time in the laundry and spent the remaining part of the day reading and playing computer games. He receives no visitors and little correspondence. He was non-complaining about the prison regime but encountered some difficulty in tolerating the idiosyncrasies of other inmates.

He told me he had attended various offending behaviour programmes, including the SOTP (both core and booster) but assumed his continuing incarceration was risk-related. His greatest fear was being incapacitated either following a physical catastrophe or an acute respiratory arrest, and as a result had made an advanced directive indicating a wish not to be resuscitated.

His appetite is only fair and he described the food at HM Prison Kingston as being of poor quality and unsuitable. He said he was encountering increasing difficulties with sleeping and lying down, waking intermittently on several occasions during the night with early morning respiratory embarrassment.

Mr O's mental health is generally stable with the exception of a marginally flattened affect and poor motivation. His cognitive estimates were reasonably good but sluggish, he did not demonstrate any thought disorder and although he described some lability of mood (subjectively: sometimes feeling down in the dumps; objectively: looks sad) and was melancholic, did not present as being clinically depressed. He lacked energy, did not enjoy mixing with other inmates, had few if any friends, preferring to spend time on his own. He maintained eye contact during conversation, was generally socially appropriate, and exhibited a reasonable vocabulary range. He rarely smiled but responded to gestures of emotional warmth.

He was lucid, orientated in time, place and person, demonstrated a reasonable attentive span but limited concentration ability. His overall comprehension was satisfactory and he was able to recount episodes from his earlier life with good recall for recent events. His manner throughout was polite although initially suspicious and he co-operated fully.

In summary

Results following testing with the ADAS-Cog confirmed Mr O to have scored well on the majority of tasks. He did, however, encounter some minor difficulty with word recognition and constructional praxis. His spoken language ability and overall comprehension was not impaired and he did not exhibit any signs/symptoms that would suggest the presence of organic brain disease. He scored 27 (max 30) when tested with the MMSE. Testing with the Geriatric Depression Scale resulted in a score of 15, (max 30), that would indicate him not to be depressed (0 -10 = not depressed; 11-20 = mild depression; 21-30 = severe depression). His physical health, however, is only fair and he is therefore likely to warrant regular clinical review for the foreseeable future.

His current medication is as follows:

Aspirin - 75mgms daily
Atorvastatin - 40mgms
Isosorbide Mononitrate - 20mgms bd
Clopidogrel - 75mgms daily
Frusemide - 20mgms daily
Bisoprolol - 2.5mgms daily
Nicorandil - 20mgms bd
GTN Spray - to be used when necessary
Bactroban Cream - to be applied as directed

Appendix 11 Typical Prison Regime – Staff on duty

HM Prisons Albany and Kingston

Prisoner Related Information

Typical New Regime (03.04.05)

Following a complete review of the prison regime a new daily routine will operate from **3rd April 2005**. The main changes are as follows:

Staff on duty **Staff briefing in the main corridor**

One detailed member of staff to wing to relieve night staff

Unlock at 0730hrs

Movement to workshops a.m. will be at 0815hrs

Movement to workshops p.m. will be at 1315hrs

Exercise will take place in the morning

There will be a short lock up roll check at lunchtime, approximately 15 minutes. Prisoners will then have access to phones, showers and landings

There will be no work for prisoners on Friday p.m.

Monday to Thursday, evening lock up will take place at 1845hrs

Friday evening lock up will take place at 1815hrs

With Prisoners unlocked this will enable visits to start on time

During the summer (May to September) it is hoped to run field association, Monday, Tuesday and Wednesday from 1720-1820hrs and on Friday afternoons from 1400-1530hrs

The weekend routine will remain the same as now

'Aramark' canteen will commence on Thursday at 1725hrs

There will be no visits on Monday a.m.

Unemployed prisoners and prisoners remaining on the wing for interview or medical appointments will remain unlocked during the core part of the day

Prisoners placed on Rest in Cell will remain locked up all day - Access to sanitation facilities via wing patrols

The new regime will be under constant review to iron out any problems and undergo a full review after 3 months.

Appendix 12 Typical Prison Regime – Monday - Thursday

Revised Core Day - Monday to Thursday

Times	Activity
07.15	Staff on duty - Staff briefing - Roll check
07.30	Unlock - Night staff off duty
07.45	Treatments
08.15	Movement to labour
08.15	Unemployed exercise
08.30	Corridor movements - Gym (N.V.Q.) Chapel Education
08.45	Corridor movements - Gym (Courses)
09.15	Unemployed exercise return & Programme movement
11.30	Corridor movement - Gym (All Chapel, Education return)
11.45	Labour & Programmes movement
11.45 -12.15	Employed exercise
11.45 -12.30	Lunch served & roll check
12.30	Staff to lunch (A & M shifts)
13.00	Late shift staff on duty
13.15	Early shift staff off duty & labour movement
13.30	Corridor movements - Gym (All), Chapel
14.00	Programme movements/Visits commence (Mon/Wed/ Fri)
16.00	Visits cease (Mon/Wed/Fri) Corridor movements - Edu return
16.15	Labour movement
16.20	Corridor movements - Gym (All) Chapel
16.30	Programme movement
16.45 -17.15	Tea served
17.30	Staff to tea (A shifts)
17.30	Activities/Association
18.30	Activities cease
18.45	Lock up/Roll check
19.00	Staff off duty
20.30	Night staff on duty/Roll Check
20.45	Evening patrols off duty

Appendix 13 Typical Prison Regime - Friday

Revised Core Day - Friday Afternoon

Times	Activity
12.30	Staff to lunch (A & M shifts)
13.30	Staff from lunch
13.45	Activities commence
14.00	Visits commence
16.00	Visits cease
16.45	Tea served
17.30	Staff to tea
18.15	Activities cease/Lock up/Roll Check
18.30	Staff off duty
20.30	Night staff on duty/Roll Call
20.45	Evening patrols off duty

Appendix 14 ADAS - Cog Schedule

This data has been taken from Rosen, Mohs, & Davis, 1984 - Items and Scores.

	No. of items	Points
Memory	3	27
Orientation	1	8
Language	5	25
Praxis	2	10
Overall Total	**11**	**70**

* Healthy individual scores between 5 - 10

** Mean level of change in ADAS-Cog over one year duration 9 points

Appendix 15 ADAS - Cog – Tasks and Scores

No. Task	Characteristics	Score
Word recall	The recall task of frequent, easily to imagines word	0-10pts
Naming	Naming of 12 presented objects and fingers On a hand	0-5pts
Commands	Task of understanding and fulfilling 1-5 commands	0-5pts
Constructional praxis	Drawing 4 geometric forms using a pattern	0-5pts
Ideational praxis	Ability to perform a familiar but complex sequence of actions	0-5pts
Orientation	Assessment of time and space orientation	0-8pts
Word recognition	The task of discriminating new words from already presented ones	0-12pts
Instructions/ Remembering	Ability to remember instructions from the the previous recognition test	0-5pts
Spoken	Assessment of the quality of individual's speech language ability	0-5pts
Word finding difficulty	Assessment of individual's ability to communicate verbally	0-5pts
Comprehension	The individual's ability to understand spoken speech	0-5pts

Appendix 16 Mini-Mental State Examination

Mini-Mental State Examination (MMSE) - (Folstein, Folstein, & McHugh, 1975)

Max Score	Score	
		ORIENTATION
5	-	What is the (year) (season) (date) (month) (day)?
5	-	Where are we: (country) (county) (town) (prison) (floor)?
		REGISTRATION
3	-	Name 3 objects: (1 second to say each). Then ask the participant all three after you have said them. Give one point for each correct answer. Then repeat them until the participant learns all. Count trials and record.
		Number of trials.....
		ATTENTION AND CALCULATION
5	-	Serial 7's. 1 point for each correct. Stop after 5 answers. If the participant refuses, spell 'world' backwards.
		RECALL
3	-	Ask for 3 objects repeated above. Give 1 point for each correct

LANGUAGE

9 - Name a pencil; name a watch. (2 points)

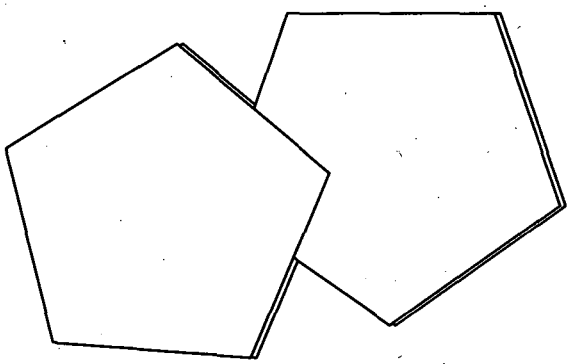
Repeat the following: 'No ifs, ands or buts'. (1 point)

Follow a three stage command: 'Take this paper in your right hand, fold it in half, and put it on the floor.' (3 points)

Read and obey the following: 'Close your eyes.' (1 point)

Write a sentence. (1 point)

Copy a design. (1 point)



Total Score.....

Assess level of consciousness along a continuum: Alert,Drowsy,Stupor,Coma

Appendix 17 Mini Mental State Examination - Normative Data

Normative Data on the MMSE

Age (yrs)

Education	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>84
4th Grade	22	25	25	23	23	23	23	22	23	22	22	21	20	19
8th Grade	27	27	26	26	27	26	27	26	26	26	25	25	25	23
High School	29	29	29	28	28	28	28	28	28	28	27	27	25	26
College	29	29	29	29	29	29	29	29	29	29	28	28	27	27

Appendix 18 Geriatric Depression Scale

This data has been taken from Yesavage, Brink, Rose, Lum, Huang, Adey, and Leirer, 1983. (Revised).

Geriatric Depression Scale

Name.....Date.....

1.	Are you basically satisfied with your life?	Yes/No
2.	Have you dropped many of your activities and interests?	Yes/No
3.	Do you feel that your life is empty?	Yes/No
4.	Do you often get bored?	Yes/No
5.	Are you hopeful about the future?	Yes/No
6.	Are you bothered by thoughts you can't get out of your head?	Yes/No
7.	Are you in good spirits most of the time?	Yes/No
8.	Are you afraid that something is going to happen to you?	Yes/No
9.	Do you feel happy most of the time?	Yes/No
10.	Do you often feel helpless?	Yes/No
11.	Do you often get restless and fidgety?	Yes/No
12.	Do you go to association?	Yes/No
13.	Do you frequently worry about the future?	Yes/No
14.	Do you feel you have more problems with memory than most?	Yes/No
15.	Do you think it is wonderful to be alive now?	Yes/No
16.	Do you often feel downhearted and blue?	Yes/No
17.	Do you feel pretty worthless the way you are now?	Yes/No
18.	Do you worry a lot about the past?	Yes/No
19.	Do you find life exciting?	Yes/No
20.	Is it hard for you to get started on new projects?	Yes/No
21.	Do you feel full of energy?	Yes/No
22.	Do you feel that your situation is hopeless?	Yes/No
23.	Do you think most people are better off than you are?	Yes/No
24.	Do you frequently get upset over little things?	Yes/No
25.	Do you frequently feel like crying?	Yes/No
26.	Do you have trouble concentrating?	Yes/No
27.	Do you enjoy getting up in the morning?	Yes/No
28.	Do you prefer to avoid social gatherings?	Yes/No
29.	Is it easy for you to make decisions?	Yes/No
30.	Is your mind as clear as it used to be?	Yes/No

Total =

Score 1 for Yes on: 2-4,6,8,10-14,16-18,20,22-26,28.

Score 1 for No on: 1,5,7,9,15,19,21,29,30.

0-10 = not depressed

11-20 = Mild depression

21-30 = Severe depression

GDS 15: 1,2,3,4,7,8,9,10,12,14,15,17,21,22,23 (cut off of 5/6 indicates depression).

GDS 10: 1,2,3,8,9,10,14,21,22,23.

GDS 4: 1,3,8,9 (cut-off of ½ indicates depression).

Appendix 19 Functional Evaluation - the BARTHEL index

This data is taken from Mahoney & Barthel, 1965.

Barthel Index

		With help	Independent
1	Feeding (if food needs to be cut up = help)	5	10
2	Moving from wheelchair to bed and return	5-10	15
3	Personal toilet (wash face, comb hair, shave, and Clean teeth)	0	5
4	Getting on and off toilet (handling clothes, wipe flush),	5	10
5	Bathing self	0	5
6	Walking on level surface	10	15
	(if unable to walk, propel wheelchair)	0*	5*
7	Ascend and descend stairs	5	10
8	Dressing (includes tying shoes, fastening fasteners)	5	10
9	Controlling bowels	5	10
10	Controlling bladder	5	10

A score of 100 indicates independence in activities of daily living

Appendix 20 Prison Life - Health and Well-Being

Elements of Prison Life and Contributory/Influencing Factors to Health and Well-Being

The Prison

- The political context; the legacy of history; composition of the prisoner population; social and economic groupings unevenly represented in the prison population; high proportion of prisoners with dysfunctional lifestyles.
- Organizational dissonance; the perceived culture of the prison - attitude of the staff fashioned by prior life experiences and memories of personnel and inmates.
- The type of managerialism: instrumentalism and quantification (what can be measured is important as opposed to the quality of service provided - as determined by a new benchmarking programme and the introduction of 14 Key Performance Indicators reinforced by 45 key actions and outcomes.
- Architecture, accommodation and the environment linked to the prison including overcrowding and inmate violence. Throughout the duration of my research several inmates at HMP Albany had been assaulted (attempted strangulation, physical assault resulting in charges of GBH, and scalding with sugared water). Environmental conditions including sanitation and food together with the design of the prison medical centre;

environmental stress of perceived threat and control (high threat - low control), poor conditions and limited facilities.

- Environmental Press Theory (Gibbs, 1991) - dynamic interactions of the physical and psychological characteristics of the aging individual with the social and physical environment.

Prison Life and the Prison Officer

- Safety: a physical and psychological dimension related to trust and confidence, and that individuals (both prisoners and prison officers) can contain their own aggressive impulses; the presence and threat of mentally unstable prisoners and sexually predatory behaviour.
- Protection of decency: keeping self and living area clean; time spent out of cell; access to privacy.
- Preservation of dignity; Perception; Cleanliness; Uncertainty; Trust; Truthfulness; Daily life within the prison; Inactivity and boredom.
- The experience of prison in particular the stress, tension and psychological fear can be painful for many prisoners, and unbearable for some. The deprivation of liberty constitutes the intended punishment and additional suffering is both but nevertheless damaging. Each prison can be understood within its own context and sets the standard for the social relations between custodians and inmates. Warehousing and regression to the dungeons preceded the age of enlightenment, but some commentators maintain that post enlightenment is a dead end, whereby inmates survive as opposed to live; prisons merely contain with little if any family contact.

- HMP Albany houses an integrated population albeit predominantly sex offenders and vulnerable prisoners. Operates a situational/social control, a dualist position whereby adherence to apparently conflicting values often results in an ongoing balance dilemma.
- One of a cluster of three prisons with food prepared off site at HMP Parkhurst which had, on several occasions, been contaminated with (ground glass), and the tea/other beverages contaminated with urine; laundry facilities off site at HMP Parkhurst occasional episodes of razor blades stitched in the hem of blankets.
- Befriending one another was perceived to be difficult. Perception of fellow prisoners (I'm not like them) with sex offenders a resulting marginalized group within a marginalized society.
- Logistical difficulties with visiting combined with visiting protocols requiring visitors to report to the prison by 1000am on the morning of the intended visit to arrange return at a prearranged time later in the afternoon.
- HMP Kingston houses solely murderers and life sentence prisoners. A relaxed regime had resulted in hostility between prison officers and the previous governor.
- Fear of being in prison with enforced intimacy subject to surveillance by prison officers and close scrutiny by fellow inmates with suppressed emotions and potential for exploitation.
- Institutional dependency resulting in: losing sense of self; loss of motivation; losing interest in the outside world; losing touch with both

family and friends. Economic and interpersonal hardships imposed on family members; losing the ability to make independent decisions; viewing the prison as home; viewing oneself within the institutional context.

- Prison food is bland, lacking in nutritional value, unappetizing diet; poor provision for diabetics (no diabetic biscuits); lack of fruit and protein hence diet is supplemented by purchasing provisions from weekly income; personal clothing (as opposed to prison clothes) not to be worn at mealtimes (the hot-plate); insufficient time to eat meals and fear of food contamination.
- Although retirement age in the community is 65 years, it differed in both prisons 60/63 years; chronic physical ill health prevented a continuation of work.
- Source of income, sense of value, importance, allays boredom, provides a structure to each day as opposed to "doing time", although a number of prisoners did complain about the menial/non creative nature of the work.
- Religious activities for some fulfilled or provided internal stability possibly reducing anxiety and depression (more apparent at HMP Albany).
- Recreation time - education, exercise, bowling, gardens, (elderly garden at HMP Albany), cards, pool, play-station, painting, model making although loud music was omnipresent in both prisons.
- The role of the prison officer; fairness of staff regimes; prison regime/social order framed within the orientations and experiences of its senior managers and laid down procedures (inter-related).

Self

- For elderly prisoners growing old itself was a constant source of concern and a corresponding fear of being perceived as becoming increasingly less robust
- Length of sentence and the associated uncertainties with an indeterminate sentence or post tariff lifer.
- A lack of purpose in life and respect for age from prisoners and prison staff alike.
- Attributing illness to a normal part of ageing and a barrier to care seeking.
- Perception of oneself reflected in:- stigmata/shame of being in prison; previous values/achievements in life undermined; low sense of self esteem; loss of self-concept; inability to conceive a future.
- The knowledge of changes associated with aging combined with the effects of long-term confinement.
- Behaviour of older prisoners becoming more rigid and less flexible.
- The age-related differences in the manifestation of psychopathology.
- The links between social disadvantage and ill-health.
- The stress and anxiety combined with the deleterious consequences of liberty loss.
- Increasing concerns about bullying, violence, and noise.
- A lack of open expression about ones feeling (mood etc).
- A fear of becoming chronically ill and subsequently debilitated.
- A fear of dying.

- The death of relatives difficult to cope with; reduced number of relationships; resulting necessity to have control over immediate social world.
- The death of family pets.
- The destruction of relationships with those who would have been significant others.
- A sense of powerlessness; lack of control; loss of ability to influence events/decisions on the "outside".
- Longer sentences have necessitated a regulated life style in order to compensate for an uncertain future.
- A fear of eventual release and community reaction especially with sex offenders.
- A fear of becoming institutionalised but being unable to prevent this occurring (...can only sleep with the cell door locked).
- Refusal of treatment and non-compliance.

Inter and Intra Personal Relationships

- For sex offenders broken family relationships especially from abusing children, stepchildren and grandchildren.
- Roles lost irredeemably and forever including those of parent, child, and grandparent.
- Family disruption and the relevance of family contact to the painfulness of the prison experience including the potential relationship between family ties and recidivism.

- The loss of trust that can be linked to psychosis, depressive illness, and identity problems; perceived deficits in support from prison officers were reported to be the major predictors of anxiety, depression and hopelessness.
- A fear of victimization.
- The social life of the prisoner - whereby prisoner relationships may be perceived by prison staff as networking and manipulative.
- A desire to develop more stable relationships with prison staff.
- Prisoner relationships that clearly have low levels of formal power but high levels of informal power.

Health Issues

- The provision of care to isolated elderly offenders is structurally constrained in two ways. First, because of inadequate resource allocation, the relationship between 'practitioner' and offender is dominated by instrumentality. Secondly, the organisational and prison rules shape the interpersonal relations between 'practitioner and client', in ways which may negatively impact on the outcomes of care for both.
- Staff who were unable to delineate there professional role as care providers from the institutional goals of security and control were more likely to become institutionalised.
- The provision of medical care including the apparent attitude of prison healthcare staff, the delivery of care, blurring of roles and opposing philosophies of custody and caring (the duality of security considerations and the obscure locus of practice).

- Incarceration and treatment perceived as being incompatible and constantly changing Prison Medical Officer input generally provided by locum or retired practitioners not necessarily with accredited training and somewhat deficit of elderly care experience.
- Inadequate screening procedures; lateness for attendance at hospital out-patients; a failure to attend 'unknown' appointments attributable to operational or logistical reasons; discrepancies in dispensed medication.
- Differential interpretations of prisoner behaviour by custodial staff as distinct from clinical judgements made by medical/nursing staff.
- Prisoner containment and compliance given priority over therapeutic goals and medical management practices.
- There were no self- inflicted deaths involving prisoners aged 61years and above, with those between 60 and 69 years less likely to deliberately self-harm
- Diagnostic difficulties complicated by the coexistence of personality disorder more apparent at HMP Kingston.

Appendix 21 Case History 1

Case History 1

Name: G.F. **Date of Birth**: 22.04.21. **HM Prison Kingston**

Background

- G.F. was born in London, the second of five children. His Father died when he was 8 years old, and he is unable to remember him. He was described as being below average at school, had considerable difficulties in concentrating and was bullied. At home he shared a bed with his brothers, and as an adult reported obtaining sexual arousal from these occurrences.
- As far back as he can remember he had a strong fantasy life, and preferred sitting on his own daydreaming rather than joining in with the family activities. He also reported a fascination with death, enjoyed watching funerals and visiting graveyards. It is also recorded that he treated animals cruelly, including skinning and hanging cats.
- G.F. was seduced by an adult man at the age of 12 years He has never had any form of heterosexual relationship, but did report kissing a couple of girls at parties, although this gave him no pleasure.

- Left school aged 14 years, without any formal qualifications. Subsequently had numerous unskilled jobs prior to joining the Royal Air Force in which he served five years (From 1941 - Until 1946).
- Reported his first sexual experience when aged 16 years with a 13 year old boy.
- Initially came to the attention of the police when he was serving in the RAF. He met a boy outside a pub, first attempted to fondle him then later strangle him, but the boy escaped. G.F. then returned to a party in the public house but later broke into a house that he believed to be the boys' home. Apparently it was part of the pub, and out of annoyance he stole some property. He was arrested and charged with theft, but the other circumstances failed to come to light.
- In 1946 he was demobilised from the RAF with good character and was employed intermittently during the preceding 12 months. In the same year, following demob, he was given a 12-month custodial sentence following 3 offences of indecent assault. In 1950 and 1953 he had two further convictions.
- He later reported making attempts to harm 4 other boys during 1955.
- From 1952 onwards he was living with his mother, a married brother and his family at the family home when he abducted a 7 year old boy in 1957.

Index offence - August 1957

- G.F. had been seen accompanying a little boy towards a building site. The boy was not struggling and was presumed to be willing participant. His naked body was found, face downwards several days later. The pathology

report described extensive scratches to his neck, chest, abdomen and buttocks, and cause of death to be asphyxia due to suffocation.

Psychology reports (1959)

- Admitted to the attempted murder of 4 boys (3 before and 1 after).
- Committing buggery with a 13 year old boy after plying him with drink, following which he sealed up the house and attempted to gas him-self.
- Subsequently admitted to sexual offences with 35 boys which he recorded in a diary and listed types of practices.
- Following the murder he attempted suicide by gas. At the time he had another young boy with him. Originally his plan had been to kill this boy with a knife, but he then decided that he would gas him along with himself. Fortunately his sister-in-law returned to the house, smelled gas and broke down the door, which allowed the boy to escape.
- G.F. pleaded guilty to the murder and was sentenced to life imprisonment in 1957.
- He first parole hearing was in 1969. At this and subsequent hearings psychiatric and psychological evidence was put forward showing a lack of remorse, continuing arousal from sexual fantasies and no fundamental change in his outlook on life following his long prison term.
- His most recent parole hearing in 2001 continued to consider him a risk to young boys.
- In 1970 he was segregated under Rule 43 following publication of both his identity and offences. G.F. was extremely aggrieved at this development.
- His Mother died in 1972.

- In 2002 he has no surviving relatives.

Past Medical History

- Meningitis - requiring hospital admission.

Prison Medical History

- Initially underwent psychotherapy but this was abandoned in 1967 as he had experienced no change.
- Two moderate myocardial infarctions, one in 1979 and the second in 1985.
- In 1967 and again in 1972 the possibility of castration was considered to which he consented if it would make his release possible. In the event the procedure was cancelled in view of it being unlikely to alter his dangerousness.
- He was assessed at Park Lane Special Hospital in 1984 when his memory was recorded as being 'intact', although he was noted to show an excessive interest in visiting children.
- He underwent a trans-urethral prostatectomy in 1992.
- In 1997 he began to demonstrate 'symptoms of deterioration in memory' together with a disordered/unsteady gait and some urinary incontinence. Following a CT scan (August) a diagnosis of normal pressure hydrocephalus was confirmed, he was offered operative procedure (Spitz Holtzer shunt), but declined.
- The CT scan demonstrated a moderate degree of global atrophy reasonable for his age. The lateral and 3rd ventricles were

disproportionately large. There were subtle low-density changes in the peri-ventricular white matter surrounding the lateral ventricles, consistent with mild ischaemic changes.

Appendix 22 Case History 2

Case History 2

Name: K.D. **Date of Birth**: 23.01.30. **HMP Albany**

Background

- The older child in a family of two children, D was born and raised in Kilmarnock. His widowed mother subsequently remarried when he was young and there was prolonged conflict between himself and his stepfather. Years later his mother committed suicide after undergoing major surgery, and he experienced feelings of guilt, believing that he should have done more to help his mother. He appeared to have unresolved grief over her death.
- On leaving school at the age of 15 years, D had a number of manual jobs, prior to being called up for National Service. On completion of his Military Service he returned to his native Scotland, initially working for the railways as a ticket collector. He later lived in Liverpool where he worked in a foundry for several years.
- Since 1957, his life has been dominated by numerous court appearances. He has spent many years in prison and has only held down short periods of employment, mainly in the hotel or catering trade. Alcohol dependency appears to be linked with most of D's offending. Periods of stability in his life are related to when he has either been in a hostel or other form of accommodation catering for people with alcohol problems.

Past medical history

- Non available.

Prison Medical History

- Diagnosed as suffering from Alzheimer's disease in early 2000, he is described as being extremely ill, and would encounter significant difficulty committing further offences due to his poor mental functioning and limited mobility. He requires continuing care and a level of nursing that is not available within the prison system.
- The offence of arson fits into the existing pattern of D's dangerous behaviour. Without assistance to alter his behavioural response to stress, the prognosis is poor in terms of re-offending in a similar fashion. His alcohol abuse is a contributory factor but I suspect that it is an expression of his emotional difficulties rather than a major cause of his loss of control.
- D previously acknowledged the need for assistance and agreed that a community-based disposal was unlikely to ensure the necessary safeguards. The Court will have to decide between a therapeutic orientated disposal and a custodial sentence, which has hitherto done nothing to prevent the escalation of re-offending.

Offending Behaviour

- D's offending has escalated in seriousness and dangerousness during recent years. His early criminal career was characterised by petty offending and dishonesty, with the exception of an indecent assault in

1965. However, from 1973, he has served three custodial sentences one for arson and two for robbery.

Index Offence

- Mr D was released from prison approximately three days prior to his index offence. He had been serving a two-year custodial sentence for two offences of arson. Following release he went to London and spent the bulk of his discharge grant on a heavy drinking binge. He slept rough for one night before boarding a train at Kings Cross without a ticket. He was detected and escorted off the train at Darlington, where he proceeded to spend the remainder of his money in public houses.
- At the Queens Head Hotel, because of his inebriated state, he was asked to leave by the publican who also pointed out that he had urinated upon himself and the seat. D felt intense resentment, perceiving that he was being demeaned and ridiculed. He remained outside the public house for a considerable length of time seething with increasing anger.
- He acknowledged that he had decided to light a fire shortly after his ejection, wanting to pay back the publican - he felt unable to express his anger in any other way; although in hindsight he denied wanting to seriously harm the occupants.