11 Health Care in Prisons*

Tom Marshall, Sue Simpson and Andrew Stevens

1 Summary

Introduction

Providing health care for prisoners has historically been the responsibility of the prison service, not the NHS. Prison governors have been responsible for allocating resources to health care leading to considerable variation between prisons in the way in which health care services are provided. Prisons face many problems in the provision of health care, in particular relating to the need for security and inmates' isolation from their communities.

Describing the prison population

The prison population has three key features: it is largely young, overwhelmingly male and has a very high turnover. About 60% of inmates are under 30 years old. Fewer than one in twenty prisoners are female. New receptions per year amount to four times the prison population. Local prisons, which receive remand prisoners directly from the courts and prisoners on short sentences, have the highest turnover. Training prisons and high security prisons, which hold prisoners on longer sentences, have a lower turnover. About one in five prisoners are on remand, that is, they are awaiting legal proceedings or sentencing. Prisoners are drawn from lower socio-economic groups and have poor levels of education. Ten per cent of the prison population is black.

Prevalence and incidence of health problems

The range and frequency of physical health problems experienced by prisoners appears to be similar to that of young adults in the community. However, prisoners have a very high incidence of mental health problems, in particular neurotic disorders, compared to the general population. By ICD-10 criteria, in any week, almost half of prisoners are suffering from a neurotic disorder such as anxiety or depression. One in ten prisoners has suffered from a psychotic disorder in the past year.

* This chapter is an updated version of a report commissioned jointly by the Department of Health and the Directorate of Health Care of the Prison Service in England and Wales in 1998/9.

Suicide is about eight times more common among prisoners than in an equivalent community population. Suicides most frequently occur within the first weeks and months of imprisonment. Incidents of deliberate self-harm are reported in one in sixty prisoners a year.

Half of prisoners are heavy alcohol users and about one in twenty has a serious alcohol problem. About half of prisoners are dependent on drugs (principally opiates, cannabis and stimulants) and at least one quarter have injected drugs. A minority of prisoners continue to use drugs while in prison.

Services available

Opportunities for informal care and self-care are very limited in prisons. Per capita expenditure on formal health care services are higher than equivalent expenditure for young adults in the NHS.

Directly employed health care staff include health care officers (prison officers with some training in nursing), nursing staff (some whom may also be prison officers) and medical officers. Many prisons also contract with local general practitioners, hospital trusts, medical, dental and other specialists. In addition to access to NHS in-patient facilities, many prisons also have their own in-patient facilities.

A substantial part of the work of Prison Health Care Services involves routine medical examination at entry and prior to release and preparing medical reports for legal reasons.

Per year of imprisonment, prison inmates consult primary care doctors three times more frequently and other health care workers about 80 to 200 times more frequently than young adults in the community. Prison inmates are admitted to NHS hospitals as frequently as young adults in the community, but are also admitted to prison in-patient facilities two to sixteen times more frequently than this. Inmates are also heavy users of medical specialists and professions allied to medicine.

Effectiveness of services

There is little direct evidence of the effectiveness of health services in a prison setting. Relevant data are available from a range of sources of evidence-based reviews and guidelines.

It is known that screening prisoners at reception fails to identify many who are mentally ill. There are effective means of managing many of the health problems of prisoners. There is a range of effective treatments for minor illnesses, some of which are available without prescription. There is a range of medications and some psychological treatments (in particular cognitive behaviour therapy) which are effective for neurotic disorders and symptoms. For a range of health problems, the work of doctors can be successfully carried out by other professionals using clinical guidelines.

Recommendations

Planning of health care should be based on an understanding of health care needs. Planning of health care should not be primarily driven by a concern for demand (by patients or professionals) and historical precedent.

Efforts should be made to increase prisoners' ability to self-care and to reduce their dependence on the formal health care system. The recognition and management of neurotic disorders using effective pharmacological and psychological treatments should be given a high priority in the primary health care system. To achieve this, staff will need appropriate training. The provision of prison-based in-patient

facilities should be reviewed. The management of chronic physical and mental illnesses should follow appropriate clinical guidelines.

2 Introduction and statement of the problem

Health care in prisons was for many years a matter of concern.[1] Prison medicine was said to be out of date, with a very 'medicalised' model of care, focusing on illness not health, and with little attention to prevention, guidelines, multidisciplinary work, audit, continuing professional development, or information.[2] HM Chief Inspector of Prisons, working independently of the Prison Service, reports directly to the Home Secretary on the treatment of prisoners and the conditions in which they are held. Adverse reports following inspections led to investigations into health care in prisons. In 1997 the Standing Health Advisory Committee to the Prison Service in its report *The Provision of Mental Health Care in Prisons* highlighted an uncoordinated approach to the delivery of mental health care.[3] More recent publications addressing the main issues of concern include *Patient or Prisoner?*[4] and the joint Prison Service and NHS Executive working group report, *The Future Organisation of Prison Health Care*.[5]

Both of these reports made recommendations for the restructuring of the Prison Health Care Service with a view to improving prison health care. Health care delivered in prisons was found rarely to be planned on the basis of need. Both reports also recommended that comprehensive health needs assessment of the prison population should be carried out.

Responsibility for the health care of prisoners

The health care of prisoners has until recently been funded and organised separately from the National Health Service (NHS), being the responsibility of HM Prison Service. The broad aim of the Prison Health Care Service was:

> *to provide for prisoners, to the extent that constraints imposed by the prison environment and the facts of custody allow, a quality of care commensurate with that provided by the National Health Service for the general community, calling upon specialist services of the NHS as necessary and appropriate.*
>
> Standing Order 13. Health Care. Home Office. HM Prison Service

From 1992 Governors were responsible for purchasing health care for their individual prisons, with the Directorate of Health Care providing advice on strategy, policy and standards.[1] This included the payment of staff; the provision of clinics for dentistry; opticians' services; genito-urinary medicine; and pharmacy.[4] The NHS was responsible for funding NHS (secondary) in-patient and outpatient care. The source of funding for NHS visiting consultants and for NHS services which reach into prisons (such as community mental health support) was less clear and varied from one prison to another. In 1996 annual health care expenditure by the prison service averaged approximately £1000 per prisoner (based on the Average Daily Population). However, this figure concealed wide variation in expenditure on health care, with some institutions spending as little as a few hundred pounds per inmate and others as much as £9000 or between 3% and 20% of their total budget on health care.[5]

In 1999 the establishment of a formal partnership between the Prison Service and the NHS was agreed The partnership was lead by two national joint units – a policy unit and a task force – to help support and drive the reform of prison health care from the centre. The units formally came into being on 1 April 2000. In September 2002, Ministers announced the decision to transfer the budgetary responsibility for prison

health from the Prison Service to the Department of Health. In addition a timetable of April 2006 was agreed for full devolution of commissioning responsibility to Primary Care Trusts (PCTs).

General features of the health care needs of prisoners

Prisoners have general health needs similar to those found in the general population. These are often overshadowed by health care needs related to offending behaviour such as substance misuse and mental health problems. Prisoners also have health care needs which are a consequence of imprisonment. Imprisonment restricts access to family networks, informal carers and over the counter medication; the prison environment can be overcrowded and may be violent; prisoners suffer emotional deprivation and may become drug abusers or develop mental health problems whilst incarcerated. Other health care needs may be made more complicated by imprisonment such as the management of chronic diseases like diabetes or epilepsy. Finally, certain health care needs are requirements of the prison system itself, for example health screening on arrival at prison and assessments carried out to determine a prisoner's fitness to appear in court.

Most health care in prisons is primary care. However, health care delivery in prisons faces a significant number of challenges not experienced by primary care in the wider community:

> *The primary purpose of prison is custody and rehabilitation and the need to provide primary health care in such a setting, places constraints and duties on doctors, nurses and other health care staff.*[5]

Providing health care in a custodial setting

There are particular challenges in maintaining a health care ethos to thrive in an environment where the highest priorities are maintaining order, control and discipline.[6] These include:

- Custody affects care in that it removes the opportunity for self-care and independent action; inmates have to ask staff for the most simple health care remedies.
- The health care teams' access to inmates may have to be curtailed in the interests of security.
- The proposed actions of medical staff may clash with security considerations.
- Nurses may be asked to carry out duties unrelated to health care.
- Some patients may be manipulative, try to obtain medication they do not require and create suspicion amongst health care staff of all prisoners.
- The health care centre is often seen as a sanctuary or 'social care' option for some prisoners, in particular those who are being bullied.

The prison estate in England and Wales

The prison estate is diverse, comprising small and large establishments, serving different roles and widely distributed geographically. There are currently 139 prison establishments in total.[7] Most prisons are managed directly by the Prison Service but a small number are managed on behalf of the Prison Service by the private sector.

Prisons are primarily classified by the age and sex of their inmates. There are prisons for male and female prisoners and separate institutions serve the needs of young offenders and adults. Prisons are further subdivided into local prisons, training prisons and high security prisons.

The total number of places in the prison estate is increasing, from around 60 000 in 1997 to 76 600 in 2005. It is planned to increase capacity to around 80 400 in 2007.[8]

Adult men's prisons

Local prisons and remand centres

Local prisons are institutions which hold prisoners when they are first sentenced. A number of local prisons are also designated as remand centres and therefore are used to hold prisoners who have been remanded in custody by the courts. Prisoners who are sentenced to a short term of imprisonment may spend their whole sentence in a local prison. Prisoners whose sentence is longer than a few months are usually transferred to training prisons. Because of the large numbers of remand prisoners and prisoners with short sentences, local prisons have a very high turnover. They contain a high proportion of prisoners who may be experiencing difficulties in adjusting to their recent incarceration or recent sentencing.

At any one time local prisons can hold 40% of the prison population. Because they act as reception and allocation centres they have a high throughput of prisoners. Local prisons usually have in-patient facilities and 24-hour cover for health care. The nature of the remand population will mean that it is likely to contain the highest percentage of seriously ill people with physical and mental disease.[9]

Training prisons

It is intended that training prisons are where all but very short sentence prisoners serve most of their sentences. Prisoners are categorised according to the level of security. They may have a high level of security (closed prisons) or lower levels of security (open prisons). Inmates in training prisons are allocated work.

The prison population is more static in training prisons. Since seriously ill prisoners normally have been detected at the initial receiving establishment, there is less need for medical assistance. In this population more physical disorders and fewer serious psychiatric disorders are present.[9]

High security prisons

Category A prisoners and those who are serving long sentences usually serve most of their sentence in high security prisons. For security reasons, prisoners are usually rotated between high security prisons every three years. High security prisons were previously known as dispersal prisons.

Because the prison population is older and present for longer, high security prisons tend to have the most comprehensive health care services in the prison service.[10]

Women's prisons

The female estate comprises 16 prisons in England and no prisons in Wales.[11] Women's prisons are divided into Young Offender Institutions, adult local prisons and adult training prisons (open and closed). The majority of women's prisons are entirely dedicated to the custody of women prisoners; however, some women prisoners are located in wings of adult male prisons, with separate sleeping and living areas. Despite an increase of more than 50%, since the early 1990s females comprise only 6% of the prison population.[12] The geographical spread of women's prisons means that many women may be imprisoned far away from their homes and families.

There are a number of health problems and needs that are specific to women in prison. These include maternity care, gynaecology and care of babies in prison, as well as a range of health education services such as family planning. Primary care consultation rates and admission rates to prison health care centres are high in women's prisons compared with other prison types and considerably higher than consultation rates for women in the community.[13]

Young Offender Institutions

Prisoners between the ages of 15 and 21 are held in designated establishments run under the Young Offender Institution Rules.[14] These institutions are further subdivided into those whose inmates are predominantly juveniles (aged 15 to 18) and those which hold inmates of all ages up to 21. Some Young Offender Institutions are designated as remand centres and therefore receive prisoners who are remanded in custody by the courts. Others are training prisons and, like their adult counterparts, may either be open (low security) or closed (secure).

In Young Offender Institutions there is often a small health care centre with a part-time medical officer and a few health care officers to provide day nursing cover.[9] Chronic physical illness is generally uncommon in this age group and serious mental illness, such as schizophrenia, is unusual. However, many offenders have temperamental, emotional and behavioural problems that manifest as self-harm and suicidal behaviour.

Models of health care provision in prisons

Within prisons, the way in which health care is managed and organised varies considerably. Following an investigation into a sample of 38 prisons in 1998,[13] models of health care were broadly classified into five types. These are listed in **Box 1**.

Box 1: The five main models of health care provision in prisons.

1 One or more directly employed full-time prison doctors supported by a mix of health care officers and nurses provide primary care. External NHS specialists provide specialist care. A variety of local contractual arrangements exist to support this requirement. The prison may have its own pharmacy service, or share with one or more others; in some cases pharmacy is provided under contract with external organisations either in the public or private sector. This is the model that is typical in most local and remand prisons.
2 Primary care is provided by NHS General Practitioners who are employed by the prison to work a set number of sessions within the prison, again supported by a mix of health care officers and nurses, with other services provided as at (1). This applies to predominantly smaller establishments.
3 Primary care contracted out to a local general practice who provide full-time medical services again supported as at (2).
4 The entire health care service in prison is met by an external organisation, for example a private sector provider or an NHS Trust. These examples are relatively few, mostly in contractually managed establishments, though there are some cases in the directly managed sector of the prison estate.
5 Primary care provided by clustering arrangements between several prisons.

Source: The Joint Prison Service and National Health Service Executive Working Group.[13]

These models serve as a general description, but there are prisons where elements of the models apply in different combinations or proportions. For example, general practitioners complementing and supporting the work of directly employed doctors, while some services are contracted out entirely. In addition the models of care have been described in relation to the medical composition of care rather than the nursing composition. In a few establishments health care is nurse-led, but this is not generally the case.

The models of care described highlight the range of personnel who may either be directly employed or contracted to deliver health care in prisons. The majority of prisons have a health care manager. The health care manager may be the most senior nurse by grade or a principal health care officer, with or without first level nurse registration. Most prisons either have a directly appointed full-time medical officer or a local GP appointed as a part-time medical officer. In the former case, the GP is an employee of the Home Office and is therefore classed as a civil servant.

During the period April 1996 to March 1997 staff providing health care in prisons handled over 2 million consultations with inmates. In around 30 000 cases prisoners received treatment in NHS hospitals as outpatients, in-patients or at accident and emergency departments.[13]

Describing the prison population

The prison population can be described numerically in a number of ways. The first of these is the Average Daily Population (ADP). This refers to the average number of prisoners in the prison at any one time. The second, New Receptions, refers to the number of new prisoners arriving in the prison in a given time period. In any one prison, the total number of new receptions is made up of newly sentenced or remanded prisoners (referred to as New New Receptions) and prisoners who have been transferred from other prisons. The relationship between these three statistics is shown in **Figure 1**. The significance of this is that the prison service is not just dealing with an average of around 73 000 people in prison at any one time but with the 150 000 who pass through prison each year.

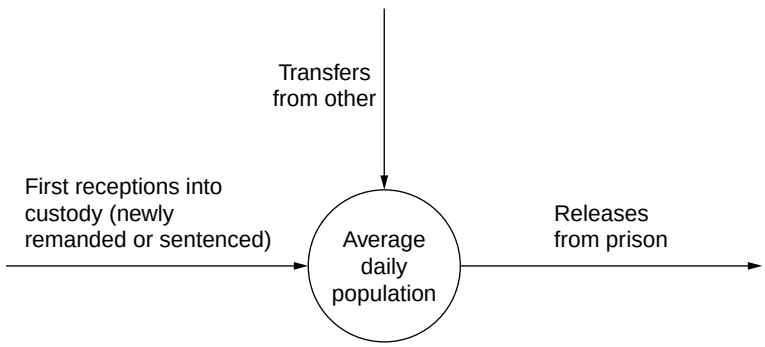


Figure 1: Throughput and average daily population of a prison.

Overall description of the prison population and trends

Between 1993 and 1997 the prison population increased by 37%.[15] The seasonally adjusted prison population rose to 66 000 in July 1998 and then decreased by around 2% (attributed to the Home Detention Curfew introduced in January 1999).[16] The ADP in England and Wales in 1998 was 65 299 and

at the end of March 1999 was 64 200.[16] In 1998 the prison population rate in England and Wales (per 100 000 of the national population) was 125.[17] More recently the prison population has grown, reaching a population of 75 249 in March 2005, with a further 3375 prisoners under the Home Detention Curfew.[7]

Certified Normal Accommodation (CNA) is the capacity of the prison estate with no overcrowding. The CNA at the end of March 1999 was 61 900, i.e. the prison population exceeded the CNA by around 4%. Operational capacity is the maximum number of prisoners which can be accommodated in the prisons, albeit with some overcrowding. The number of prisoners held in March 2005 was 1400 below the operational capacity of 76 620.[7]

The total cost of the prison service in 2003–04 was over £2000 million, equivalent to approximately £27 000 per prisoner per year.[18]

Description of the prison population by category of prisoner

At the end of April 2005 the majority of inmates (67%) were sentenced adult male prisoners. The remainder was divided between male young offenders (12%), male remand prisoners (15%) and female prisoners (6%).

Sentenced prisoners

The commonest reason for imprisonment among sentenced females is drug offences (more than one-third) whereas among sentenced males the largest proportion (24%) were held for violence against the person. In April 2005, on average, 44% of sentenced male adults and 40% of sentenced adult females were serving terms of more than 4 years (excluding life) (see **Table 1**).

Table 1: Population of sentenced prisoners: April 2005.

Type of prisoner	Males	Females
Adults		
Less than 12 months	5,367	549
12 months to 4 years	16,259	1,130
4 years and over	23,348	1,247
Life	5,455	173
All adults*	50,488	3,104
Young offenders		
Less than 12 months	1,722	94
12 months and over	6,000	2,242
All young offenders*	7,728	336
All sentenced prisoners*	58,216	3,440

* Includes fine defaulters.

Lifers

Prison service statistics indicate that between 1987 and 1997 there was a 58% increase in the male, and an 85% increase in the female, life sentence population. On 30 April 2005 there were 5633 male lifers and 181 female lifers.

Reconvictions

Just over half (56%) of prisoners released from prison in 1994 were re-convicted of a standard list offence within two years. Reconviction rates are highest for male young offenders (76%). About half of sentenced adult males (49%) and females (51%) were reconvicted within two years.[15]

Prisoners on remand

Remand prisoners represent around 16% of the prison estate. The average time spent in custody for untried prisoners in 1997 was 51 days for males and 36 days for females. However, there were 200 untried prisoners who had been in prison for more than one year.[15]

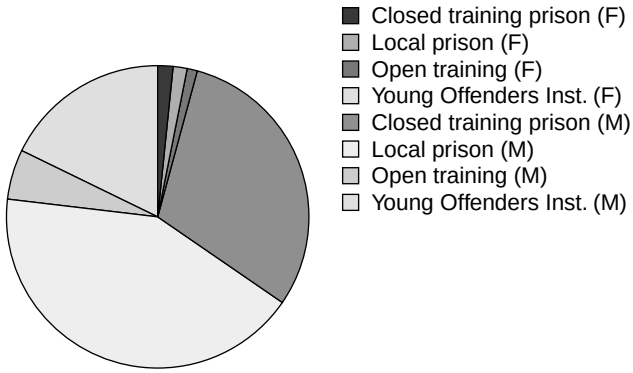
Description of the prison population by category of prison

The health care needs of prisoners will to some extent depend on the primary function of the establishments where they are held. A description of the prison population by category of prison is therefore useful. In general terms the prison population is characterised by a high turnover: overall the number of new receptions is about four times larger than the Average Daily Population. However, the turnover of prisoners is considerably higher in local prisons and Young Offender Institutions and somewhat lower in closed training prisons, where prisoners are serving longer sentences (**Table 2**).

Table 2: Turnover of prisoners in different categories of prison in 1996/97.

Type of prison	Turnover: new receptions per year divided by ADP per year
Closed training prison (female)	4
Local prison (female)	8
Open training prison (female)	4
Young Offender Institution (female)	8
Closed training prison (male)	2
Local prison (male)	5
Open training prison (male)	3
Young Offender Institution (male)	4
All prisons	4

Source: Directorate of Health Care, Home Office.



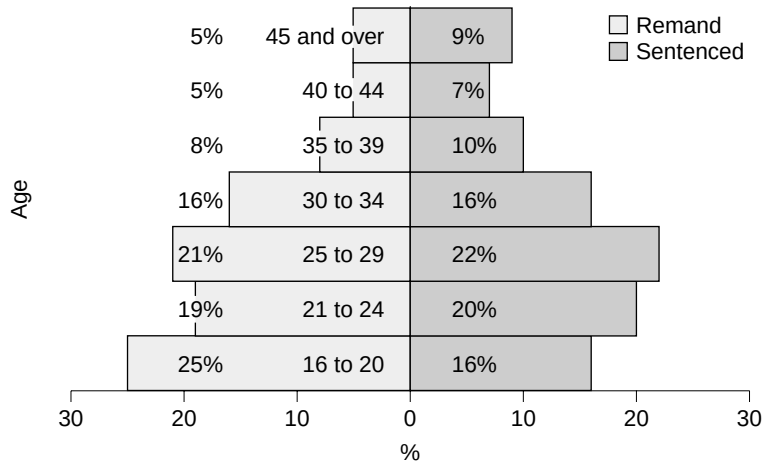
Source: Directorate of Health Care, Home Office.

Figure 2: Average Daily Population (ADP) by category of prison in 1996/97.

Description of the prison population by age

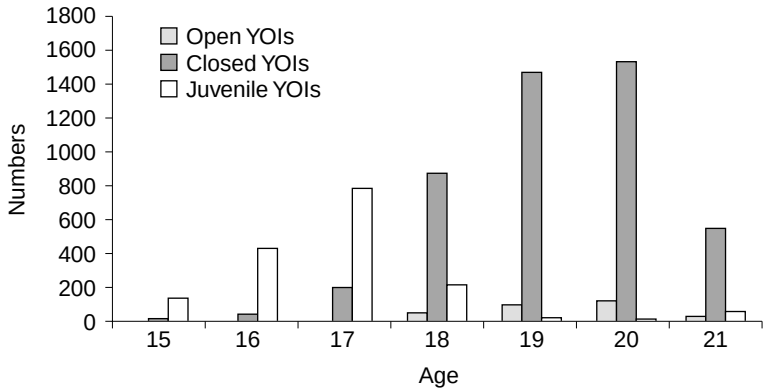
Males

A quarter of all male remand prisoners are aged 16 to 20 (young offenders) and 65% are under 30 years of age. The equivalent figures for sentenced male prisoners are 16% and 58%. The age structure of the male prison population is illustrated in Figures 3, 4 and 5 and **Table 3** below.



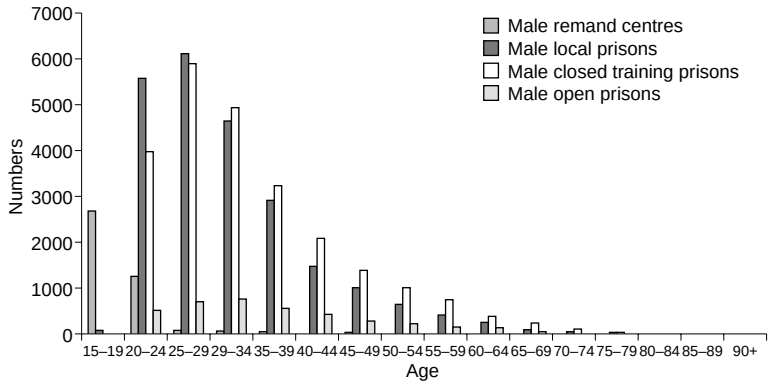
Source: Directorate of Health Care, Home Office.

Figure 3: Age structure of the male prison population: remand and sentenced prisoners.



Source: Directorate of Health Care, Home Office.

Figure 4: The numbers and ages of male prisoners in Young Offender Institutions on 31 December 1998.



Source: Directorate of Health Care, Home Office.

Figure 5: The numbers and ages of male prisoners in adult prisons on 31st December 1998.

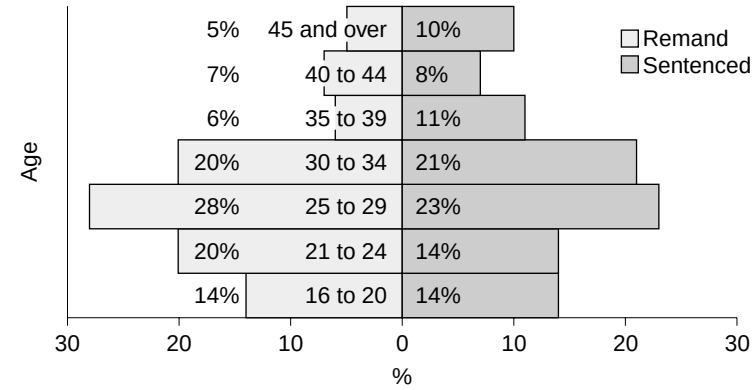
Table 3: The prison population on 31 December 1998: age of male prisoners by type of institution.

Age	Remand	Local	Closed training	Open training	Closed YOIs	Open YOIs	Juvenile
15–19	2,623 (64%)	88 (0%)	4 (0%)	1 (0%)	2,617 (56%)	163 (52%)	1,583 (96%)
20–24	1,307 (32%)	5,486 (24%)	3,938 (17%)	469 (13%)	2,089 (44%)	151 (48%)	64 (4%)
25–29	72 (2%)	6,089 (26%)	5,865 (25%)	682 (19%)	0 (0%)		
29–34	49 (1%)	4,627 (20%)	4,915 (21%)	716 (20%)	0 (0%)		
35–39	33 (1%)	2,890 (13%)	3,272 (14%)	556 (16%)	0 (0%)		
40–44	12 (0%)	1,495 (7%)	2,098 (9%)	365 (10%)	0 (0%)		
45–49	18 (0%)	963 (4%)	1,358 (6%)	277 (8%)	0 (0%)		
50–54	3 (0%)	633 (3%)	1,019 (4%)	235 (7%)	0 (0%)		
55–59	1 (0%)	368 (2%)	625 (3%)	113 (3%)	0 (0%)		
60–64	0 (0%)	206 (1%)	341 (1%)	71 (2%)	0 (0%)		
65–69	0 (0%)	88 (0%)	175 (1%)	24 (1%)	0 (0%)		
70+	0 (0%)	58 (0%)	103 (0%)	8 (0%)	0 (0%)		
Total	4,118	22,991	23,713	3,517	4,706	314	1,647

Source: Directorate of Health Care, Home Office.

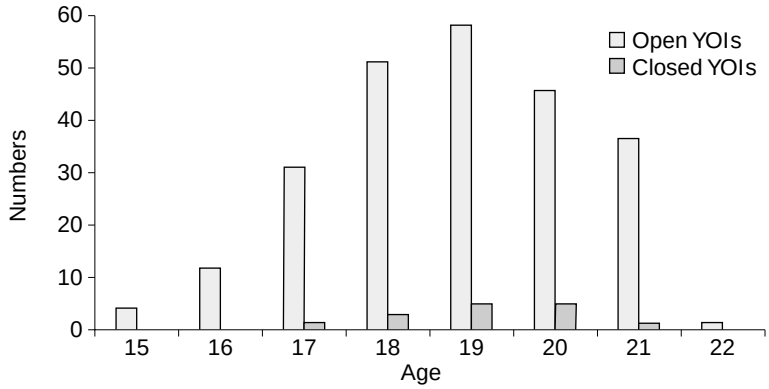
Females

About one in seven of all female remand prisoners are aged 16 to 20 (young offenders) and 62% are under 30 years of age. The equivalent figures for sentenced female prisoners are 14% and 51%. The age structure of the female prison population is illustrated in the figures and the table below.



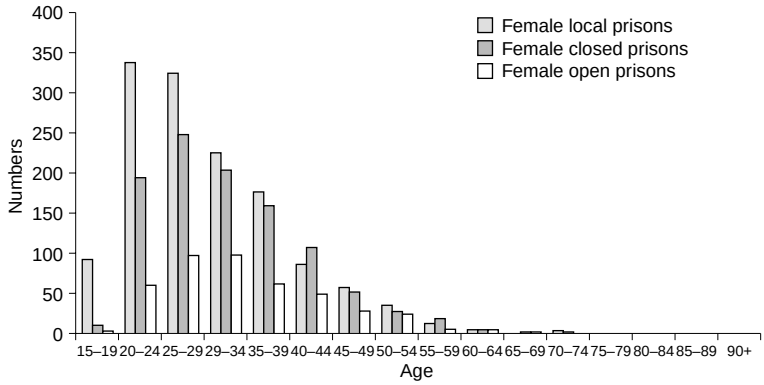
Source: Directorate of Health Care, Home Office.

Figure 6: Age structure of the female prison population: remand and sentenced prisoners.



Source: Directorate of Health Care, Home Office.

Figure 7: The numbers and ages of female prisoners in Young Offender Institutions on 31 December 1998.



Source: Directorate of Health Care, Home Office.

Figure 8: The numbers and ages of female prisoners in adult prisons on 31 December 1998.

Table 4: The prison population on 31 December 1998: age of female prisoners by type of institution.

Age	Local	Closed	Open	Closed YOIs	Open YOIs
15–19	88 (7%)	13 (1%)	4 (1%)	155 (65%)	9 (60%)
20–24	337 (25%)	191 (19%)	64 (15%)	84 (35%)	6 (40%)
25–29	324 (24%)	246 (24%)	93 (22%)		
29–34	227 (17%)	206 (20%)	95 (22%)		
35–39	178 (13%)	161 (16%)	66 (15%)		
40–44	83 (6%)	107 (10%)	45 (10%)		
45–49	57 (4%)	52 (5%)	27 (6%)		
50–54	35 (3%)	28 (3%)	22 (5%)		
55–59	12 (1%)	18 (2%)	6 (1%)		
60–64	7 (1%)	7 (1%)	6 (1%)		
65–69	0 (0%)	1 (0%)	1 (0%)		
70+	3 (0%)	2 (0%)	0 (0%)		
Total	1,351	1,032	429	239	15

Source: Directorate of Health Care, Home Office.

Description of the prison population by ethnicity

Ethnic minority groups accounted for 18% of the male and 24% of the female prison population at the end of March 1999 compared with about 6% of the male and female general population of England and Wales.[16] However, of this ethnic minority population, 29% of males and 49% of females were foreign nationals. Given this, a more representative way to compare the data with the general population is to only describe prisoners who are British nationals (see **Table 5**).

Table 5: Ethnicity of the prison population who are British nationals and of the population of England & Wales aged 15 to 64.

Ethnicity	Males		Females	
	Prisoners	England & Wales	Prisoners	England & Wales
White	86%	95%	86%	95%
Black	10%	1%	11%	2%
South Asian (Bangladeshi, Indian, or Pakistani)	2%	3%	1%	2%
Chinese or other ethnic groups	2%	1%	2%	1%

Adapted from: White P *et al.*, *Prison Population Brief*.[9]

Other important factors describing the prison population

Socio-economic backgrounds of prisoners

Table 6 illustrates the employment and educational backgrounds of the prison population. The unemployed and undereducated are over-represented. Overall, a minority of prisoners are engaged in productive work (employed or bringing up a family), with a very high proportion either unemployed or long-term sick. Almost half of prisoners have no educational qualifications and only a small minority have been educated to A-level or beyond.

Table 6: The employment and educational characteristics of the prison population.

Economic activity	Male		Female	
	Remand	Sentenced	Remand	Sentenced
Working	36%	44%	26%	34%
Unemployed	34%	28%	24%	23%
Living off crime	15%	17%	14%	12%
Long-term sick	11%	7%	14%	8%
Bringing up family	0%	0%	13%	17%
Other	4%	3%	9%	6%
Educational qualifications	**Remand**	**Sentenced**	**Remand**	**Sentenced**
A-level or higher	12%	15%	13%	13%
GCSE	34%	37%	42%	36%
Other	3%	2%	1%	1%
None	52%	46%	44%	48%

Source: *Psychiatric Morbidity among Prisoners in England and Wales*.[34]

Table 7 illustrates that a significant minority of the prison population were homeless (in temporary accommodation, hostels or living on the streets) prior to incarceration and a similar proportion were in insecure forms of accommodation (bedsits or rooms with shared amenities).

Table 7: The prior accommodation arrangements of the prison population.

Type of accommodation	Males		Females	
	Remand	Sentenced	Remand	Sentenced
Privately owned	8%	15%	7%	14%
Rented (self-contained)	47%	48%	56%	61%
Bedsit/room (shared amenities)	7%	6%	8%	3%
Homeless (temporary accommodation, hostel, living on streets)	7%	5%	8%	4%
With parents/relatives	22%	20%	13%	13%
Other	9%	6%	8%	3%

Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]

Childhood influences

Many prisoners have experienced various childhood influences relevant to their offending behaviour and health later in life. Compared to the wider community, a very high proportion have been in local authority care as children, spent time in an institution as a child or attended special school.

In relation to ethnicity and cultural background, it is of note that a significant minority of prisoners were born outside the UK (see **Table 8**).

Table 8: Childhood factors affecting prisoners.

Childhood factors	Males		Females	
	Remand	Sentenced	Remand	Sentenced
Born outside UK	11%	10%	17%	16%
In local authority care as a child	33%	26%	29%	25%
Spent time in an institution as a child	43%	35%	27%	25%
Attended special school	27%	23%	16%	11%

Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]

Stressful life events affecting prisoners

The majority of prisoners have experienced three or more stressful life events at some time in their life. The commonest stressful events are bereavement, relationship breakdown, expulsion from school, running away from home, redundancy and money problems. Many prisoners (especially women prisoners) have experienced domestic violence (see **Table 9**).

Table 9: Types of stressful life events experienced by prisoners.

	Males		Females	
	Remand	Sentenced	Remand	Sentenced
Violence at home	28%	25%	51%	48%
Bullying	30%	30%	21%	26%
Sexual abuse	9%	8%	34%	31%
Serious illness/injury	18%	14%	16%	13%
Violence at work	6%	6%	3%	4%
Relationship breakdown	42%	45%	46%	46%
Death of close friend or relative	46%	47%	41%	47%
Death of parent or sibling	24%	29%	30%	30%
Death of spouse or child	6%	6%	17%	15%
Stillbirth of baby	8%	7%	10%	11%
Expelled from school	55%	49%	41%	33%
Running away from home	51%	47%	59%	50%
Homelessness	47%	37%	52%	34%
Serious money problems	55%	50%	50%	48%
Sacked or made redundant	44%	49%	26%	31%

Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]

Adverse experiences in prison

Imprisonment entails a loss of privacy, living in a densely populated environment and isolation from everyday environments. Individual behaviour is restricted by institutional routines and low levels of stimulation can lead to boredom. This kind of environment has been shown to lead to maladaptive behaviour.[19]

Prisoners, in particular male prisoners, tend to organise themselves on the basis of a clearly defined hierarchy. At the top are professional criminals, in particular armed robbers, who may exercise considerable power in the prison. Most prisoners occupy a middle stratum. At the bottom are prisoners who are shunned by other inmates, often because of the nature of their offences (for example, sexual assaults on children). Because they are at risk of violence, these inmates are held in segregation units. The existence of this hierarchy has implications for the experience of victimisation.

Victimisation

Because of the nature of the prison population, it is not uncommon for prisoners to experience victimisation while imprisoned. The most common types of victimisation are threats of violence, theft of belongings and actual violence. Among women prisoners, unwanted sexual attention is also common (see **Table 10**).

Table 10: Prisoners' experience of victimisation while in prison.

Type of victimisation	Males		Females	
	Remand	Sentenced	Remand	Sentenced
Threatened with violence	22%	30%	13%	17%
Victim of violence	10%	14%	6%	8%
Belongings stolen	18%	30%	25%	36%
Intimidated to hand over belongings	6%	7%	4%	5%
Unwanted sexual attention	1%	4%	10%	11%
Victim of forced sexual attention	0%	1%	3%	1%

Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]

3 Sub-categories

Sub-categories of health care needs are used to enable planners of health care services to recognise and manage the different requirements for services that sub-groups in a single population or disease group may present. There are a number of ways in which the health care needs of the prison population could be sub-categorised.

Categorisation by type of prison

The health care needs of establishments depend to some extent on their primary function, as this will affect the type and turnover of inmates and their general health problems. One method of sub-categorisation would be to categorise by the type of prison, i.e.:

- prisoners in Young Offender Institutions
- prisoners in women's prison
- prisoners in training establishments/open prisons
- prisoners in local prisons/remand centres
- prisoners in high security prisons.

Categorisation by type of health problem

Health care needs of prisoners could also usefully be sub-categorised by diseases andhealth problems. This is because many of the health problems found in a prison setting are common in all types of establishment regardless of age or sex. There are health problems that:

- are important in primary care outside of prisons: These include the commonest reasons for consultation in the (non-elderly) general population, for example epilepsy, asthma, diabetes, infectious diseases, dental health, minor and self-limiting diseases and neurotic disorders

- are risk factors for (or associated with) criminal behaviour: These health problems include mental disorders which appear to dominate the workload of the Prison Health Care Service despite official policy encouraging early diversion of mentally disordered offenders from custody to hospital, i.e. personality disorders, functional psychoses and substance misuse
- are associated with imprisonment: These are health problems that may arise because of imprisonment and include neurotic disorders, self-harm and suicide
- are a consequence of, or are associated with poverty: As described in the section 2, the unemployed and homeless are over-represented in the prison population. Therefore health problems that are more prevalent in these groups will be more prevalent in the prison population than in the community. These include epilepsy, asthma, ischaemic heart disease, dental health problems and infectious diseases
- are particularly difficult to handle in the prison environment: This particularly refers to maternity care.

Other sub-categories

The health care needs of prisoners could also be sub-categorised by length of stay (short, medium or long stay), category of prisoner (remand or sentenced) or the prisoners' external stability and support (i.e. access to family networks, social services, support groups etc.).

Sub-categorisation chosen for health care needs assessment of a prison population

In the sub-categories described above, a number of health problems could fit into more than one sub-category and would therefore make the process of data collection unnecessarily complicated. As a result of this the sub-categories that will be used through this report are based on type of health problem and, where necessary within these categories, the type of prisoner.

- Main sub-categories
  - minor and self-limiting illnesses
  - physical health problems
  - pregnancy and maternal health
  - mental disorders
  - substance misuse
  - health promotion.
- Secondary sub-categories:
  - age
  - sex
  - remand or sentenced.

Data on the prevalence of illness in the community is often available on the basis of age and sex. Where the prevalence of illness in the prison population has been estimated on the basis of its prevalence in the wider community, the figures have been broken down by age and sex. The sections of the document which are concerned with chronic physical illnesses generally report the age and sex specific prevalence and apply these to the average prison population.

Where the prevalence of illness in the prison population has been estimated from data collected from the prison population, inmates have generally been subdivided into male and female, and sentenced and

remand prisoners. The sections of the document that are concerned with psychiatric illness generally report the prevalence of illness on the basis of whether prisoners are on remand or are sentenced.

4 Prevalence and incidence

One of the limitations of an approach to needs assessment which begins with the incidence and prevalence of health problems is that it can overlook the promotion of positive health. Because this section is concerned with identifying needs, it includes a sub-section on health promotion, although strictly speaking we cannot meaningfully talk about the prevalence of need for health promotion.

Health promotion

Health promotion is based on an assessment of needs and supported by evidence of effectiveness can help achieve three objectives. It can build the physical, mental and social health of prisoners and staff; prevent the deterioration of prisoners' health during or because of custody; and encourage prisoners to adopt healthy behaviours which can then be carried back into the community.[20]

The report of the Joint Working Group endorses the role of health promotion as a legitimate and integral part of the prison's activities. It states that: 'Good health care and health promotion in prisons should help enable individuals to function to their maximum potential on release, which may assist in reducing offending. It should also reduce morbidity in a high risk section of the general population with medium and long-term reduction in demands on the NHS.'[13]

Alongside the role of health care, five factors have been identified which affect the health of prisoners. These can all be considered under the heading of health promotion:

- the social demography of the prison population
- the built environment of the establishment
- the organisational culture in the prison
- relationships between prisoners, and with the external world
- specific medical issues facing the prison population.[21]

Health promotion needs of prisoners

It may be helpful to consider the health promotion needs of prisoners under three headings. Needs that all prisoners are likely to have, needs that many prisoners are likely to have and needs that some prisoners have. Examples each of these are illustrated in **Box 2**.

Box 2: Health promotion needs common to all prisoners.

All need:
- *advice on avoiding sexually transmitted diseases, HIV and hepatitis
- *hepatitis B immunisation
- advice on avoiding drug overdose on leaving prison (needed by all because staff cannot identify all at risk)
- protection against harm caused by smoking
- appropriate levels of physical activity
- a balanced diet
- adequate association time
- a meaningful occupation (work, education, artistic activity, physical education)
- contact with the outside world and help to maintain family ties.

*All prisoners can be considered to have these needs although not all prisoners are necessarily at high risk. This is because it is difficult for staff to identify all those who are at high risk, and because all prisoners need information in order to reduce fear and stigma.

Many need:
- psychological skills training
  - cognitive behavioural skills training
  - activities to improve self-esteem
  - thinking skills
  - anger management
- practical skills training
  - job search skills
  - parenting education
  - advice on selection and cooking of food
- health-related education
  - dietary advice, advice on exercise and smoking
- specific health promotion interventions
  - access to listeners or equivalent
  - support to give up drugs, alcohol or smoking.

Some need:
- immunisation against TB, pneumococcus or influenza
- advice on specific conditions, e.g. minor illnesses, diabetes, epilepsy, asthma, the menopause, sickle-cell disease
- access to equivalent cancer prevention and early detection advice and services.

Minor illness

The term 'minor illnesses' is used here to describe self-limiting conditions which occur frequently in the community. They include musculo-skeletal problems (such as minor injuries, back and neck pain), respiratory infections (such as coughs, colds and sore throats), gastro-intestinal complaints (such as indigestion, constipation and diarrhoea), neurological complaints (such as tension headaches and migraine), allergies (such as hayfever) and skin conditions (such as dermatitis, eczema and psoriasis).

In the community, respiratory conditions, injuries, infectious diseases and skin disorders are the most common reasons for consultations with general practitioners among males aged 16–44. In women of this age, by far the most common reasons for consultation are for preventive or other health-related reasons. This principally means services such as family planning and pregnancy care but also includes routine physical examination and cervical screening. After this, respiratory conditions, genito-urinary disorders, infectious diseases and skin conditions are the most common reasons for consultation. For most conditions, women in this age group consult a general practitioner more often than men. This information originates from the *Morbidity Statistics from General Practice Fourth National Study*[22] and is illustrated in **Table 11**, **Table 12** and **Table 13**.

Table 11: Principal reasons for GP consultation among persons in the community (adjusted to age of prison population).

Reason for consultation (ICD category)	Males		Females	
	Percentage of consultations	Consultations per person year	Percentage of consultations	Consultations per person year
Infectious and parasitic diseases	6%	0.1	6%	0.3
Neoplasms	1%	0.0	1%	0.0
Endocrine and metabolic	2%	0.0	1%	0.1
Blood diseases	0%	0.0	0%	0.0
Mental disorders	7%	0.1	6%	0.2
Neurological disorders	7%	0.1	5%	0.2
Circulatory disorders	3%	0.1	2%	0.1
Respiratory disorders	19%	0.4	14%	0.6
Digestive disorders	5%	0.1	3%	0.1
Genito-urinary disorders	2%	0.0	11%	0.5
Pregnancy-related	0%	0.0	2%	0.1
Skin disorders	9%	0.2	6%	0.3
Musculo-skeletal disorders	10%	0.2	6%	0.3
Congenital abnormalities	0%	0.0	0%	0.0
Perinatal conditions	0%	0.0	0%	0.0
Ill-defined symptoms	6%	0.1	6%	0.2
Injury and poisoning	11%	0.2	4%	0.2
Other (medical examination, maternity care, screening, contraception)	11%	0.2	26%	1.1
Total consultations per person year	100%	1.98	100%	4.30

Source: *Morbidity Statistics from General Practice. Fourth national study, 1991–1992.*[22]

Table 12: Commonest reasons for consultation by category (males, adjusted to age of prison population).

Reason for consultation (diagnosis)	Persons (per 10 000) who consult during the course of a year
Infectious and parasitic diseases	
Ill-defined intestinal infections (009)	238
Dermatophytosis (110)	188
Other diseases due to viruses and Chlamydiae (078)	158
Mental disorders	
Neurotic disorders (300)	228
Diseases of the nervous system and sense organs	
Disorders of external ear (380)	344
Disorders of conjunctiva (372)	181
Nonsuppurative otitis media and Eustachian tube disorders (381)	120
Diseases of the circulatory system	
Essential hypertension (401)	139
Diseases of the respiratory system	
Acute bronchitis and bronchiolitis (466)	397
Acute upper respiratory infections of multiple or unspecified site (465)	370
Acute pharyngitis (462)	339
Asthma (493)	305
Acute tonsillitis (463)	300
Allergic rhinitis (477)	288
Acute sinusitis (461)	195
Influenza (487)	191
Common cold (460)	115
Diseases of the digestive system	
Disorders of function of stomach (536)	126
Diseases of skin and subcutaneous tissue	
Diseases of sebaceous glands (706)	279
Atopic dermatitis and related conditions (691)	140
Contact dermatitis and other eczema (692)	136
Diseases of the musculo-skeletal system and connective tissue	
Other and unspecified disorders of back (724)	345
Other and unspecified disorder of joint (719)	196
Other disorders of soft tissues (729)	118
Symptoms, signs and ill-defined conditions	
Symptoms involving respiratory system and other chest symptoms (786)	201
Other symptoms involving abdomen and pelvis (789)	144
General symptoms (780)	140
Symptoms involving head and neck (784)	121
Injury and poisoning	
Sprains and strains of other and unspecified parts of the back (847)	234
Certain adverse effects not elsewhere classified (995)	204
Sprains and strains of knee and leg (844)	116
Sprains and strains of ankle and foot (845)	103

Table 12: Commonest reasons for consultation by category (males, adjusted to age of prison population).

Reason for consultation (diagnosis)	Persons (per 10 000) who consult during the course of a year
Supplementary classification: factors influencing health status and contact with health services	
Encounters for administrative purposes (V68)	641
Need for prophylactic vaccination and inoculation against bacterial diseases (V03)	387
Need for prophylactic vaccination and inoculation against certain viral diseases (V04)	272
General medical examination (V70)	262
Special screening for cardiovascular, respiratory and genito-urinary diseases (V81)	181
Special screening for endocrine, nutritional, metabolic and immunity disorders (V77)	115

Source: *Morbidity Statistics from General Practice. Fourth national study, 1991–1992.*[22]

Table 13: Commonest reasons for consultation by category (females, adjusted to age of prison population).

Commonest reasons for consultation (over 250 only): in categories and ranked	Persons (per 10 000) who consult during the course of a year
Infectious and parasitic diseases	
Candidiasis (112)	823
Ill-defined intestinal infections (009)	360
Endocrine, nutritional and metabolic disorders and immunity disorders	
Obesity and other hyperalimentation (278)	150
Mental disorders	
Neurotic disorders (300)	579
Diseases of the nervous system and sense organs	
Disorders of external ear (380)	356
Disorders of conjunctiva (372)	326
Diseases of the respiratory system	
Acute upper respiratory infections of multiple or unspecified site (465)	688
Acute bronchitis and bronchiolitis (466)	606
Acute pharyngitis (462)	603
Acute tonsillitis (463)	515
Acute sinusitis (461)	455
Allergic rhinitis (477)	407
Asthma (493)	374
Influenza (487)	257
Diseases of the digestive system	
Functional digestive disorders not elsewhere classified (564)	301
Diseases of the genito-urinary system	
Disorders of menstruation and other abnormal bleeding from female genital tract (626)	822
Pain and other symptoms associated with female genital organs (625)	492
Other disorders of urethra and urinary tract (599)	466

Table 13: Continued.

Commonest reasons for consultation (over 250 only): in categories and ranked	Persons (per 10 000) who consult during the course of a year
Diseases of skin and subcutaneous tissue	
Diseases of sebaceous glands (706)	351
Contact dermatitis and other eczema (692)	279
Atopic dermatitis and related conditions (691)	271
Diseases of the musculo-skeletal system and connective tissue	
Other and unspecified disorders of back (724)	454
Other and unspecified disorder of joint (719)	256
Symptoms, signs and ill defined conditions	
Other symptoms involving abdomen and pelvis (789)	401
General symptoms (780)	310
Symptoms involving respiratory system and other chest symptoms (786)	270
Injury and poisoning	
Certain adverse effects not elsewhere classified (995)	323
Supplementary classification of factors influencing health status and contact with health services	
Contraceptive management (V25)	3,002
Special screening for malignant neoplasms (V76)	1,259
Normal pregnancy (V22)	610
Encounters for administrative purposes (V68)	605
Need for prophylactic vaccination and inoculation against bacterial diseases (V03)	524
General medical examination (V70)	465
Postpartum care and examination (V24)	414
Need for prophylactic vaccination and inoculation against certain viral diseases (V04)	384
Special screening for cardiovascular, respiratory and genito-urinary diseases (V81)	285

Source: *Morbidity Statistics from General Practice. Fourth national study, 1991–1992.*[22]

Prevalence of minor illness in the prison population

The prevalence of minor illnesses in the prison population is likely to mirror the prevalence in the equivalent population in the community. Minor illnesses account for the bulk of consultations in community general practice and are likely to account for the bulk of consultations in the prison population. The OPCS survey of sentenced male prisoners[23] indicated that about one in ten had suffered from skin diseases, respiratory problems and allergies in the past year (see **Table 14**).

Table 14: Conditions reported as occurring within the past 12 months (sentenced male prisoners).

Condition	Age band				
	16–24	**25–34**	**35–44**	**45+**	**Total**
Skin diseases	8%	14%	11%	12%	12%
Respiratory (excluding asthma)	9%	10%	8%	17%	10%
Asthma	15%	10%	4%	10%	10%
Allergies	7%	5%	9%	7%	7%

Source: *Survey of the Physical Health of Prisoners 1994: a survey of sentenced males.*[23]

In a survey of women prisoners[24] (n=214), 48% reported menstrual complaints, 47% anxiety and depression, 45% musculo-skeletal complaints and 30% reported respiratory problems. A high proportion of women also reported minor conditions in the two weeks prior to the survey (see **Table 15**).

Table 15: Minor illnesses reported by women prisoners in the previous two weeks.

Mainly psychological or neurological symptoms	**Percentage (n)**	**Mainly dermatological symptoms**	**Percentage (n)**
Difficulty sleeping	64% (136)	Skin problems	41% (88)
Feeling tired	62% (133)		
Headache	57% (121)		
Mainly gastro-intestinal symptoms	**Percentage (n)**	**Mainly respiratory or infectious symptoms**	**Percentage (n)**
No appetite/off food	30% (64)	Persistent cold/flu	34% (73)
Constipation	26% (55)	Persistent cough	26% (55)
Diarrhoea or sickness	15% (33)	Sore throat	22% (46)
		High temperature	8% (17)

Source: Smith C, Assessing health needs in women's prisons.[24]

Physical health problems

A number of surveys, described below, indicate that, in general, the physical health of prisoners is worse than that of people of equivalent age in the general population.

Adult male prisoners

A survey of the physical health of sentenced male prisoners was carried out on a representative sample of sentenced prisoners in England and Wales in 1994.[23] Three-fifths of men rated their health as good or very good but 48% said they had a long-standing illness or disability. The most commonly reported long-standing conditions and a comparison between adult men aged 18–49 in the general population are listed in **Table 16**. Prisoners aged 18–49 were more likely than men of equivalent age in the general population to report a long-standing illness or disability. They were also more likely to have consulted a doctor in the last two weeks and to be taking prescribed medicines.

The survey also indicated that prisoners on average had a lower body mass index than men in the general population. Just over one-third of prisoners were classed as overweight or obese compared with just over a half of men of equivalent age in the general population.

Young prisoners

In a survey of the physical health of young prisoners (aged 16–24), 39% reported long-standing illness or disability, 21% reported respiratory problems (asthma in 15%) and 10% reported musculo-skeletal problems.[14] Many young prisoners were receiving treatment: 26% were taking medicines, an average of 1.6 medications each. Over half (55%) of all young prisoners had consulted their GP during the six months immediately prior to arrest. A separate survey of 500 young offenders[25] found that on entering prison 17% (n=82) of the respondents said they were currently receiving medical treatment. This included 9% who

Table 16: Comparison of the physical health of prisoners with the general population.

Condition group	Percentage reporting each condition	
	Prisoners (n=925)	General population (n=4407)
Musculo-skeletal complaints	16%	12%
Respiratory conditions	15%	8%
Digestive system	5%	3%
Nervous system	5%	3%
Mental disorders	5%	1%
Skin complaints	3%	1%

Source: *Survey of the Physical Health of Prisoners 1994: a survey of sentenced males.*[23]

were prescribed inhalers for asthma, 7% who were taking a short course of specific treatment (antibiotics) and 1% who were on long-term medical treatment for conditions such as diabetes, epilepsy and depression.

Women prisoners

Women prisoners have been found to report higher rates of various physical and psychological problems than women in the general population. These include asthma, epilepsy, high blood pressure, anxiety and depression, stomach complaints, period and menopausal problems, sight and hearing difficulties, and kidney and bladder problems.[26] A survey of the health care needs of women in prisons[24] indicated that 60% rated their own health as fair, poor or very poor.

Epilepsy

If the incidence and prevalence of epilepsy in the community is similar to that in prison inmates, we would expect about 0.4% of the prison population to suffer from epilepsy and 0.13% to become epileptic while in prison. **Table 17** shows the effects of applying these estimates to the prison population. Overall this implies that there would be about 250 prisoners with chronic epilepsy and 80 or 90 new epileptics each year.

Table 17: Estimated number of epileptics in the prison population based on community prevalence.

Age	Male prisoners					Female prisoners				
	Incidence	Prevalence	Prisoners	New	Chronic	Incidence	Prevalence	Prisoners	New	Chronic
16 to 24	0.19%	0.45%	20,583	39	93	0.15%	0.45%	697	1	3
25 to 44	0.09%	0.36%	33,736	30	121	0.11%	0.38%	1,831	2	7
45 to 64	0.10%	0.40%	6,231	6	25	0.08%	0.36%	277	0	1
65 to 74	0.16%	0.38%	396	1	2	0.16%	0.43%	7	0	0
75 to 84	0.18%	0.46%	58	0	0	0.16%	0.40%	0	0	0
85+	0.12%	0.30%	2	0	0	0.14%	0.35%	0	0	0
Total	0.13%	0.39%	61,006	76	241	0.01%	0.02%	2,812	3	11

Source: *Morbidity Statistics from General Practice. Fourth national study, 1991–1992.*[22]
Prison population: Home Office statistics for 31 December 1998.

However, direct estimates of the prevalence of epilepsy among prisoners are somewhat higher. In 1969, Gunn observed a prevalence of epilepsy among male British prisoners almost twice as high as in the general population.[27] These findings have been confirmed in subsequent surveys.[28] Gunn's figures (see **Table 18**) suggest that the prevalence of epilepsy in the prison population is almost twice that in the community, i.e., on 31 December 1998 an estimated 530 prison inmates (0.8% of prisoners) would have had epilepsy.

Table 18: Estimated number of epileptics in the prison population: based on prison estimate.

Age	Male prisoners			Female prisoners**		
	Prevalence	Prisoners	Numbers	Prevalence	Prisoners	Numbers
15–24	1.10%	20,583	226	1.10%	951	10
25–34	0.70%	23,015	161	0.70%	1,191	8
35–44	0.60%	10,721	64	0.60%	640	4
45–64*	0.80%	6,687	53	0.80%	284	2
Total	0.83%	61,006	505	0.81%	3,066	25

Source: Adapted from Gunn J.C. The prevalence of epilepsy among prisoners. *Proceedings of the Royal Society of Medicine* 1969; **62**: 60–3.
Prison population: Home Office statistics for 31 December 1998. * Includes those over 64. ** Male prevalence rates have been applied to female prisoners.

A direct estimate of the prevalence of epilepsy in male sentenced prisoners can also be made from the OPCS survey of the physical health of prisoners.[23] The survey recorded the percentage of male sentenced prisoners reporting 'fits' in the past 12 months (see **Table 19**). This is a broad case definition – not everyone who has a fit is epileptic – but the overall prevalence was 2%, which is closer to Gunn's estimate of the prevalence of epilepsy than estimates based on the general population.

Table 19: Percentage of male sentenced prisoners reporting 'fits' in the past 12 months.

Age	Percentage reporting 'fits' in past 12 months
15 to 24	1%
25 to 34	4%
35 to 44	1%
≥45	–
Total	2%

Source: *Survey of the Physical Health of Prisoners 1994: a survey of sentenced males.*[23]

Asthma

Table 20 shows the age-specific prevalence of wheezing in the past year, doctor-diagnosed asthma and treated asthma in the general population. The figures are based on the *Health Survey for England 1996*[29] and *Key Health Statistics from General Practice 1996*.[30] The table also shows the expected prevalence of asthma in the prison population. Asthma tends to be more common in the young. As the prison population is predominantly young, the overall prevalence of asthma is higher than that of the general population. Based on these figures, 13% of male and 14% of female prisoners have doctor-diagnosed asthma. Just under half of these will be receiving treatment; 5% and 6% respectively.

Table 20: Age-specific prevalence of wheezing in the past year, doctor-diagnosed asthma and treated asthma in the community and expected prevalence in the prison population.

Age	Males				Females			
	Prison population	Wheezing in the past year*	Diagnosed asthma*	Treated asthma†	Prison population	Wheezing in the past year*	Diagnosed asthma*	Treated asthma†
16–24	20,583	20%	19%	7%	951	23%	17%	8%
25–34	23,015	19%	12%	5%	1,191	19%	14%	6%
35–44	10,721	18%	11%	4%	640	17%	12%	5%
45+	6,687	19%	8%	4%	284	19%	11%	6%
Total prevalence in the prison population	61,006	19%	14%	5%	3,066	20%	14%	6%

Source: **Health Survey for England 1996*.[29] † *Key Health Statistics from General Practice 1996*.[30] (Prison population derived from Home Office statistics for 31 December 1998. NB: figures have been rounded to the nearest percentage point.)

In the information presented in **Table 20**, in the 16–24 year old age group the prevalence of diagnosed asthma was similar to the prevalence of wheezing symptoms, particularly for males. However, in the older age groups the prevalence of diagnosed asthma was much less than the prevalence of wheezing. The prevalence of wheezing recorded in the *Health Survey for England 1996*[29] showed a strong social-class gradient: 15% and 27% of men in socio-economic classes I and V respectively. The prevalence of diagnosed asthma did not show this social-class gradient: 13% and 11% of men in socio-economic classes I and V respectively. This suggests that asthma is under-diagnosed in the social classes from which the prison population is drawn. Since about one-fifth of prisoners will have experienced wheezing symptoms in the past year. It is likely that some of these have unrecognised asthma.

Diabetes

Table 21 shows the estimated prevalence of diabetes in the prison population. The figures have been extrapolated from the age-specific prevalence of diabetes in community populations. Based on these data we can expect diabetes to affect between 0.6% and 0.8% of the prison population. Because the prison population is predominantly young, insulin-dependent diabetes mellitus (IDDM) is much more common than non-insulin-dependent diabetes mellitus (NIDDM).

Table 21: The age-specific prevalence of diabetes in the community and the estimated prevalence in the prison population.

Age	Male			Female		
	Prison population	IDDM prevalence	NIDDM prevalence	Prison population	IDDM prevalence	NIDDM prevalence
16–24	20,583	0.3%	0.0%	951	0.3%	0.0%
25–34	23,015	0.5%	0.1%	1,191	0.4%	0.1%
35–44	10,721	0.6%	0.3%	640	0.5%	0.2%
45–54	4,506	0.6%	1.0%	221	0.5%	0.7%
55–64	1,725	0.9%	2.8%	56	0.8%	2.1%
>64	456	1.1%	4.2%	7	0.9%	3.1%
Total prevalence in the prison population	61,006	0.5%	0.3%	3,066	0.4%	0.2%

Source: *Key Health Statistics from General Practice 1996*.[30] Prison population: Home Office statistics for 31 December 1998.

There are few direct estimates of the prevalence of diabetes in prison. In one male prison, 35% of an eligible population of inmates attended a Well Man Clinic.[31] Attendees ranged in age from 21 to 62 (mean 32 years). Eight percent (95% CI 4.5–11.1%) were found to be diabetic, well above the expected prevalence in this age group. Even if it is assumed that all diabetic inmates in the eligible population selectively attended this clinic, this implies a prevalence of 2.7% (95% CI 1.6–3.9%). If this figure is representative of the whole prison population, it implies that diagnosed diabetes is two to eight times as common in prison inmates as in the community.

Ischaemic heart disease and cardiovascular risk factors

Prisoners with ischaemic heart disease

Patients with pre-existing cardiovascular (heart disease) or cerebrovascular disease (strokes) are at very high risk of further vascular events. Because of this they are the highest priority in the management of cardiovascular disease and its risk factors.

The prevalence of ischaemic heart disease is very dependent on the age of the population. **Table 22** shows the age-specific prevalence of ischaemic heart disease in the general population.[32] Based on these figures about 0.5% of male inmates and 0.3% of female inmates are likely to suffer from ischaemic heart disease.

However, because inmates are drawn largely from lower social classes, the above may be an underestimate. Heart disease is about half as common again among socio-economic class V as among the general population.[33] The adjusted prevalence estimate is shown in **Table 22**.

Table 22: Age-specific prevalence of ischaemic heart disease in the 1994 Health Survey for England.

Age band	Based on general population		Adjusted for social class of prisoners	
	Men	Women	Men	Women
16–24	0.0%	0.2%	0.0%	0.3%
25–34	0.3%	0.1%	0.5%	0.2%
35–44	0.5%	0.3%	0.8%	0.5%
45–54	3.0%	2.3%	4.5%	3.5%
55–64	10.3%	5.9%	15.5%	8.9%
Total prevalence in the prison population	0.5%	0.3%	0.7%	0.5%

Source: 1994 Health Survey for England.

Smoking

Smoking is highly prevalent among the prison population. Over three-quarters of all prisoners smoke and over half are moderate or heavy smokers[34] (see **Table 23**).

Table 23: Prevalence of smoking among the prison population.

Smoking behaviour	Male (%)		Female (%)	
	Remand	Sentenced	Remand	Sentenced
Heavy smoker	31	24	41	34
Moderate smoker	36	34	31	32
Light smoker	18	19	11	15
All smokers	85	77	82	82
Ex or non-smoker	15	23	18	18

Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]

Raised blood pressure and raised serum cholesterol

The risk of heart disease increases with blood pressure and with cholesterol levels. However, risk of heart disease is also affected by a number of other factors, principally age and sex. Because of this it is not helpful simply to estimate the numbers of persons with raised blood pressure or raised cholesterol. Management of raised cholesterol and raised blood pressure are considered later in this document.

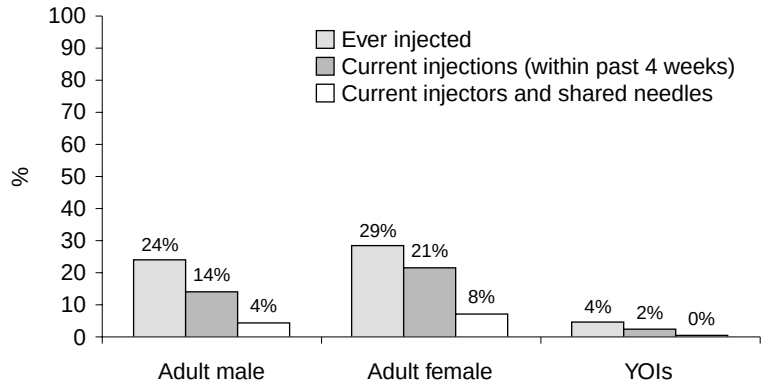
Infectious diseases

Bloodborne viruses: HIV, hepatitis B and hepatitis C

In 1997, a survey of eight prisons was carried out by the Public Health Laboratory Service and the Prison Service Directorate of Health Care, to find out about the prevalence of bloodborne virus infections and risk factors for bloodborne virus infections.[35] The total sample size was 3942 prisoners, 83% of those asked to participate.

Prevalence of risk factors

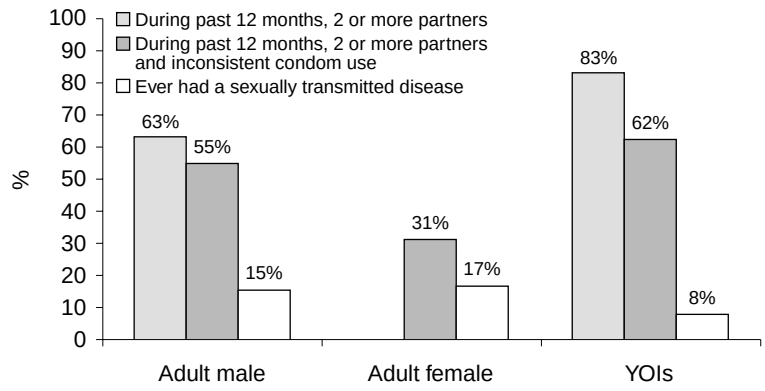
The survey found that about one in four adult prisoners have engaged in activities likely to put them at risk of infection with HIV, hepatitis B or hepatitis C. **Figure 9** shows the proportion who have injected drugs. One quarter of prisoners have injected drugs and more than half of these have done so recently: a significant minority have shared needles. These findings have been confirmed in a more recent prison-based survey.[36]



Source: *Prevalence of HIV in England and Wales in 1997: Annual Report of the Unlinked Anonymous Prevalence Monitoring Programme.*[35]

Figure 9: Injecting drug behaviour among the prison population in 1997.

High proportions of prisoners also engage in risky sexual behaviour. Over half of all male prisoners reported two or more sexual partners in the past year but had not consistently used condoms to reduce risk of infection (see **Figure 10**). Seventeen per cent of females and 15% of males had a sexually transmitted disease.



Source: *Prevalence of HIV in England and Wales in 1997: Annual Report of the Unlinked Anonymous Prevalence Monitoring Programme.*[35]

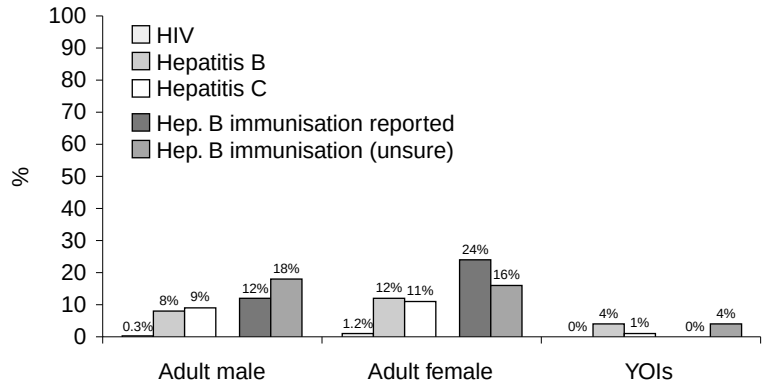
Figure 10: Sexual behaviour and risk factors for sexually transmitted diseases in the prison population in 1997.

A previous survey of behaviours, which might put prisoners at risk of HIV infection, was conducted among 1009 adult prisoners in 13 prisons in England and Wales.[37] This portrayed a similar situation, indicating that the male prison population showed higher levels of drug misuse and injecting behaviour than the general population and that there was a relationship between this behaviour and higher levels of criminal behaviour. Prisoners who continued to inject in prison were again likely to share needles. Male prisoners also showed more risky sexual behaviour and were more likely to have had sexual contact with women who were at increased risk of HIV, such as prostitutes. This survey suggested that between 1.6% and 3.4% of the adult male prison population engaged in homosexual activity.

More recent evidence confirms that risky behaviour is common among inmates of Young Offender Institutions: 20% of attendees at a genito-urinary clinic reported intravenous drug misuse and 2% were hepatitis C positive. These prevalences are much more frequent than in genito-urinary clinic attendees in the community.[38]

Prevalence of bloodborne viral infections

In 1997, about one in ten prisoners had antibodies to hepatitis B and hepatitis C (see **Figure 11**). This indicates previous exposure to infection. It also suggests that other inmates who share injecting equipment with these prisoners, their sexual partners within and outside of prison, and persons (including health care staff and prison officers) who come into contact with their blood or saliva are at risk of infection.



Source: *Prevalence of HIV in England and Wales in 1997: Annual Report of the Unlinked Anonymous Prevalence Monitoring Programme.*[35]

Figure 11: The prevalence of HIV, hepatitis B & C infection and immunisation against hepatitis B, among prisoners in 1997.

The numbers of new cases of acute and chronic viral hepatitis and HIV infection in the prison population between 1993/94 and 1997/98 are listed in **Table 24**.

Table 24: New cases of infectious diseases identified in the prison population: numbers and rate per 1000 prisoner years (1993/94 to 1997/98).

	1993/94		1994/95		1995/96		1996/97		1997/98		Average on 31 March 1998	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Tuberculosis cases	32	0.7	31	0.6	29	0.6	22	0.4	50	0.8	6	–
Hepatitis B cases	146	3.2	175	3.5	202	3.9	161	2.8	246	3.9	70	–
Hepatitis C cases	0	0.0	102	2.1	543	10.5	760	13.4	916	14.6	317	–
HIV +ve	–	–	–	–	62	1.2	123	2.2	177	2.8	49	–
HIV +ve CD4 count <250	–	–	–	–	–	–	–	–	28	0.4	4	–
Total new receptions	–		196,212		198,441		200,500		233,202			
ADP	45,827		49,308		51,470		56,671		62,584			

Source: *Annual Report of the Director of Health Care 1997–98.*[48]

Sexually transmitted diseases

There are no direct estimates of the prevalence of other sexually transmitted diseases in the UK prison population. It is possible to make an indirect estimate of the prevalence from national data sources. All genito-urinary medicine (GUM) clinics in England submit KC60 statistical returns to the HIV & STD Division of the Public Health Laboratory Service. New diagnoses of a number of sexually transmitted conditions in 1998 are reported in **Table 25**. While these form a basis for estimates of the incidence of sexually transmitted diseases in the prison population, it is important to recognise that prisoners are likely to have a higher incidence of these infections than the general population.

Sexually transmitted diseases are more common in young people. In 1998, diagnoses of infectious syphilis, uncomplicated gonorrhoea, uncomplicated chlamydia, genital herpes and genital warts were highest among those aged 25–34 years in males. In females diagnoses of uncomplicated gonorrhoea were highest in 16–19 year olds, of uncomplicated chlamydia and first attack genital warts in 20–24 year olds, and of infectious syphilis and genital herpes in 25–34 year olds.

Sexually transmitted diseases (STDs) diagnosed at GUM clinics represent only the tip of the iceberg of sexually transmitted infections. The KC60 returns provide an estimate of the incidence and prevalence of symptomatic disease, but provide little information on the population incidence and prevalence of total infection (asymptomatic and symptomatic).[39] A very large proportion of sexually transmitted infections remain undiagnosed and asymptomatic – as many as 70% of women with genital chlamydial infection are asymptomatic,[40] as are 60% of cases of genital herpes.[41]

Tuberculosis

Tuberculosis is an important illness for a number of reasons. First, despite being treatable it has a significant mortality. Second, untreated cases may spread the illness to others including prison staff. Indeed, the British Thoracic Society recommends that all new prison staff are screened for tuberculosis.[42] Third, treatment is complicated by the requirement that patients take medications for many months. Interrupted courses of treatment may lead to the emergence of drug-resistant tuberculosis.

In the UK tuberculosis is more common among deprived groups[43] and is particularly common among the homeless. In London, 1.5% of residents in a shelter for the homeless were found to have tuberculosis following screening.[44] Tuberculosis is also more prevalent among immigrants, in particular those who have recently arrived in this country.[45] Since the socio-economic groups at risk of tuberculosis are represented in the prison population, prisoners are likely to be at risk of tuberculosis. In addition, since tuberculosis is transmitted from person to person by inhalation of infectious material, the crowded conditions found in prisons lend themselves to spread of the disease.

In the USA tuberculosis is highly prevalent in the prison population and as a result discharged prisoners have been known to spread tuberculosis to the wider community. Moreover, there is evidence that prison staff in the USA and Canada suffer from a higher prevalence of tuberculosis than the wider community, probably because they are exposed to infected prisoners.[46,47]

In view of this it seems encouraging that in England and Wales the reported prevalence of active tuberculosis in prisons to date remains low. Nevertheless, tuberculosis is more common in the prison population than in the wider community. Fifty new cases of tuberculosis were reported in prisoners in England and Wales from April 1997 to March 1998.[48] This is about 8 cases per 10 000 ADP or 2 cases per 10 000 new receptions in custody. In the general population, in the UK, there are about 6000 annual notifications. This is equivalent to 1.4 and 1.0 cases per 10 000 males and females. Adjusted to the prison population's age structure, the figures are 1.4 and 1.2 per 10 000 male and female prisoners respectively.

It is possible that not all cases of tuberculosis are detected among the prison population. Given that at least 5% of the prison population are homeless, a prevalence rate of 1.5% among the homeless implies that

Table 25: Numbers and rates of new diagnoses of selected sexually transmitted infections, by sex and age, England, 1998.

Condition	Infectious syphilis				Uncomplicated gonorrhoea				Uncomplicated chlamydia				Herpes simplex (first attack)				Genital warts (first attack)			
Age/Sex	Male		Female		All Males		Female		Male		Female		Male		Female		Male		Female	
<16	0	0.0	0	0.0	36	0.1	155	0.3	53	0.1	552	1.1	11	0.0	93	0.2	91	0.2	425	0.8
16–19	6	0.1	4	0.0	982	7.9	1,435	12.2	2,335	18.7	8,290	70.5	313	2.5	1,798	15.3	2,718	21.8	8,284	70.5
20–24	4	0.0	13	0.1	2,094	10.8	1,202	6.5	6,136	31.7	8,997	49.0	1,197	6.2	2,602	14.2	100,076	52.1	9,909	53.9
25–34	37	0.1	26	0.1	3,475	8.3	930	2.3	7,860	18.8	5,945	14.7	2,697	6.4	3,469	8.6	12,705	30.4	7,527	18.7
35–44	22	0.1	4	0.0	1,327	3.8	241	0.7	2,083	6.0	1,123	3.3	1,255	3.6	1,088	3.2	3,691	10.7	1,961	5.7
45+	14	0.0	2	0.0	448	0.5	75	0.1	576	0.6	229	0.2	612	0.7	570	0.5	1,625	1.8	964	0.9
Total	83		49		8,362		4,038		19,043		25,136		6,085		9,620		30,906		29,070	

Source: PHLS (1999) Sexually transmitted infections. www.phls.co.uk/facts/std-t01.htm

among formerly homeless prisoners alone there are likely to be about 41 cases of tuberculosis at any one time. It also implies that 150 cases are likely to pass through prison a year. (These figures are estimated as follows: 5% of an ADP of 55 000 is 2750 homeless prisoners; 1.5% of this is 41. Similarly 5% of 200 000 new receptions is 10 000 new homeless prisoners; 1.5% of this is 150.)

Dental health

A number of measures are used to assess oral health. One of these is the DMFT index. This is simply a count of the total number of teeth which are decayed, missing or filled. Other key measures include the number of sound teeth (teeth which have no evidence of decay) and the number of standing teeth (at least a root is present). The prison population is drawn disproportionately from the lower socio-economic classes,[49] and it is therefore likely that the dental health of social classes IV and V most closely reflects that of the prison population.

The Office of Population Censuses and Surveys carries out a dental health survey every ten years. **Table 26** illustrates the proportion of adults in social classes IV and V in the 1988 survey[50] who are dentate. Prisoners are predominantly young adults and very few young adults are edentulous.

Table 26: Proportion of adults who are dentate in social classes IV and V.

Age	Males	Females
16–24	100%	100%
25–34	99%	93%
35–44	98%	91%
45–54	88%	74%
55–64	59%	49%
65–74	35%	27%
75+	–	7%

Source: *Adult Dental Health 1988: United Kingdom*.[50]

Table 27 illustrates a number of indicators of the dental health of adults in social classes IV and V. Significant numbers of adults in these social classes have substantial numbers of filled, decayed or unsound teeth.

In the survey of adult dental health, the prevalence of decayed or unsound teeth were estimated on the basis of visual examination. The prevalence following more thorough examination is likely to be higher. These figures are therefore likely to indicate the minimum number of persons who are in need of dental services. Overall the prevalence of decayed teeth is similar at all ages, with an average of one decayed or unsound tooth per adult. However, decayed or unsound teeth are unevenly distributed, with just over half of the population having none and a small minority having more than five (see **Table 28**).

Table 27: Indicators of the dental health of adults in social classes IV and V.

Age	Proportion of dentate adults in social classes IV and V with:			
	≥21 standing teeth	≥18 sound teeth	≥12 filled teeth	no decayed or unsound teeth
16–24	99%	80%	5%	57%
25–34	95%	38%	32%	42%
35–44	75%	28%	24%	41%
45–54	53%	14%	22%	46%
55–64	45%	26%	9%	54%
65+	25%	13%	5%	32%

Source: *Adult Dental Health 1988: United Kingdom.*[50]

Table 28: Numbers of decayed or unsound teeth among dentate adults: by age.

Age	Numbers of decayed or unsound teeth among dentate adults			
	0	1–5	>5	Mean
16–24	62%	35%	3%	0.9
25–34	57%	40%	4%	1.1
35–44	55%	42%	3%	1.0
45–54	50%	48%	3%	1.1
55+	54%	42%	4%	1.1

Source: *Adult Dental Health 1988: United Kingdom.*[50]

However, the adult dental health survey found the prevalence of decayed or unsound teeth to be higher in the lower social classes[50] (see **Table 29**).

Table 29: Numbers of decayed or unsound teeth among dentate adults in social classes IV and V.

Social class	Numbers of decayed or unsound teeth among dentate adults			
	0	1–5	>5	Mean
IV & V	47%	47%	6%	1.5

Source: *Adult Dental Health 1988: United Kingdom.*[50]

A survey of the dental health and attitudes of the Scottish prison population was commissioned by the Scottish Executive Health Department in 2002. The aim of the survey was to provide accurate and up-to-date information on the dental health of the Scottish prison population. The survey consisted of a structured interview followed by dental examinations of a random sample of the Scottish prison population. The survey protocol followed the 1998 UK Adult Dental Health Survey methodology, thus allowing direct comparison to the Scottish population. A total of 559 prisoners participated in the survey, a 75% response rate. The results showed that on average the prison population had more decayed but fewer filled teeth than the Scottish population. The severity of tooth decay was also considerably worse in the prison population, especially for female prisoners. Reported length of stay data showed that it took two

years to improve the dental health of prisoners. No other more serious pathology (e.g. suspected malignancy) was found in any subject.[51]

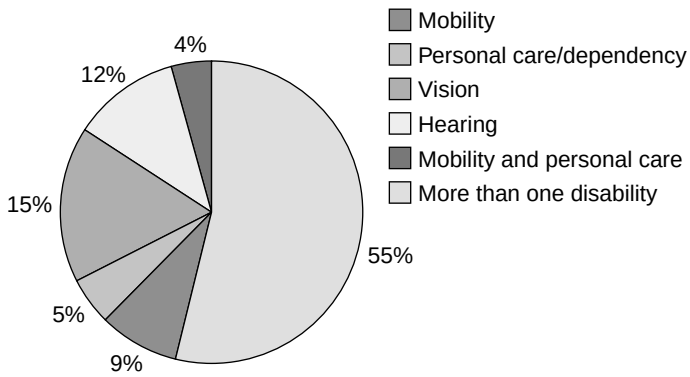
Oral health of prisoners outside of the UK

A survey of the oral health of prisoners in a single prison in USA showed their dental health to be poor. The mean DMFT indices were 12.9, 16.4 and 22.1 for inmates aged respectively 20 to 34, 35 to 44 and 45 and older.[52] However, as patterns of oral health are rather different in the USA, it is difficult to draw conclusions for the UK prison population.

Special senses and disability

Disability

A survey of the number of prisoners known to have a physical disability was carried out in all 129 UK prisons (n=56 151) in July 1996 (Ingram L, Home Office internal report, 1997). In all, 118 prisons responded. It was estimated that approximately 0.6% (n=324) of the prison population were known to have a disability. Over 70% of prisoners known to have a disability had mobility problems, either alone or in combination with other problems (see **Figure 12**). About 17% were known to have hearing problems and 20% problems with personal care among their disabilities. As the survey only identified prisoners whose disabilities were known, it is therefore likely to have underestimated less visible impairments such as hearing problems. The projected number of prisoners with a hearing problem based on the total population on 28th November 1997 was 54. More recent information indicates that there are at least 70–100 deaf prisoners and many more who have a serious hearing difficulty which remains undetected.[53]



Source: Ingram L (1997) Home Office internal report, 1997.

Figure 12: Nature of prisoners' disabilities.

Speech, language and communication problems

The ability to communicate is important for three related reasons. First, it is essential for normal social functioning. Second, other types of health care are less likely to be effective if communication is impaired. This applies to simple interventions such as advice and reassurance as much as more complex interventions

which rely on communication, such as cognitive therapy. Third, communication problems may be linked to some kinds of offending behaviour. Information on the prevalence of speech and language problems is far from complete.

The most comprehensive prevalence data comes from a survey of 20 years' experience in Polmont YOI in Scotland.[54] The majority of those serving sentences of three months or more underwent a screening assessment by the Speech and Language Therapist using an Initial Interview Questionnaire (see **Appendix 1**). Between 1973 and 1994, of almost 10 000 young offenders who were screened 11% needed treatment. More detailed information on the types of speech and language problems encountered is available from 1986 to 1994. This is illustrated in **Figure 13**. The commonest problems are with pragmatic communication, articulation and stammering. Pragmatic communication refers to the ability to interpret, synthesise and use verbal and non-verbal communication within a variety of contexts. Articulation refers to the ability to elicit specific phonemes and stammering refers to difficulties in maintaining fluency of speech.

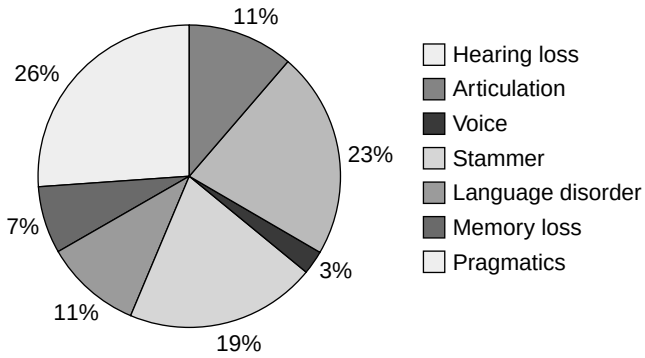


Figure 13: Types of speech and language disorders encountered in Polmont YOI, 1986–1994.
Source: *A Review of Communication Therapy with Young Male Offenders: internal report.*[54]

Based on these figures, we might expect about one in nine young offenders to have a need for speech and language therapy. It is not clear whether a similar figure would apply to adult prisoners. However, adult inmates are unlikely to have received speech and language therapy and in the absence of specific prevalence data it is probably a reasonable estimate for adults.

Pregnancy and maternity care

There will always be a number of pregnant women in custody at any one time. Pregnant prisoners can be a vulnerable group, including adolescent and immature women, foreign nationals and women abusing drugs and alcohol.[26] The total number of diagnosed pregnancies, number of inmates admitted to hospitals for delivery, number of live births in hospital and number of inmates referred for termination between 1994/95 and 1997/98 are shown in **Table 30**. Around 1% of female prisoners have a baby when they are in a prison establishment, whilst around 6% of females coming into prison in a year (i.e. total new receptions) are pregnant.

Table 30: Information relating to pregnancies in prisons 1994/95–1997/98.

	1994/95		1995/96		1996/97		1997/98	
	Number	% of TNR*	Number	% of TNR*	Number	% of TNR*	Number	% of TNR*
Diagnosed pregnancies	480	6	494	6	477	6	440	5
Live births in hospital or establishment	63	0.8	80	1	88	1.1	72	0.8
Inmates referred for termination	–	–	–	–	15	0.2	17	0.2

* TNR (total new receptions) is based on the total female prison population being 4% of the total prison population from 1994/95 to 1997/98.
Source: *Annual Report of the Director of Health Care 1997–98.*[48]

Parenthood

On 21 November 1994 a survey of women prisoners was carried out to establish the number of prisoners who were mothers.[55] Motherhood was defined as having children under 18 or being pregnant at the time of the survey. Overall 3% of (a sample of 1766) women were pregnant. The majority of imprisoned women had dependent children (see **Table 31**).

Table 31: Female inmates with children.

Category	
Non-mothers	
No children	31%
All children >18	8%
Mothers	
Children <18	58%
Children <18 and pregnant	2%
No children but pregnant	1%

Source: Imprisoned Women and Mothers: Home Office Research Study 162.[55]

The preliminary results of more recent research on women prisoners provide further data on imprisoned mothers.[56] Five hundred and sixty seven sentenced women aged 18 to 40 (excluding Category A, lifers and foreign nationals) were studied. Of these, 66% of the sample had dependent children (see **Table 32**) and 3% were caring for children in prison.

Table 32: Results of a survey of 567 sentenced women prisoners aged 18–40.

Age of children	Percentage with dependent children of this age
0–4	34%
5–10	40%
11–18	26%
Number of children	**Percentage with this number of dependent children**
1	23%
2	22%
3 or more	21%

Source: *Women prisoners: work experience and intentions, HM Prison Service 1999.*

It is likely that the majority of male prisoners are also parents, as they are drawn from age groups when parenthood is common. However, as parental responsibility is in practice unequally distributed, it is also likely that a minority of male prisoners bear primary responsibility for their children. A review of young male offenders[14] found that almost a quarter were fathers or expectant fathers. However, in the majority of cases the young man was no longer in a relationship with the mother.

Mental disorders

The most comprehensive information on the prevalence of mental disorders is contained in the publication *Psychiatric Morbidity Among Prisoners in England and Wales* prepared by the Office of National Statistics.[34] Most of the information included in this section on mental disorders is based on this report.

Background

Intellectual functioning

Prisoners tend to have below average levels of intellectual functioning. Greater proportions of remand than sentenced prisoners have very low levels of intellectual functioning. Assessed by the Quick Test (a brief intelligence test of perceptual-verbal performance), one in ten male sentenced, one in twenty male remand and one in ten female prisoners had very low levels of intellectual functioning (a Quick Test score below 25 – the median QT score in the population would be expected to be 42, equivalent to an IQ of 100).[34]

Co-morbidity

Prisoners tend to suffer from more than one mental health problem. Those with more serious neurotic disorders are more likely to suffer from functional psychosis and personality disorders. Alcohol and drug misuse also tends to be associated with personality disorders. An estimated 3–11% of prison inmates have co-occurring mental health disorders and substance abuse disorders.[57]

Disciplinary problems

Prisoners with evidence of a personality disorder are more likely than others to have been held in cellular confinement or in strip cells.[34]

Social support

Compared to the general population, prisoners have low perceived levels of social support (see **Box 3** for information on how social support is assessed). This is particularly striking among those identified as probably suffering from psychosis, those exhibiting more neurotic symptoms, male prisoners and those with personality disorders (other than antisocial personality disorders).[34] These groups of prisoners are also more likely to have small primary support groups (i.e. close friends and relatives).

Box 3: Statements used in the assessment of perceived social support.

- There are people I know who do things to make me happy.
- There are people I know who make me feel loved.
- There are people I know who can be relied on no matter what happens.
- There are people I know who would see that I am taken care of if I needed to be.
- There are people who accept me just as I am.
- There are people I know who make me feel an important part of their lives.
- There are people I know who give me support and encouragement.

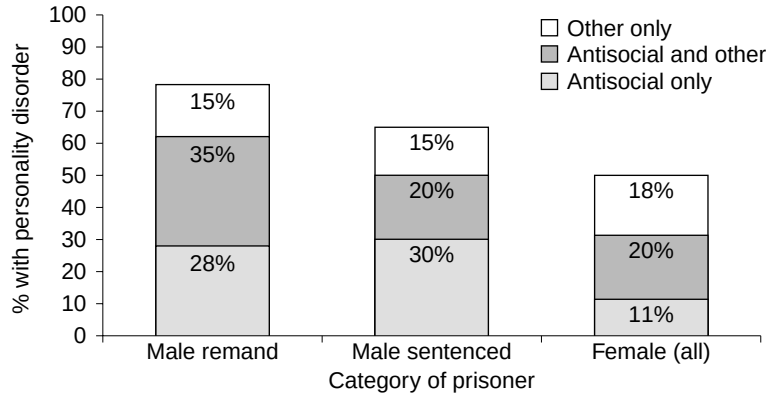
Individuals say if the statements are not true (score =1), partly true (score=2) or certainly true (score =3). A score of 21 indicates no lack of social support. Scores of 17 and below show that individuals perceived a severe lack of social support.

Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]

Personality disorders

Personality disorder is defined as 'an enduring pattern of inner experience and behaviour that deviates markedly from the expectation of the individual's culture, is pervasive and inflexible, has an onset in adolescence or early adulthood, is stable over time, and leads to distress or impairment'.[58] Different categories of personality disorder have been defined, but there is no agreement about the usefulness of these categories. In the Office of National Statistics survey, during clinical interviews, the prevalence of personality disorder was assessed by Structured Clinical Interview for DSM-IV Personality Disorder (SCID-II).

Overall, the majority of prisoners have an identifiable personality disorder. The most common of these is antisocial personality disorder. It is not uncommon for prisoners to fulfil the diagnostic criteria for more than one personality disorder. The prevalence of personality disorder among the prison population is shown in **Figure 14** and in **Table 33**. Over half of male prisoners and almost a third of female prisoners have an antisocial personality disorder. In comparison, surveys of communities in the general population in New Zealand, Canada and the USA have identified antisocial personality disorder in only 3–7% of men and 1% of women.[34]



Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]

Figure 14: The prevalence of personality disorder among prisoners: clinical interview.

Table 33: Percentage of prisoners with a personality disorder.

Type of personality disorder	Male remand	Male sentenced	Female (all)
Antisocial only	28%	30%	11%
Antisocial & other	35%	20%	20%
Other only	15%	15%	18%
Total (any personality disorder)	78%	64%	50%

Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]

Functional psychoses

Functional psychoses include schizophrenic and other delusional disorders, mania and severe depression. However, in practice, the great majority of functional psychoses are schizophrenic and delusional disorders. In 1997, when assessed by clinical interview, 10% of male remand, 7% of male sentenced and 14% of female prisoners had suffered from functional psychosis in the past year (see **Table 34**). In the general population (the adult population resident in private households) the prevalence of functional psychosis is approximately 0.4%.[59]

In the Office of National Statistics survey, the presence of functional psychosis was assessed by lay interview. The findings were confirmed by a clinical interview using the Schedules for Clinical Assessment of Neuropsychiatry (SCAN) in a 1 in 5 sub-sample of respondents. About two-thirds of those identified as probably suffering from functional psychosis by lay interview were confirmed as having psychosis. The majority (96%) of those identified by lay interview as not suffering from psychosis were confirmed not to be suffering from functional psychosis. However, just over one-third were missed by lay assessment and just over a third of those judged ill by lay assessors were subsequently judged not to be ill (see **Table 35**).

Table 34: Prevalence of functional psychoses within the past year (clinical interview).

	Percentage within last year		
	Male remand	**Male sentenced**	**Female (all)**
Schizophrenia	2%	1%	3%
Other non-organic psychotic disorder	7%	4%	10%
Any schizophrenic/delusional disorder	**9%**	**5%**	**13%**
Manic episode	1%	1%	1%
Bipolar affective disorder	0%	0%	0%
Severe depression + psychosis	1%	0%	1%
Any affective disorder	2%	1%	2%
Any functional psychosis (Approximately 95% CI)	**10% (±4)**	**7% (±4)**	**14% (±6)**

Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]

Table 35: Sensitivity and specificity of lay interview in detecting functional psychosis.

Lay interview	**SCAN assessment**	
	Functional psychosis	**No functional psychosis**
Probable psychosis	6%	4%
Probably no psychosis	4%	87%

Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]

Assessed by lay interview, the prevalence of functional psychosis is similar to when it is assessed clinically. Functional psychosis seems to be twice as common in remand as in sentenced prisoners and twice as common in female as in male prisoners. Rates also appear to be higher in white than in black prisoners (see **Table 36** and **Figure 15**).

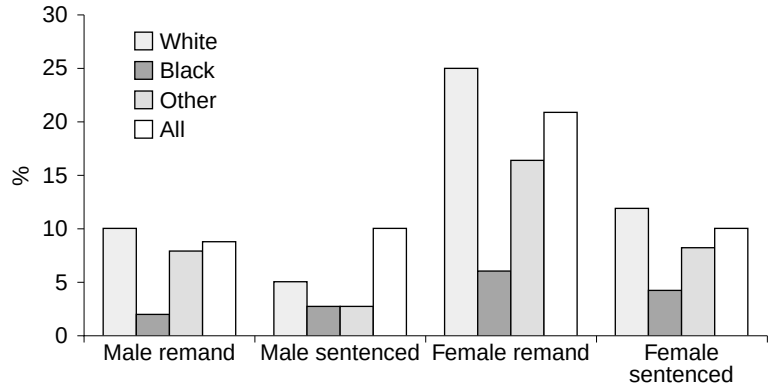
Table 36: Prevalence of probable psychotic disorder (lay interview).

	White	**Black**	**Other**	**All**
Male remand	10%	2%	8%	9%
Male sentenced	5%	3%	3%	5%
Female remand	25%	6%	17%	21%
Female sentenced	12%	4%	8%	10%

Source: Psychiatric Morbidity among Prisoners in England and Wales.[34]

Neurotic disorders

Neurotic disorders are a group of related problems, the most common of which is depression. Depression often co-exists with anxiety and the disorders are sometimes referred to as two sides of the same coin. Major depression is a syndrome of low mood or loss of interest along with a number of other symptoms



Source: *Psychiatric Morbidity among Prisoners in England and Wales*[34]

Figure 15: Prevalence of functional psychosis by ethnicity (lay interview).

(see **Box 4**). Many people have some of the symptoms of depression, such as sleep disturbance, lack of energy, loss of appetite, anxiety and worry about physical health.

Box 4: Diagnostic criteria for major depression.

Must have one of the following:

- depressed mood most of the day
- diminished interest or pleasure in almost all activities most of the day.

Must have four or more of the following:

- significant change in weight or appetite (increase or decrease)
- sleep disturbance (insomnia or excessive sleeping)
- agitation or retardation (sluggishness)
- fatigue or loss of energy
- feelings of worthlessness or guilt
- inability to concentrate
- suicidal thoughts or intentions.

Symptoms must have been present nearly every day for two weeks.

Source: *Diagnostic and Statistical Manual of Mental Disorders (4e) (DSM IV)*.[58]

Risk factors for depression

It is useful to consider the risk factors for depression under three headings: predisposing factors, precipitating factors and maintaining factors. These are illustrated in **Table 37**. Apart from a genetic predisposition to depression, all of the predisposing factors are common among prisoners. Conviction and imprisonment are important social precipitating factors and helplessness, while a rational response to loss of liberty may also help precipitate depression. Unsupported and untreated, some individuals recover

from depression. The frequency of depression is therefore likely to decline in long-term prisoners. However, lack of supportive social networks and low self-esteem each contribute to maintaining depression. Both factors are common in prisoners.

Table 37: Risk factors for depression.

Predisposing factors		
Biological	**Social**	**Psychological**
Genetic predisposition to depression	Emotional deprivation in childhood Childhood in care of local authority Bereavement or separation Work or marital difficulties Lack of supportive personal relationships Unemployment	Poor parental role models (e.g. violence, alcoholism or mental illness) Low self-esteem Learned helplessness
Precipitating factors		
Biological	**Social**	**Psychological**
Recent illness or injury Drug and alcohol misuse	Recent life events, especially involving loss: redundancy, unemployment, family illness, separation, divorce, loss of a supportive relationship. Conviction Imprisonment Inappropriate responses to precipitating factors, e.g. passivity	Inappropriate responses to precipitating factors, e.g. passivity Helplessness
Maintaining factors		
Biological	**Social**	**Psychological**
Chronic pain or disability Chronic illness Sensory impairment	Chronic social stresses (housing, work, family) Lack of an intimate confiding relationship at home Lack of practical information and help with social problems	Low self-esteem

Source: Adapted from Jenkins (1992).[231]

Neurotic symptoms

In the ONS survey, the prevalence of neurotic symptoms and of neurotic disorders was assessed by Clinical Interview Schedule (CIS-R).[34] The CIS-R has 14 different sections, each encompassing an area of neurotic symptoms. Respondents can score from zero to four on each section, depending on the occurrence of symptoms in the past week. Zero indicates that they have been absent and a high score indicates that they have been frequent and severe in the past week. Those with a score of 2 or more are considered to be suffering from neurotic symptoms.

Most neurotic symptoms are considerably more common among prisoners than in the community (see **Table 38**). Some neurotic symptoms, for example sleep problems, are reported by the majority of prisoners. By themselves, however, these do not necessarily warrant health care intervention.

Table 38: The prevalence of neurotic symptoms (CIS-R ≥2) in prisoners compared to the community.

Symptom	Male			Female		
	Remand	Sentenced	Prevalence in the community	Remand	Sentenced	Prevalence in the community
Sleep disorders	67%	54%	21%	81%	62%	28%
Worry	58%	42%	17%	67%	58%	23%
Fatigue	46%	35%	21%	64%	57%	33%
Depression	56%	33%	8%	64%	51%	11%
Irritability	43%	35%	19%	51%	43%	25%
Depressive ideas	38%	20%	7%	57%	39%	11%
Concentration/ forgetfulness	34%	23%	6%	53%	38%	10%
Anxiety	33%	21%	8%	42%	32%	11%
Obsessions	30%	22%	7%	35%	24%	12%
Somatic symptoms	24%	16%	5%	40%	30%	10%
Compulsions	24%	15%	5%	25%	18%	8%
Phobias	20%	13%	3%	31%	22%	7%
Worry about physical health	22%	16%	4%	25%	23%	5%
Panic	18%	8%	2%	26%	15%	3%

Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]

Neurotic disorders

In the same survey, the prevalence of neurotic disorders was also assessed using the CIS-R. Diagnoses were obtained by looking at the answers to various sections and applying algorithms based on the ICD-10 diagnostic criteria for research.[60]

In male prisoners the prevalence of any neurotic disorder in the past week is 59% in remand and 40% in sentenced prisoners. In female prisoners, 76% and 63% respectively. Anxiety and depression either separately or in combination are by far the most common neurotic disorders.

As we would expect from the nature of the precipitating and maintaining factors which affect prisoners, the general pattern with neurotic symptoms and with neurotic disorders is that they are more common in remand than sentenced prisoners (see **Table 39** and **Figure 16**).

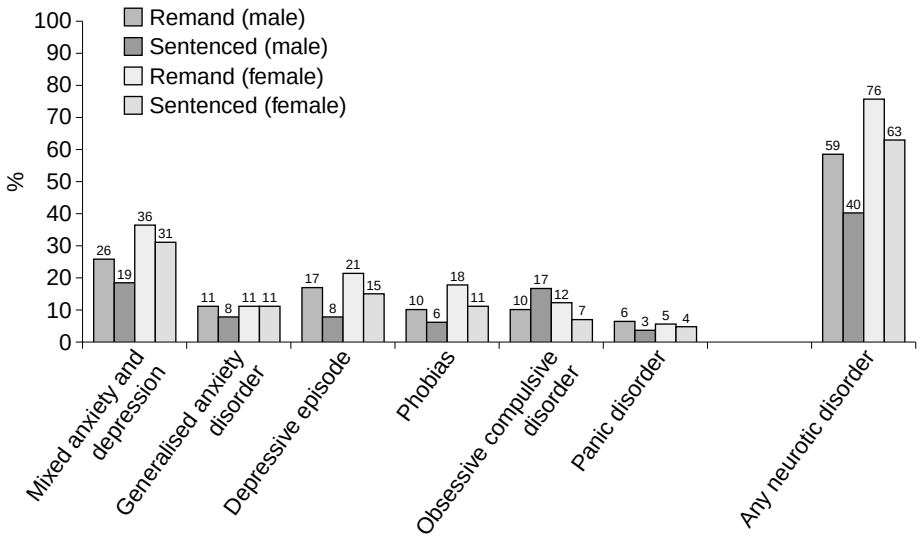
In prisons as in the community, neurotic symptoms and neurotic disorders are more common in female than male prisoners.

The prevalence of any neurotic disorder in the general population (the adult population resident in private households) is 12% for men and 20% for women. This means that neurotic disorders are three to five times more common in prisoners compared to the adult population in the community. This is particularly true for phobias and obsessive-compulsive disorder, which are common in prisoners but relatively rare in the general population.

Table 39: The prevalence of neurotic disorders in the last week.

Disorder	Male			Female		
	Remand	Sentenced	Community prevalence	Remand	Sentenced	Community prevalence
Mixed anxiety and depression	26%	19%	5%	36%	31%	10%
Generalised anxiety disorder	11%	8%	3%	11%	11%	3%
Depressive episode	17%	8%	2%	21%	15%	3%
Phobias	10%	6%	1%	18%	11%	1%
Obsessive-compulsive disorder	10%	7%	1%	12%	7%	2%
Panic disorder	6%	3%	1%	5%	4%	1%
Any neurotic disorder	59%	40%	12%	76%	63%	20%

Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]



Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]

Figure 16: The prevalence of neurotic disorders in prisoners. Proportion of the population with this disorder in the past week.

Post-traumatic stress disorder

Post-traumatic stress disorder (PTSD) is a diagnosis with the following features. Patients have been exposed to a stressful event or situation of exceptionally threatening or catastrophic nature which would be expected to cause pervasive distress in most people. The syndrome is characterised by persistent intrusive memories of the stressful event (such as flashbacks, vivid memories or dreams); partial memory loss; and

avoidance of circumstances associated with the stressful event. Symptoms must have begun within six months of the stressful event.

Table 40 shows the prevalence of post-traumatic stress disorder in the prison population. It is more common in remand prisoners and in female prisoners although overall prevalence is low.

Table 40: The prevalence of all conditions defining post-traumatic stress disorder.

Type of prisoner	Male		Female	
	Remand	Sentenced	Remand	Sentenced
Percentage with PTSD	5%	3%	6%	5%

Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]

Overview of mental health data from other sources

Adult male prisoners

About a third of all male prisoners who are sentenced can be given a psychiatric diagnosis, including 2% who are psychotic.[61] A study, published in 1996, to determine the prevalence of mental disorders among male unconvicted prisoners in England and Wales found that in a population of 750 male remand prisoners, 4.8% were psychotic, 18% had a neurotic disorder, 11.2% had a personality disorder and 7.6% had an adjustment disorder.[62] In addition, 38% had a harmful or dependent misuse of alcohol or other drugs. In total, 555 of inmates were judged to have an immediate treatment need with 9% requiring transfer to a NHS bed. A further study[63] of 569 adult male remand prisoners in a large remand prison found that mental disorder was present in 26% of the men at the time of reception into prison. Of these, 5% had a psychotic disorder, 4% had a non-psychotic mood disorder, 6% had an anxiety disorder and 7% had a personality disorder.

Young prisoners

A review of young prisoners aged 16–24[14] revealed that mental health problems were very common:

- over 50% of young prisoners on remand and 30% of sentenced young offenders have a diagnosable mental disorder
- 23% had discussed emotional problems with their doctor
- 37% of young women and 7% of men said that they had attempted suicide
- 15% of young women and 10% of men admitted to self-harm.

Most young prisoners with mental health problems do not meet the criteria under the Mental Health Act 1983 for transfer to the NHS and require treatment in prison.

Women prisoners

In England and Wales there is a significantly higher rate of mental disorder for women sentenced prisoners, compared to their male counterparts and in the remand population there is an even greater number of women identified as having a mental disorder.[26]

Self-harm and suicide

Self-harm and suicide in the community

In the community, self-harm accounts for 70 000 to 80 000 hospital admissions a year.[64] By contrast, suicides are relatively uncommon in the community. Suicide is more common in men than women and suicide in men is most common between the ages of 25 and 44 and in the very elderly (see **Table 41**). Although the overall suicide rate in England and Wales decreased between 1982 and 1996, suicides increased by 30% in men between the ages of 25 and 34 and by 16% in women aged 15 to 24. Further analysis suggests that the increase in the suicide rate for young men is accounted for by a large increase in the risk of suicide among young single men.[65]

Table 41: Annual suicide rates in the community (England and Wales 1993 to 1995) and expected numbers if this rate applied to the prison population.

Age	Males			Females		
	Rate per 100 000 in general population	Prison population 31 December 1998	Expected numbers of suicides in prison	Rate per 100 000 in general population	Prison population 31 December 1998	Expected numbers of suicides in prison
15–24	11	20,583	2	2	951	0
25–34	18	23,015	4	3	1,191	0
35–44	18	10,721	2	5	640	0
45–54	14	4,506	1	4	221	0
55–64	12	1,725	0	4	56	0
65–74	11	396	0	4	7	0
75–84	14	58	0	6	0	0
85 and over	23	2	0	5	0	0
Total for prison population	15	61,006	9	3	3,066	0

Source: Office for National Statistics. *Mortality statistics: general. England and Wales 1993, 1994 and 1995*. London: The Stationery Office.

Risk factors for suicide in the community

In the community the great majority of those who commit suicide have a previous history of some form of mental disorder. The most common diagnosis is depression, but histories of alcoholism and schizophrenia also occur more frequently in those who have committed suicide. In the community persons who self-harm are 100 times more likely to commit suicide than those who do not.[66]

Self-harm and suicide in the prison population

Direct comparisons between suicide rates in the prison population and the community are difficult to make, as it is not clear whether the Average Daily Population or the number of New Receptions should be used as a denominator. The more favourable interpretation is to use the number of new receptions. Even so the suicide rate is much higher than that in the community; in 1998 there were 42 self-inflicted deaths in

custody for every 100 000 new receptions[66] compared to 15 per 100 000 in the community for males and 3 per 100 000 for females.

Table 42 shows the numbers of self-inflicted deaths in custody for the years 1996 to 1998; suicides are consistently higher among remand than among sentenced prisoners. Self-inflicted deaths in custody have more than doubled in the last sixteen years. In 1982 there were 54 per 100 000 Average Daily Population; by 1998 this figure had reached 127 per 100 000. Suicides may be less frequent in female than male prisoners, although the small numbers of female prisoners make this estimate uncertain.

Table 42: Self-inflicted deaths in custody 1996 to 1998.

Year	Legal status	Average Daily Population (ADP)	New Receptions	Number of self-inflicted deaths	Annual rate per 100 000 ADP	Annual rate per 100 000 New Receptions
1996	Sentenced	43,043	82,861	28	65	34
	Remand (untried)	8,374	58,888	31	370	53
	Convicted unsentenced	3,238	34,987	5	154	14
	1996 total	**54,655**	**176,736**	**64**	**117**	**36**
1997	Sentenced	48,412	87,168	34	70	39
	Remand (untried)	8,453	62,066	26	308	42
	Convicted unsentenced	3,678	36,424	8	218	22
	1997 total	**60,543**	**185,658**	**68**	**112**	**37**
1998	Sentenced	52,176	86,800	27	52	31
	Remand (untried)	8,157	64,600	40	490	62
	Convicted unsentenced	4,411	42,400	15	340	36
	1998 total	**64,744**	**193,800**	**82**	**127**	**42**

Adapted from: *Suicide is Everyone's Concern: a thematic review.*[66]

The risk of suicide in prisoners is similar at all ages (see **Table 43**). A disproportionate number of suicides are by prisoners charged with violent offences and sexual offences compared to those charged with acquisitive offences (burglary, robbery, theft), drugs offences or other offences (see **Table 44**). Suicides seem to be less common among non-white (particularly black) than white prisoners (see **Table 45**).

Table 43: Proportions of self-inflicted deaths in custody by age of prisoner (1998).

Age	Males			Females		
	ADP	Suicides	Rate per 100 000	ADP	Suicides	Rate per 100 000
15–17	2,167	3	138	73	0	0
18–20	7,715	11	143	302	0	0
21+	51,124	65	127	2,691	3	111
All prisoners	61,006	79	129	3,066	3	98

Adapted from: *Suicide is Everyone's Concern: a thematic review.*[66]

Table 44: Proportions of self-inflicted deaths in custody by type of offence (1996 to 1998).

Offence type	1996			1997			1998		
	Suicides	Population	% of average rate	Suicides	Population	% of average rate	Suicides	Population	% of average rate
Violence	30%	22%	136%	28%	21%	133%	34%	21%	162%
Acquisitive offences	34%	41%	83%	38%	42%	90%	38%	40%	95%
Sexual offences	12%	8%	150%	12%	8%	150%	10%	8%	125%
Drugs offences	8%	13%	62%	7%	14%	50%	8%	16%	50%
Other	16%	15%	107%	15%	15%	100%	10%	15%	67%

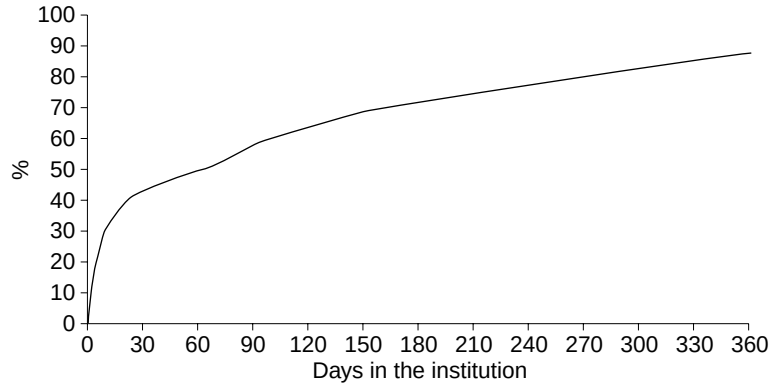
Adapted from: *Suicide is Everyone's Concern: a thematic review.*[66]

Table 45: Proportions of self-inflicted deaths in custody by ethnicity (1996 to 1998).

Ethnicity	1996			1997			1998		
	Suicides	Population	% of average rate	Suicides	Population	% of average rate	Suicides	Population	% of average rate
White	91%	81%	112%	93%	82%	113%	89%	82%	109%
Black	5%	13%	38%	6%	12%	50%	9%	12%	75%
Asian	2%	3%	67%	0%	3%	0%	2%	3%	67%
Other	0%	3%	0%	1%	3%	33%	0%	3%	0%
Not known	2%	0%	n/a	0%	n/a	n/a	0%	0%	n/a

Adapted from: *Suicide is Everyone's Concern: a thematic review.*[66]

The great majority of suicides in prison occur early during the period of custody. **Figure 17** shows the cumulative risk of suicide during the first year of custody (100% is the total number of suicides between 1994 and 1997 for which this data was available). Eight per cent of suicides take place in the first day of custody, 26% in the first week and 42% in the first 28 days of custody. After the first year of custody, the annual risk of suicide is similar to that of males in the community (i.e. 15 per 100 000).



Adapted from: *Suicide is Everyone's Concern: a thematic review.*[66]

Figure 17: Cumulative proportion of suicides occurring in the first year in the institution (1994–1997).

Self harm and suicide

The incidence of self-harm is high in the prison population (about 1.6% per prisoner per year) and seems to be higher in prisoners under the age of 30 (see **Table 46**).

Table 46: Incidents of deliberate self-harm by age of prisoner and age-specific annual risk of self-harm (1996/97).

Age	Self-harm incidents	Percentage of self-harm incidents	Percentage of population this age (1997)	Age-specific annual risk of self-harm
15–17	73	4%	4%	1.5%
18–20	277	14%	12%	1.9%
21–29	960	48%	41%	1.9%
30–39	506	25%	27%	1.5%
40–49	114	6%	10%	0.9%
50–59	23	1%	5%	0.4%
60–69	2	0%	1%	0.2%
Not known	30	2%		
Total	1,985	100%	100%	1.6%

Adapted from: *Suicide is Everyone's Concern: a thematic review.*[66]

Self-harm incidents occur with greater frequency among the unsentenced (remand) population than among sentenced prisoners (see **Table 47**). Incidents of self-harm increased from 1996 to 1997, partly because of changes in reporting procedures (not all incidences of cutting or mutilation were recorded previously). Nevertheless the number of attempted hangings increased from about 400 to about 500.

Table 47: Incidents of self-harm by legal status of prisoner (1996/97).

Year	Legal status	Average Daily Population (ADP)	New receptions	Number of episodes of self-harm	Annual rate per ADP	Annual rate per new reception
1996	Sentenced	43,043	82,861	468	1.1%	0.6%
	Unsentenced	11,612	93,875	439	3.8%	0.5%
	Total	54,655	176,736	907	1.7%	0.5%
1997	Sentenced	48,412	87,168	807	1.7%	0.9%
	Unsentenced	12,131	98,490	784	6.5%	0.8%
	Total	60,543	185,658	1,591	2.6%	0.9%

Adapted from: *Suicide is Everyone's Concern: a thematic review.*[66]

About half of prisoners who commit suicide have previously self-harmed while in custody. In 1996/97, 72 suicides were in prisoners who had previously self-harmed (see **Table 48**). In the same period 2026 prisoners self-harmed, implying a ratio of about 4% between self-harming prisoners who go on to commit suicide and all self-harmers. For those who self-harm twice or more, the ratio is 6%. (NB: These calculations are estimates. It is impossible to say that the prisoners who self-harmed in 1996/97 were the same ones who committed suicide in these years. Nevertheless they form the basis of an estimate.)

Table 48: Suicides following self-harm in relation to the numbers of episodes of self-harm (1996/97).

Number of episodes of self-harm	Total number of prisoners who self-harmed	Number of suicides preceded by an episode of self-harm	Suicides preceded by self-harm divided by the number of prisoners who self-harmed
$\geq$1 episode of self-harm	2,026	72	4%
$\geq$2 episodes of self-harm	299	19	6%

Adapted from: *Suicide is Everyone's Concern: a thematic review.*[66]

There is also evidence that contact with others who self-harm makes young offenders more likely to self-harm themselves.[67]

Suicidal thoughts and attempts

The Office of National Statistics survey[34] found suicidal thoughts were more common in female than male prisoners. This also found that about three times as many remand as sentenced prisoners reported suicidal thoughts in the past week. More female than male prisoners reported suicide attempts. This is in contrast to the figures for completed suicides. The results of the survey are shown in **Table 49**.

Table 49: Prevalence of suicidal thoughts, suicide attempts and self-harm in prisoners.

	Male		Female	
	Remand	**Sentenced**	**Remand**	**Sentenced**
Suicidal thoughts				
In the past week	12%	4%	23%	8%
In the past year	35%	20%	50%	34%
Suicide attempts				
In the past week	2%	0%	2%	1%
In the past year	15%	7%	27%	16%
Self-harm (not suicide attempt) during current prison term	5%	7%	9%	10%

Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]

Other risk factors for suicide in prisons

In 1996 and 1997, about 40% of those prisoners who committed suicide had a previous psychiatric history. Young offenders who commit suicide are more likely to have experienced multiple family breakdown, sexual abuse, frequent violence, local authority placement as a result of family problems, truancy as a result of bullying and short periods in the community between periods of custody. Once in prison they are more likely to be isolated, have no outside contacts, have difficulty expressing themselves to other prisoners or staff and are less likely to have a job or anything to occupy them during the day.[66]

Alcohol and drug misuse

Addictive behaviour is common in the prison population, with many inmates reporting use of or addiction to cigarettes, alcohol, and illicit or prescribed drugs. Addiction to smoking is considered earlier under the heading of 'Ischaemic heart disease and cardiovascular risk factors'.

Alcohol misuse

In the ONS survey,[34] alcohol misuse is measured by the Alcohol Use Disorders Identification Test (AUDIT). The AUDIT questionnaire assesses the presence of hazardous alcohol consumption, symptoms of dependence and harmful alcohol consumption. A higher score indicates more problems; over 8 indicates 'hazardous drinking'; over 32 is a very high score.

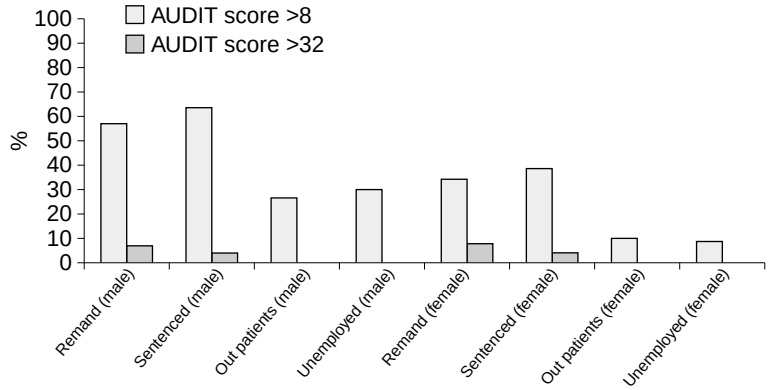
The AUDIT score was 8 or over in more than half of male prisoners and over a third of female prisoners. The differences between remand and sentenced prisoners are small (see **Table 50**). Seven per cent of male remand prisoners and 4% of male sentenced prisoners scored AUDIT scores of 32 or over. Figures for female prisoners were similar.

Table 50: Proportion of prisoners misusing alcohol in the year prior to imprisonment.

	Male		Female	
	Remand	**Sentenced**	**Remand**	**Sentenced**
AUDIT score >8	57%	63%	34%	39%
AUDIT score >32	7%	4%	8%	4%

Source: *Psychiatric Morbidity among Prisoners in England and Wales*[34]

Alcohol misuse is more common in younger prisoners (under 30), prisoners with fewer educational qualifications and among white than black prisoners. **Figure 18** compares the prevalence of alcohol misuse in prisoners to those in the community. Surveys of male outpatients in Belfast and unemployed men in Norway respectively found 27% and 30% to have an AUDIT score of 8 or over. The figures for women were 10% and 8% respectively. Compared to the community, hazardous drinking therefore seems to be about twice as common in male prisoners and about three times as common in female prisoners.



Source: *Psychiatric Morbidity among Prisoners in England and Wales*[34]

Figure 18: Prevalence of hazardous drinking in the year prior to imprisonment.

Use of alcohol may continue during imprisonment. In one survey of Category B prisoners in a single prison, 59% (95% CI 48–71%) admitted to using alcohol or hooch while in prison. This made it the second most commonly used drug (after cannabis).[68]

Drug misuse

Drug misuse has a direct impact on the health of an individual for a number of reasons. Users may suffer harm as a direct result of drug misuse (for example, intoxication and accidental overdose) and some users become dependent on drugs. Sustaining this dependency often contributes to their adverse socio-economic circumstances and their offending behaviour. There are also important health-damaging effects associated with some forms of drug use, in particular in relation to injecting and needle sharing.

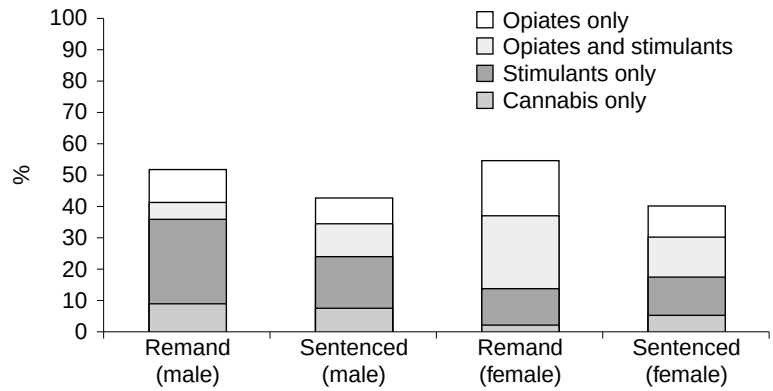
About half of remand prisoners and 40% of sentenced prisoners have been dependent on drugs prior to imprisonment.[34] The majority of these are dependent on opiates, stimulants or a combination of both (**Figure 19** and **Table 51**). Drug dependence is more common in single or cohabiting prisoners than in

married prisoners, more common in younger than older prisoners, more common in white than in black prisoners and more common in prisoners with lower levels of educational attainment.

Table 51: The prevalence of drug dependence in prisoners.

Prevalence of primary dependence on:	Male		Female	
	Remand	Sentenced	Remand	Sentenced
Cannabis only	9%	8%	2%	5%
Stimulants only	17%	16%	11%	12%
Opiates and stimulants	15%	10%	24%	13%
Opiates only	11%	8%	17%	10%
Dependence on any drug	52%	42%	54%	40%

Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]



Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]

Figure 19: Dependence on drugs in the year prior to imprisonment.

Prison-related drug misuse problems continue after release from prison; indeed, there may be a higher risk of drug-related death reported in first two weeks after release.[69]

Intravenous drug abuse is a particular concern because of the relationship between this and the spread of hepatitis C, hepatitis B and HIV. About one quarter of prisoners have injected drugs at some time and a small minority have injected in prison (see **Table 52**).

Table 52: Injecting drug use by prisoners.

Prisoners who have injected drugs:	Male		Female	
	Remand	Sentenced	Remand	Sentenced
At some time	28%	23%	40%	23%
While in prison	2%	1%	2%	2%

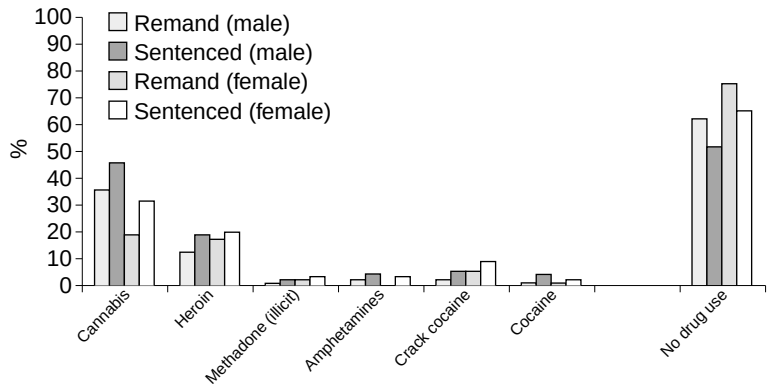
Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]

A significant minority of prisoners use drugs while in prison (see **Figure 20** and **Table 53**). Because sentenced prisoners have been in prison for a longer period of time than remand prisoners, reported drug use during imprisonment is higher in sentenced than in remand prisoners. By far the most commonly used drug is cannabis, but heroin use is also common. About half of prisoners who inject drugs want help to give up; this figure is only one in ten for non-injecting prisoners.[70]

Table 53: The use of drugs during imprisonment.

Prevalence of drug use in prison	Male		Female	
	Remand	Sentenced	Remand	Sentenced
Cannabis	36%	46%	19%	31%
Heroin	12%	19%	17%	20%
Methadone (illicit)	1%	2%	2%	3%
Amphetamines	2%	4%	0%	3%
Crack cocaine	2%	5%	5%	8%
Cocaine	1%	4%	1%	2%
No drug use	62%	52%	75%	66%

Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]



Source: *Psychiatric Morbidity among Prisoners in England and Wales.*[34]

Figure 20: The use of drugs during imprisonment.

Overview of other data sources

Young prisoners: male and female

Over three-quarters of young women prisoners and nine-tenths of young male prisoners report having used drugs or alcohol.[14] Pre-sentence reports stated that a quarter of male young offenders were under the influence of alcohol at the time of the offence and up to a quarter claim to have a current or past drink problem. Cannabis use is widespread among young prisoners, but the use of other drugs is limited.

Adult male prisoners

A survey of 1009 prisoners in 13 prisons in England and Wales found that three-quarters had used cannabis at sometime during their life, 62% had used the drug in prison at some time and 11% said that their first experience of using cannabis took place in a prison.[37]

Other drug use included illicit tranquillisers (22%), solvents (12.5%), hallucinogens (36.5%) and ecstasy (27%), in each case some prisoners reported use in prison. More than half of the sample had used opiates (mainly heroin) and/or stimulant drugs (amphetamines, cocaine and crack) at some time in their lives and 40% of these had injected drugs. Of those who used opiates, 24% reported their first time use in prison. Of those who inject drugs while in prison, more than half of these share injecting equipment.[37]

A survey among 548 newly remanded prisoners found that before remand 57% of men were using illicit drugs, 33% met DSM IV (Diagnostic and Statistical Manual of Mental Disorders, 4th edition) drug misuse or dependence criteria and 32% men met misuse or dependence criteria for alcohol.[71]

Adult female prisoners

In an interview of a random sample of women prisoners[26] two-thirds of the women reported having used illegal drugs at some point in their lives, and of these 40% reported heavy use or addiction, with over half using heroin and one-fifth intravenous drugs. Nearly 20% used amphetamines, with one in ten of these injecting. Ten per cent said they had been dependent on tranquillisers. A quarter of the drug dependent women still took drugs in prison and said they would continue to do so on release.

Attitudes to drug misuse

Qualitative research among inmates and ex-inmates indicates that certain drugs (in particular cannabis and benzodiazepines) are often regarded as serving a useful calming function or helping to alleviate the experience of incarceration.[72] Many inmates seem to regard cannabis as essentially harmless. Alongside these attitudes, inmates recognise a need for treatment among those with serious drug problems and were aware of some of the health implications of injecting. They also displayed a possibly exaggerated concern about the problems of drug withdrawal. In the same study, prison officer staff shared many of these attitudes, some commenting on the uses of drugs as palliatives and the relative harmlessness of benzodiazepines and cannabis. Others were concerned about the development of a black market in drugs. In general, staff were acutely aware that the problem of drug misuse in prisons reflected a similar problem in the community.

5 Services available and their costs

Introduction

In this section the range of health services available to prisoners are discussed. These vary from simple advice to specialist investigation and management. This section also considers the impact of other services on health, such as health promotion and informal systems of care, although they are not strictly health care services. Services available in prison are also compared in general terms with the services available to the general population in the community.

It should be noted that this is a very general overview. The provision of health care varies from one category of prison to another and within these categories from one prison to another. Services available in

the community also vary from one region to another. The main aim of this document is to give an overview of the care available for common health problems. Rather than attempt to describe in detail the management of specialist problems, this section simply records the fact that the management of some disorders is usually the remit of a particular specialist service. It is beyond the scope of this document to review the full range of specialist services available for each specific disorder.

Overview of services available by type of prison

Adult men's prisons

Local prisons and remand centres

At any one time local prisons can hold 40% of the prison population. Because they act as reception and allocation centres they have a high throughput of prisoners. Local prisons usually have in-patient facilities and 24-hour cover for health care. Present rules dictate that each prisoner must have a medical assessment on reception and on leaving. The nature of the remand population will mean that this population is likely to contain the highest percentage of seriously ill people with physical and mental disease.[9]

Training prisons

The prison population is more static in training prisons. Health care staff are not usually present for 24 hours as the need for medical assistance is less. Seriously ill prisoners will normally have been detected at the initial receiving establishment. More physical disorders (such as sports injuries) and less serious psychiatric disorders would be expected in this prison population.[9] Health education and promotion services will be very relevant.

High security prisons

Primary care consultation rates and admission to prison health care centres are high in high security prisons. It is also a feature of prisons that the most comprehensive health care services are available in secure establishments.[10]

Women's prisons

There are a number of health problems and needs that are specific to women in prison. These include maternity care, gynaecology and care of babies in prison, as well as a range of health education services such as family planning. Primary care consultation rates and admission rates to prison health care centres are high in women's prisons compared with other prison types and considerably higher than consultation rates for women in the community.[13]

Young Offender Institutions

In Young Offender Institutions there is often a small health care centre with a part-time medical officer and a few health care officers to provide day nursing cover.[9] Chronic physical illness is generally uncommon in this age group and serious mental illness, such as schizophrenia, is unusual. However, many offenders have temperamental, emotional and behavioural problems that manifest as self-harm and suicidal behaviour.

Overview of models of health care provision in prisons

Health care services are not standard across the prison estate and it has been said that no two prisons are the same.[13] However, a number of broad models of health care exist. These have been classified into the five types listed earlier in **Box 1**.

These models serve as a general description, but there are prisons where elements of the models apply in different combinations or proportions, with, for example, General Practitioners complementing and supporting the work of directly employed doctors, while some services are contracted out entirely. In addition, the models of care have been described in relation to the medical composition of care rather than the nursing composition. In a few establishments health care is nurse-led, but this is not generally the case.

The models of care described highlight the range of personnel who may either be directly employed or contracted to deliver health care in prisons. However, the majority of prisons have a health care manager – who is usually the most senior nursing officer by grade – and either a directly appointed full-time medical officer or a local GP appointed as a part-time medical officer. In the former case, the GP is an employee of the Home Office and is therefore classed as a civil servant.

Levels of health care provision

Health care provision is currently organised around prison health care centres. Four categories according to the level of service provided have been identified:[13]

- day time cover, generally by part time staff
- day time cover, generally by full-time staff
- health care centre with in-patient facilities with 24 hour nurse cover
- health care centre within-patient facilities with 24 hour nurse cover, but also serving as a national or regional assessment centre.

Health care in the community

When deciding what to do about a possible health problem, an individual weighs up a number of factors. How serious could the problem be? Who can best deal with it? What are the costs (in the broadest sense) and inconveniences of accessing one or another type of health care?

In general the costs of accessing informal care are very low. However, although the NHS is free at the point of delivery, visiting the GP involves some inconvenience (time spent travelling and waiting, the cost of travelling to and from the surgery and so on). Most people prefer to make use of their time in ways other than sitting in a waiting room or travelling to and from the GP. In other words, even attending the GP means giving up the opportunity to do something else. Because of this, although patients do not incur a financial cost, the inconvenience of using formal services favours the use of informal care first.

In the community, a person with a health care problem has a number of possible routes to health care. These are summarised in **Figure 21**. They can be broadly sub-categorised as:

- **Self-care, informal and semiformal care:** These include care by family members, voluntary organisations, over the counter medication, advice from pharmacists and telephone advice services (such as NHS Direct).
- **Primary health care services:** These include the primary health care team, principally GPs, practice nurses and other community-based nursing services. They also include other direct access services, such as accident and emergency services, dentists, opticians, private services and so on.

- **Specialist care or secondary health care services:** These are generally accessed following referral by members of the primary health care team, but direct access (self-referral) is possible in some cases (e.g. genito-urinary medicine).

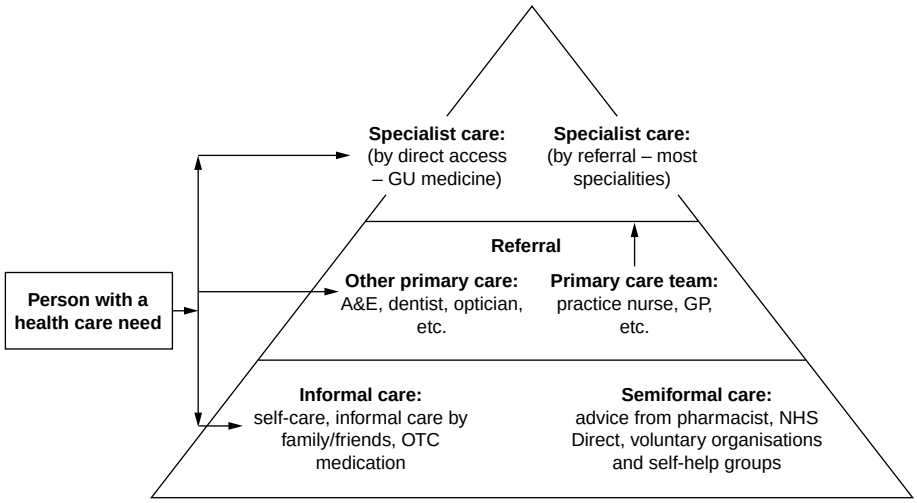


Figure 21: Pathways to health care accessible to a person in the community with a health care need.

Health care in prisons

The categories of services available to the prison population are broadly the same as those in the community, i.e. self-care and informal care, primary care (first contact care) and secondary care. Access to these is rather different to the situation in the community. In addition, two further categories need to be added: health promotion and specific prison-related health care. Because the main prison regime governs all aspects of a prisoner's life (accommodation, diet, exercise, occupation) it has control over many of the factors which affect prisoners' health. The prison therefore assumes a certain responsibility for health promotion. Prisons, rather than prisoners, also generate their own institutional needs for health services, such as the need for medical assessments to be carried out on reception, on transfer and prior to release.

For a prisoner, deciding what to do about a problem, some of the factors he weighs up are the same as a member of the public. How serious might the problem be? Who can best deal with it? What are the costs (in the broadest sense) and inconveniences of accessing one or another type of health care? However, some aspects of this equation differ.

In the first place many prisoners are worried about their physical health (see **Table 38**) and may have exaggerated concerns about the seriousness of the health problem. Second, some types of informal care are not available to prisoners (access to health information, the advice of family members, over the counter medication and so on) – see **Figure 22**. Third, there is little of the inconvenience normally associated with using formal care in the community. Some services (such as dentistry) may be more accessible than in the community; it may not be necessary to make an appointment; and health care is provided within the prison site. Finally, prisoners have little else to do with their time and time spent waiting in a waiting room or visiting a health care worker may (from the prisoner's perspective) be preferable to spending time in a

cell. In other words, for prisoners, there are a number of factors which favour the use of formal care where informal health care services would have been used in the community.

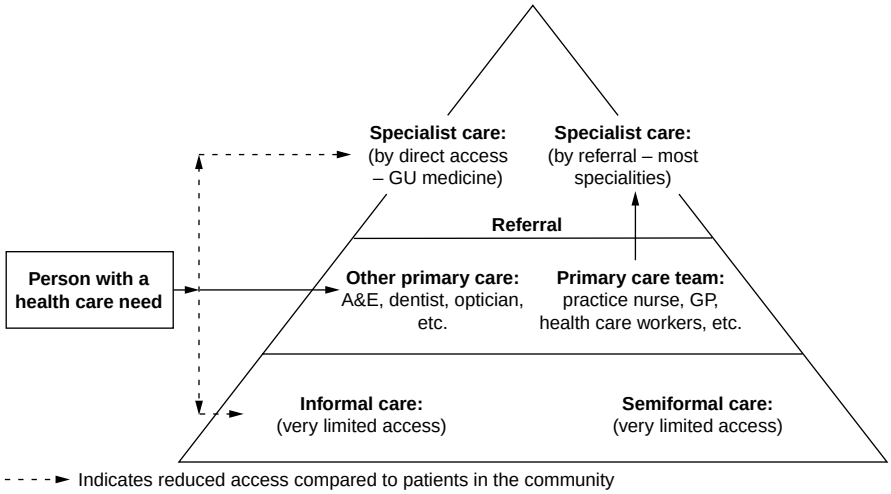


Figure 22: Pathways to health care accessible to a prisoner with a health care need.

Overview of health care services available in prisons

By focusing on the availability of services to address health problems, it is possible to overlook the characteristics of patients and of the services which affect the quality and effectiveness of care. In the context of prisons this includes ethnicity, which may create cultural or attitudinal barriers between staff and patients; language; educational background and the perceived relationship between health services and the main prison regime.

Self-care, informal and semiformal care

Self-care and informal care are not thought of as health services but availability of and access to informal care (such as 'over the counter' treatments) clearly has an effect on the demand for formal health care.

In general, health problems are common, but consultations with health professionals are relatively infrequent. The relationship between frequent health problems and relatively infrequent consultation has been described as an iceberg. Only the tip of the iceberg (usually, but not always, the more severe health problems) comes to the attention of the health services.

In the community most health care problems are dealt with through self-care, the use of over the counter medication and by consulting family members or friends – it has been reported that more than three-quarters of all symptoms are managed without medical consultation.[73]

Several factors restrict self-care in prisons. Prisoners have very restricted access to, and little disposable income for, over the counter medication. They are not generally knowledgeable about health or self-care and information may not be available. They may have health beliefs (such as fatalism) which will limit self-help. Prisoners are also necessarily isolated from their families and informal social networks. Finally, prisoners tend to become institutionalised. In other words, in prison the resources for a prisoner to

manage his or her own problems are not available. This means that prisoners are more likely to turn to the primary care service. The result of this is that primary care in the prison system is likely to be burdened with more frequent consultation for less important medical conditions than in an equivalent community setting. This can cause significant problems. The health care system can become overstretched, thereby reducing the time available for the detection of important health problems (such as depression) and ultimately can lead to the deskilling of health professionals.

Primary care

Standards

The *Health Care Standards for Prisons in England and Wales*[74] specify that prisons should provide primary care services to a standard equivalent to that available from general practices in the community. This is expected to include medical consultations, referral to secondary care, continuing care, minor surgery and trauma care, contraceptive services, maternity care and counselling. It is also expected to include health promotion in accordance with Standard 6 (i.e. to provide clinical and related services to prisoners for preventing illness and disability, maintaining and improving their health, and enabling then to take informed decisions on matters affecting their health). The standards state that doctors providing these services should be general practitioners or have experience of general practice.

Unconvicted prisoners can also apply – under prison rule 17 (4) – to be treated by a doctor or dentist of their choice at their own expense. It is up to the Governor in consultation with the medical officer to decide if there are reasonable grounds for the application.

Prisoners are more likely to turn to primary care services because of restrictions on self-care and informal care. The Joint Prison Service and National Health Service Executive Working Group's report *The Future Organisation of Prison Health Care*[13] found that during the period April 1996 to March 1997 staff providing health care in prisons handled over 2 million consultations with inmates. About two-thirds of these involved contact with health care officers or nurses and 27% with prison doctors. Primary care consultation rates and admission to prison health care centres varied between different types of prison, with the rate in women's prisons and high security prisons being considerably higher. The primary care consultation rate is considerably higher than that found in the community.

Primary care activity rates in prison

Male prisoners consult doctors about 10 times per prisoner year. This is about five times more frequent than persons of equivalent age in the community (see **Table 54** and **Table 55**). However, these figures are difficult to interpret in view of the high throughput of prisoners; most prisoners are likely to consult at least once during any period in an institution, however brief. To account for consultations generated by the prison population's high throughput, an adjusted consultation rate has been calculated. This has been achieved by reducing the total number of consultations by one consultation for each new reception. This adjustment considerably reduces the consultation rate for male prisoners. Nevertheless, consultations remain about three times higher than those for equivalent community populations.

Female prisoners consult doctors about 20 times a year. This is also about five times more frequently than women of equivalent age in the community. The adjusted consultation rate for female prisoners is also three times higher than for equivalent community populations (see **Table 54** and **Table 55**).

Table 54: Consultation rates and adjusted consultation rates per ADP per year.

Sex	Male					Female				
Type of prison	Closed training	Local prisons	Open training	YOI	All male prisons	Closed training	Local prisons	Open training	YOI	All female prisons
Health care worker consultations	27	20	17	27	23	61	65	55	23	59
Doctor consultations	10	11	7	6	10	21	20	15	26	20
Doctor consultations (adjusted)	8	7	3	3	6	17	13	11	18	14

Source: Home Office statistics 1996/97 (unpublished).

Table 55: Age-specific general practitioner consultation rates (per person year) in the community and predicted consultation rates for the prison population.

Age	Males		Females	
	Age-specific consultation rate	Percentage of prison population of this age	Age-specific consultation rate	Percentage of prison population of this age
16–24	1.7	34%	4.3	31%
25–44	1.9	55%	4.3	60%
45–64	3.1	10%	4.3	9%
65–74	4.3	1%	4.7	0%
75–84	5.2	0%	5.4	0%
85+	5.8	0%	5.5	0%
All ages	2.0	100%	4.3	100%

Source: *Morbidity Statistics from General Practice. Fourth national study, 1991–1992.*[22]

Male prisoners consult health care workers twice as frequently as they consult doctors, with 23 consultations per prisoner-year. Female prisoners consult health care workers three times as frequently as they consult doctors, with 59 consultations per prisoner year. There are no directly comparable data on the use of health care workers in the community. However, in the community, consultations with nurses (practice nurses, health visitors, district nurses etc.) are much less frequent than consultations with doctors, running at about 0.3 per person-year for patients between the ages of 16 and 64.[22]

On the face of it, therefore, male prisoners consult other health care workers 77 times more frequently than patients in the community consult nurses. Female prisoners consult other health care workers 197 times more frequently than patients in the community consult nurses. However, nurse consultations in the community are not directly comparable to health care worker consultations by prisoners. The latter may substitute for lay consultation (for example asking family members' advice), consultation with pharmacists, nurses, physiotherapists and other health care workers. However, it is clear that prison populations make very frequent demands on health care workers in comparison to community-based populations.

Reasons for using primary care

Any attempt to reduce the burden on the primary care team will require increased use of informal care to deal with some of the problems usually addressed by the formal services. It is therefore important to identify the reasons for primary care consultation among the prison population. Unfortunately there are no national data on the diagnoses of prisoners who consult health care workers or primary care doctors. However, there are extensive data on the use of primary care in the community. Observations of a number of GP sessions in prisons have confirmed that the more common reasons for consultation in the community are also important in the prison population.

Table 11 gives a breakdown of the main categories of reasons for consultation in the community. Among men, respiratory conditions, musculo-skeletal disorders, injury and poisoning are the most common categories. Among women the category which includes maternity care, screening and contraception is the most common reason for consultation, followed by respiratory conditions and genito-urinary disorders. **Table 56** and **Table 57** show the ICD diagnostic codes for which GP consultations are most frequent. The data have been adjusted to the age of the prison population. Together these diagnoses account for almost half of all GP consultations. It is clear that even in community populations, many consultations are for administrative purposes. Various upper respiratory infections, back pain and neurotic disorders are all important reasons for consultation among men. Among women, contraceptive management and pregnancy are the most common reasons for consultation.

Not all of these services are also provided in prison. Female prisons do not all provide cervical screening and those that do, tend to have contracted with a local practice to provide primary care.[26] In some cases, the high rate of turnover of prisoners makes it difficult to communicate results and to arrange follow-up. However, prisoners are drawn from a group with many of the risk factors for cervical cancer.

Secondary care

Standards

The Health Care Standards for Prisons in England and Wales[74] state that specialist services should be provided within the prison, appropriate to the health care needs of the prisoners.

Rates of consultation with specialists

Direct comparisons between the use of secondary care by prisoners and community populations are not straightforward. Prison service data record the numbers of consultations, whereas health service data record the number of referrals, each of which can generate a number of consultations. In addition, health service data are not easily available for referrals to professions allied to medicine.

Because 68% of prisoners are under 34 and 96% are under 54, GP referral rates for these age groups give the most accurate indication of service use by an equivalent community population. To reflect the predominant socio-economic backgrounds of prisoners, ideally, comparison would be made between service use by prisoners and social classes IV and V. However, these data are not easily available. It is not clear how this adjustment would affect referral rates. Lower socio-economic classes have more morbidity, but they may also have poorer access to health care.

Table 56: Most frequent reasons for consultation by males in the general population (adjusted to the age of the prison population). All diagnoses accounting for ≥200 consultations per 10 000 person years.

Reason for consultation	Consultation rate per 10 000 person years
Infectious and parasitic diseases	
Ill-defined intestinal infections (009)	281
Other diseases due to viruses and chlamydiae (078)	224
Dermatophytosis (110), e.g. athlete's foot, ringworm	226
Mental disorders	
Neurotic disorders (300)	471
Diseases of the nervous system and sense organs	
Disorders of conjunctiva (372)	224
Disorders of external ear (380)	397
Diseases of the circulatory system	
Essential hypertension (401)	347
Diseases of the respiratory system	
Acute sinusitis (461)	243
Acute pharyngitis (462)	397
Acute tonsillitis (463)	374
Acute upper respiratory infections of multiple or unspecified site (465)	434
Acute bronchitis and bronchiolitis (466)	526
Allergic rhinitis (477)	331
Influenza (487)	218
Asthma (493)	544
Diseases of the skin	
Diseases of sebaceous glands (706)	424
Diseases of the musculoskeletal system and connective tissue	
Other and unspecified disorder of joint (719)	279
Other and unspecified disorders of back (724)	626
Peripheral enthesopathies and allied syndromes (726) e.g.: tendinitis	277
Symptoms, signs and ill-defined conditions	
Symptoms involving respiratory system and other chest symptoms (786)	248
Sprains and strains of other and unspecified parts of back (847)	351
Injury and poisoning	
Certain adverse effects not elsewhere classified (995)	221
Others: factors influencing health status and contact with health services	
Encounters for administrative purposes (V68)	1,365
Consultation rate for all the above reasons (percentage of total consultations)	9,030 (46%)
Total consultation rate (all reasons)	19,827

Source: *Morbidity Statistics from General Practice. Fourth national study, 1991–1992*.[22]

Table 57: Most frequent reasons for consultation by females in the general population (adjusted to the age of the prison population). All diagnoses accounting for ≥500 consultations per 10 000 person years.

Reason for consultation	Consultation rate per 10 000 person years
Infectious and parasitic diseases	
Candidiasis (112)	1,101
Mental disorders	
Neurotic disorders (300)	1,153
Diseases of the respiratory system	
Acute sinusitis (461)	586
Acute pharyngitis (462)	725
Acute tonsillitis (463)	662
Acute upper respiratory infections of multiple or unspecified site (465)	840
Acute bronchitis and bronchiolitis (466)	832
Asthma (493)	764
Diseases of the genito-urinary system	
Other disorders of urethra and urinary tract (599)	655
Pain and other symptoms associated with female genital organs (625)	697
Disorders of menstruation and other abnormal bleeding from female genital tract (626)	1,222
Diseases of the skin	
Diseases of sebaceous glands (706)	526
Diseases of the musculoskeletal system and connective tissue	
Other and unspecified disorders of back (724)	758
Symptoms, signs and ill-defined conditions	
Other symptoms involving abdomen and pelvis (789)	573
Others: factors influencing health status and contact with health services	
Normal pregnancy (V22)	2,244
Postpartum care and examination (V24)	551
Contraceptive management (V25)	4,668
Encounters for administrative purposes (V68)	1,198
Special screening for malignant neoplasms (V76)	693
Consultation rate for all the above reasons (percentage of total consultations)	20,445 (48%)
Total consultation rate (all reasons)	42,993

Source: *Morbidity Statistics from General Practice. Fourth national study, 1991–1992.*[22]

In the community, specialist outpatient referral rates are low in the age-group 16–54. The highest referral rates are for women – in particular referrals to gynaecology (**Table 58**). Because data are not directly equivalent, comparison should be made with caution, but it appears that total consultation rates by prisoners are higher than referral rates in the community (**Table 59**). This is particularly striking where direct speciality comparisons can be made such as referrals to psychiatry.

Table 58: Referral rates (per 1000 person years) among patients in the general population registered with a general practitioner.

Speciality	Male		Female	
	16–34	35–54	16–34	35–54
Gynaecology	0	0	52	48
General surgery	19	32	23	45
Dermatology	10	10	16	15
Orthopaedic	17	23	14	23
General medicine	9	20	12	23
Ear, nose & throat	10	14	12	15
Psychiatry	8	7	11	8
Ophthalmology	4	8	5	10
Neurology	3	4	4	6
Rheumatology	2	4	3	7
Total (all included specialities)	83	121	153	199

Source: *Key Health Statistics from General Practice 1996.*[30]

Table 59: Prisoner consultation rates (per 1000 prisoner-years) with medical specialists, dentists and professions allied to medicine.

Speciality	Specialist consultations per 1000 ADP
Medical and dental specialists	
Psychiatrist	468
Dentist	1,708
Radiologist	76
Genito-urinary medicine	241
Professions allied to medicine	
Optician	245
Physiotherapy	172
Chiropodist	190
Radiographer	144
Other	176

Source: Home Office statistics 1996/97.

In-patient care

Prisoners have access to the full range of NHS beds provided in the community. In addition, prisons have their own health care centre beds. These provide a less intensive level of care.

Numbers of beds and occupancy

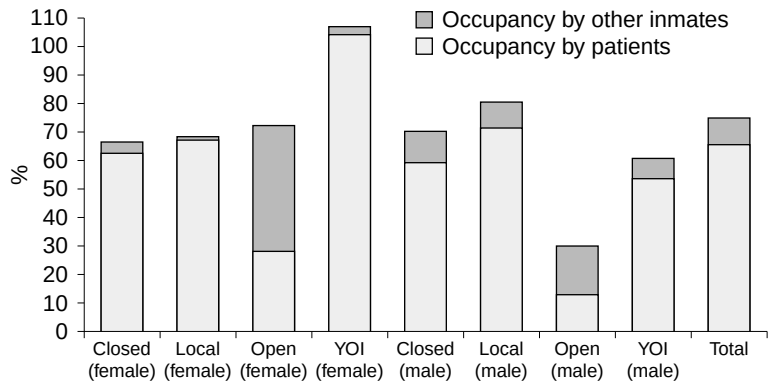
In 1997/98, 1792 in-patient beds were provided within prisons.[48] This amounts to approximately 29 health care beds per 1000 of the prison population. In contrast, in the UK as a whole there are approximately 5 beds per 1000 population.[75]

In 1996/97, overall occupancy of health care centre beds in prisons was 75%, use by patients accounted for 66% of occupancy and other inmates accounted for an additional 9%. However, these figures conceal wide variations in bed usage. Because of the pressures of overcrowding, for example, health care centre beds are not always used for health care. Occupancy rates in open prisons were particularly low and when beds were occupied this was frequently not by patients (but by other inmates). At the other end of the spectrum, occupancy rates in local prisons were consistently high (see **Table 60** and **Figure 23**).

Table 60: In-patient beds and bed occupancy in prisons in 1996/97 (unpublished).

Type of prison	Number of in-patient beds	ADP occupying in-patient beds	ADP other inmates	Bed occupancy by patients	Bed occupancy by other inmates
Closed (female)	52	33	2	62%	4%
Local (female)	115	76	2	66%	1%
Open (female)	11	3	5	28%	45%
YOI (female)	5	5	0	104%	2%
Closed (male)	152	89	17	58%	11%
Local (male)	1,097	780	99	71%	9%
Open (male)	30	4	5	13%	18%
YOI (male)	271	146	24	54%	9%
Total	1,733	1,136	155	66%	9%

Source: Prison Service, Directorate of Health Care, statistics for 1996/97 (unpublished).



Source: Prison Service, Directorate of Health Care, statistics for 1996/97 (unpublished).

Figure 23: Bed occupancy in health care centre beds (1996/97).

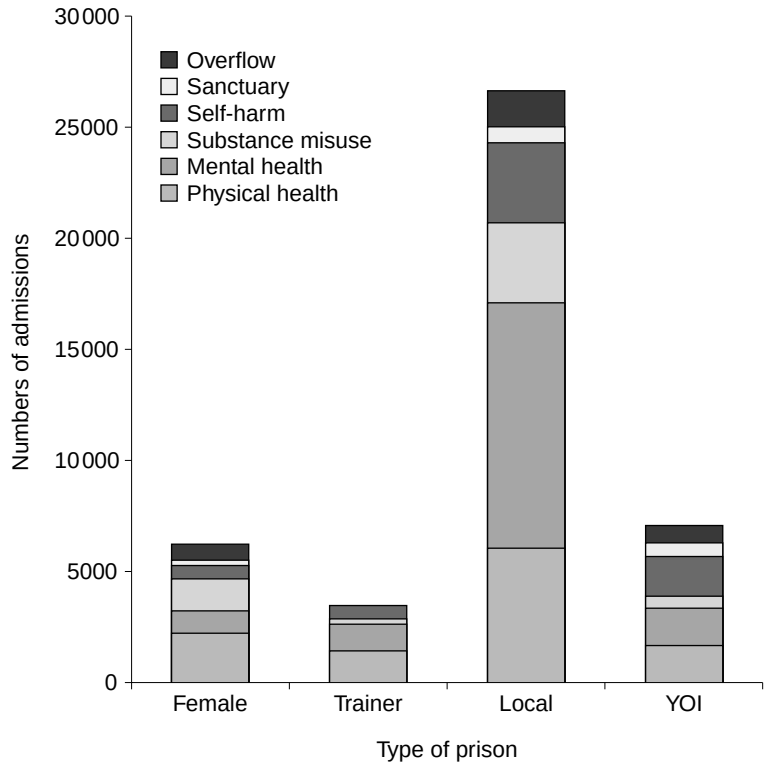
Reasons for in-patient admission

In 1996/97, just over one-third of admissions to health care centre beds were for mental health reasons, one quarter for physical health problems and the remainder for self-harm, substance misuse and for sanctuary (see **Table 61**). Mental health admissions are particularly prominent in local prisons, physical health problems in training prisons and female prisons and self-harm in Young Offender Institutions. These data are illustrated in **Table 61** and **Figure 24**.

Table 61: Numbers of in-patient admissions and principal reasons for admission (1996/97).

Type of prison	Total in-patient admissions to health care centre (HCC) beds by reason for admission							Admissions to hospital beds
	Physical health	Mental health	Substance Misuse	Self-harm	Sanctuary	Overflow	Total admissions to HCC beds	
Female	2,116 (35%)	1,162 (19%)	1,329 (22%)	582 (10%)	330 (5%)	514 (9%)	6,033	327
Trainer	1,421 (46%)	993 (32%)	152 (5%)	281 (9%)	123 (4%)	136 (4%)	3,106	913
Local	5,957 (22%)	11,107 (41%)	3,667 (14%)	3,492 (13%)	837 (3%)	1,740 (6%)	26,800	1,004
YOI	1,750 (26%)	1,612 (24%)	483 (7%)	1,689 (25%)	429 (6%)	829 (12%)	6,792	226
All prisons	11,244 (26%)	14,874 (35%)	5,631 (13%)	6,044 (14%)	1,719 (4%)	3,219 (8%)	42,731	2,470

Source: Prison Service, Directorate of Health Care, statistics for 1996/97 (unpublished).



Source: Prison Service, Directorate of Health Care, statistics for 1996/97 (unpublished).

Figure 24: Numbers of admissions and principal reasons for admission (1996/97).

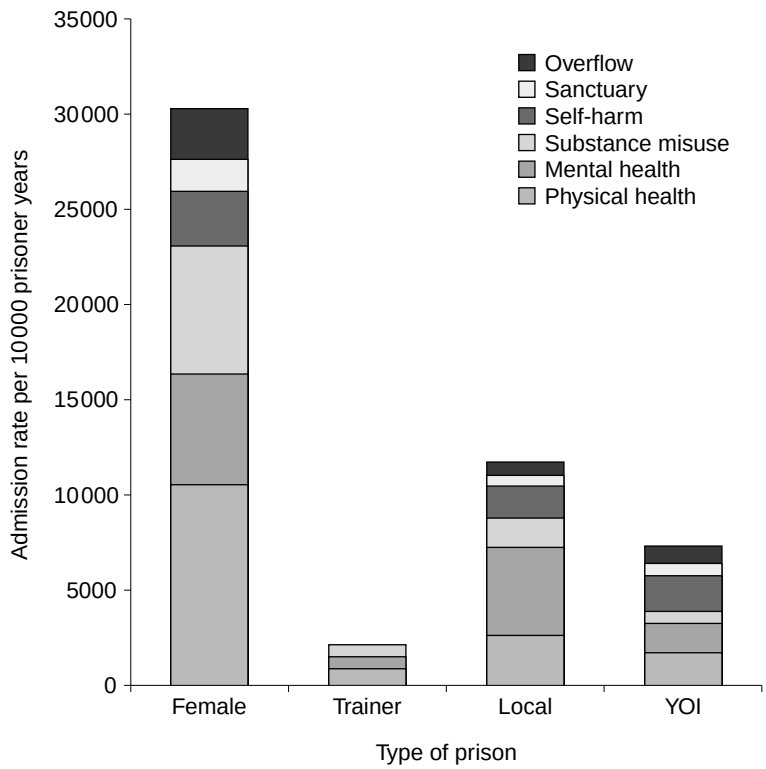
Admission rates

Overall there are about 7800 admissions to health care centre beds per 10 000 prisoner-years. Admissions to health care beds are particularly high in female prisons. The figures for female prisons, training prisons, local prisons and Young Offender Institutions are respectively 30 200, 1500, 11 400 and 7400. Admissions to NHS hospitals by prisoners are at a much lower rate, ranging from 1600 per 10 000 prisoner-years in female prisons to 250 per 10 000 prisoner-years in Young Offender Institutions (see **Table 62** and **Figure 25**).

Table 62: In-patient admission rate per 10,000 prisoner years and principal reasons for admission (1996/97).

Type of prison	Total in-patient admissions to health care centre beds per 10,000 population (by reason for admission) 1996/97							Admissions to hospital beds
	Physical health	Mental health	Substance misuse	Self-harm	Sanctuary	Overflow	Total admissions to HCC beds	
Female	10,578	5,809	6,644	2,909	1,650	2,569	30,159	1,635
Trainer	707	494	76	140	61	68	1,545	454
Local	2,541	4,738	1,564	1,490	357	742	11,432	428
YOI	1,895	1,746	523	1,829	465	898	7,356	245
All prisons	2,053	2,715	1,028	1,103	314	588	7,801	451

Source: Prison Service, Directorate of Health Care, statistics for 1996/97 (unpublished).



Source: Prison Service, Directorate of Health Care, statistics for 1996/97 (unpublished).

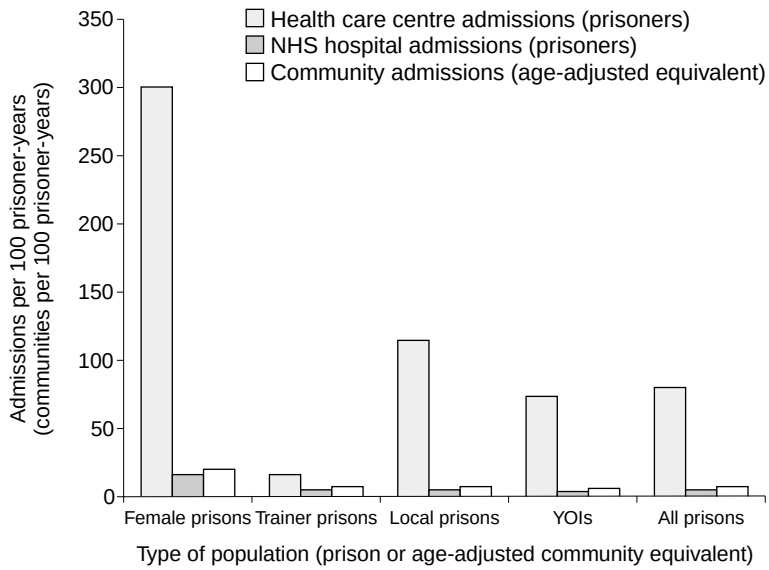
Figure 25: Admission rates per 10 000 prisoner-years and principal reasons for admission 1996/97).

Applying 1995/96 age- and sex-specific hospital admission rates for England to the prison population we would expect admission rates of 749 (per 10 000 person-years) for males and 1844 for females (see **Table 63**). Prisoners, particularly young offenders, are admitted less frequently to NHS (outside) hospitals than the general population, with standardised admissions ratios (compared to age and sex adjusted 1995/96 hospital admissions) of 0.9 for female prisons, 0.6 for trainer prisons, 0.6 for local prisons and 0.3 for Young Offender Institutions. However, apart from training prisons, admissions to health care centre beds are many times more frequent than hospital admissions in the general population. Standardised admission ratios are 16.4 for female prisons, 1.9 for trainer prisons, 14.3 for local prisons and 9.2 for Young Offender Institutions. These figures are illustrated in **Figure 26**.

Table 63: In-patient admission rates in the general population and expected admissions in a population of the same age as the prison population.

Age group	Males			Females		
	Admissions per 10,000	Prison population	Expected number of admissions	Admissions per 10,000	Prison population	Expected number of admissions
15–19	611	7,079	433	1,375	269	37
20–44	689	47,240	3,256	1,976	2,513	497
45–54	970	4,506	437	1,027	221	23
55–64	1,735	1,725	299	1,365	56	8
65–74	2,956	396	117	2,138	7	1
75–84	4,819	58	28	3,613	0	0
85+	6,830	2	1	5,056	0	0
Total	749	61,006	4,571	1,844	3,066	565

Source: Hospital Episode Statistics, England 1995/96. Prison population: Home Office statistics for 31 December 1998.



Source: Department of Health, *Hospital Episode Statistics*, England 1995/96 (unpublished). Prison population: Home Office statistics for 31 December 1998 (unpublished).

Figure 26: In-patient admission rates to health care centre beds and to outside hospitals compared to expected admission rates in a community population of equivalent age.

NHS hospital activity data

In 1997/98, prisoners made 3635 visits to accident and emergency. In the same year there were 25 690 NHS outpatient visits (410 per 1000 ADP). Of these 13% (3346) were surgical outpatient visits; 28% (7131) were medical outpatient visits and 59% (15 213) were for other reasons. The number of NHS in-patient admissions was 2475 (40 per 1000 ADP) in 1997/98. Of these 50% (1228) were medical admissions, 40% (986) surgical admissions and 10% (261) other admissions. The total number of escorts required to take prisoners to NHS hospitals was 25 770 and the total number of bed watch nights amounted to 6793.[48]

Cancelled NHS appointments

In 1997/98, 4243 appointments at NHS hospitals were cancelled (see **Table 64**).

Table 64: Cancelled Appointments at NHS hospitals.

Reasons for cancellations	Number of cancellations
Security implications	388
Staff shortages	1,721
Inmate transfers	584
Other	1,550
Total	4,243

Source: *Annual Report of the Director of Health Care 1997–98*.[48]

Health promotion

Health care and health promotion are complementary. They may be closely connected, for example in the prevention of communicable diseases, or offering specific advice on avoiding harmful behaviours such as smoking. However, to be effective health promotion must have a wider focus. WHO takes this approach, stating that: 'The target audience is not only prisoners, but also staff, prisoners' families, and local communities. Equally health promotion and disease prevention are not just the responsibility of the clinical professionals within the prison, but can, and to be effective should, be built into every branch of prison management to create a whole climate for improving health.'[76]

In seeking to address the wider issues of health promotion, a settings approach has recently been recommended for Scottish prisons.[77] The Chief Inspector of Prisons recommends a 'whole institution approach' as part of the business plan.[14] Some attempts have been made to measure institutional characteristics that are associated with a more health promoting environment.[78]

The prison environment is unique and in some ways – because of lack of privacy, stress, lack of normal social contact and support – potentially harmful to health. A 'settings' or 'whole institution' approach can address these problems through a three-pronged strategy: creation of 'healthy policy', health promotion and patient education.

The creation of 'healthy policy'

A healthy policy means that senior management team automatically consider health implications whenever they review existing policy and practice or intended policy changes and their implementation. The aim is to ensure that wider prison policy assist prisoners and staff in making healthy choices, as far as is

possible, and limits any potential harm. The philosophy behind the settings approach will integrate the work so that ultimately prisons will routinely seek to be secure, safe, reformative and *health promoting*. Typically examples would be to consider and maximise the health improvement potential in a prison's Anti-bullying Policy or its Induction Programme. More proactive would be providing better education to enhance prisoners job skills, for example.

Health promotion

This involves many types of staff and possibly prisoners in, for example, campaigns to promote a particular health issue, or policy development in an area such as smoking or exercise, or the provision of preventive services (e.g. drugs harm minimisation.)

Patient education

The aim of patient education or health education is to promote a healthy lifestyle through planned interventions which enable prisoners/staff to examine their knowledge, attitudes and skills in relation to a relevant health issue. Health promotion is not solely the responsibility of health care staff. Many staff, from education staff to officers on the wing and many others, have a role to play. They can look to NHS colleagues in primary care trusts for planning and practical support.

Health promoting prisons

The World Health Organization (Regional Office for Europe) in collaboration with the Department of Health co-ordinates the Health in Prisons Project. The Project's aim is to promote health in its broadest sense within the prison community (see www.hipp-europe.org). Membership of the Project requires a commitment at ministerial level backed by an appropriate level of resources to promote health in prisons. In October 2004 the project had 28 member countries involved and seven international partner organisations including the World Federation for Mental Health and the International Committee of the Red Cross.

The Project's annual business meetings, and the member countries' annual reports and plans, have so far concentrated on three priority areas (communicable diseases, mental health and drug misuse). The 1990 project meeting in The Hague resulted in the publication of a Consensus Statement on Mental Health Promotion in Prisons, which was distributed to prisons in England and Wales for World Mental Health Day 1999. The Statement recognises the potential harm imprisonment may do to mental health, which is described as: 'important for everyone, and not only for those who have been diagnosed as suffering from mental disorders, because it underpins all health and well-being'. The Statement goes on to analyse the aspects of prison life which may be damaging to the mental health of prisoners and prison staff, and to suggest steps prison managers and staff may take to protect and promote the mental well-being of prisoners and of their colleagues.

Prisoner's self-perceived needs

There is evidence that some prisoners are themselves interested in factors which affect their health. A survey of two male prisons identified about half of prisoners as being interested in diet, exercise, stress and sleeping problems (see **Table 65**). The preferred methods of receiving health information were individual discussion (63%), group discussion (41%), leaflets (33%) and video (27%). In addition, the great majority of prisoners were interested in attending a well person clinic and of those who had not undertaken training in First Aid the great majority expressed an interest in First Aid training.[79]

Recent research using focus discussion groups with prisoners and a seminar with staff found that issues such as HIV or drugs were not overriding concerns, but rather basic health issues such as dental health, mental health and relationship.[77]

Table 65: Main topics of health interest among male prisoners.

Topic of health interest	Percentage of prisoners mentioning topic
Diet and nutrition	53%
Physical exercise	45%
Handling stress	44%
Sleeping problems	43%
Smoking	34%
Managing anger	30%

Source: Cassidy *et al.* (1979).[79]

A similar survey of female prisoners[24] indicated that women would also welcome health promotion services. The most popular perceived need was for advice about coping with stress (see **Table 66**).

Table 66: Perceived need for services among female prisoners.

Subject of interest	Would be some help/great help at the moment
Diet and nutrition	36%
Physical exercise	49%
Advice about coping with stress	64%
Advice about problems with children	40% (62% of those with children)
Advice about giving up smoking	34%
Coming off drugs (illegal/prescribed/alcohol)	23%/17%/15%

Source: Smith C, Assessing health needs in women's prisons.[24]

Examples of health promotion initiatives in practice

Much health promotion activity is already taking place in prisons. Some initiatives are listed in **Table 67**, information on other initiatives is available through the *Health in Prisons Project.*

Health care services specific to the prison service

In addition to the health care services provided in response to the health care needs and demands of the prison population, there are health-related services that are an inherent part of the prison system.

Health screening on arrival at prison

Health Care Standard 1 in *The Health Care Standards for Prisons in England and Wales*[74] requires all prisoners to undergo health screening on arrival at prison. Prisoners are also expected to be assessed when they are transferred between prisons or from an outside hospital for in-patient care. Prisoners are to be

Table 67: Examples of health promotion initiatives in prisons.

	Examples of initiatives
Healthy eating	Cookery, food hygiene and healthy eating classes; Heartbeat Awards; reduced levels of fat, salt and sugar in meals.
Smoking	Self-help no smoking group; smoking awareness sessions; interest paid on the savings of inmates who do not purchase tobacco.
Physical activity	Provision of additional competitive sports; PE linked with induction screening and the Well Person clinic.
Mental well-being	Suicide prevention policy; posters and leaflets on metal well-being; anti-bullying messages, self harm therapy group.
Life and social skills	Course on Enhanced Thinking Skills; course covering stress, dependency, parent-craft, assertiveness and self-esteem; inmates encouraged to produce poetry and art on drugs issues; inmates encouraged to work for NVQs.
Sexual health	Information on HIV, STDs and TSE given on induction, confidential counselling on all sexual matters, support of World AIDS day, information leaflets on HIV/AIDS, drama workshop.
Substance misuse including alcohol	Voluntary testing on reception; videos on induction programmes; drug-free landing; poetry and art sessions on drug issues; links with therapists including acupuncturists, a Zen meditation specialist and a stress management specialist; drug education and rehabilitation training programme (DEPART).
Cancer prevention and early detection	'Sun Know How' packages for staff; testicular self-examination (TSE) in HIV/AIDS awareness sessions, prosthetic aids for the teaching of TSE and breast self-examination.
Safety and cleanliness	Training in food hygiene and cleanliness, first aid training.

Source: HIPP Resources – good practice guide, www.hipp-europe.org/resources/internal/good-practice.

seen by a health care worker on the day of their arrival and by a doctor within 24 hours. In local prisons, in particular, the primary health service has to cope with the large numbers of prisoners received every day. Reports indicate that the screening service is often very rushed and inadequate at identifying some important health problems.[62,63,71] This situation is exacerbated by lack of access to previous medical records. In March 2003, the Home Office linked its suicide prevention strategy to new triage-based reception health screening arrangements and mental health in-reach services in some selected English prisons. The Under-Secretary of State announced that all English prisons would be implementing the new screening system in 2004 and by 2006 mental health in-reach services would be available in every prison.

Details from the medical examination are recorded in an Inmate Medical Record and will normally follow the prisoner from prison to prison during their remand and sentence period. Medical records from a prisoner's home practice will only be requested if the prison doctor thinks there is a good reason for requesting them and the prisoner needs to sign to consent to it.[80]

Exit examination

Prisoners are examined by the medical officer just before discharge – in most cases this will be the previous day. If the prisoner is seriously unwell he can ask to stay in prison until he feels better, but this decision is up to the medical officer and the Governor.[80] The Reed Committee recommended that prisoners should be subject to discharge planning as much as patients being discharged from hospital.[81]

When prisoners leave custody at the end of sentence or after a period on remand, transfer back to the NHS can pose problems. After a long sentence, the prisoner may no longer be registered with a GP. Registration in his home area is difficult when he may be detained many miles away. Since the NHS assumes responsibility on the basis of area of residence, it is a particular problem that some prisoners have no home address when they are released and it may not be clear which health authority should assume responsibility for their care. In the past problems were made worse by the structural disjunction between the NHS and the Prison Health Care Service, which meant that prison health care notes did not get transferred to the GP in the community.

Medical reports

Health care personnel are also required to prepare parole reports, custody reports, psychiatric reports and court orders. The numbers of reports prepared over the last five years are listed in **Table 68**.

Table 68: Numbers of medical reports.

Type of report	Number of reports prepared in that year				
	1993/94	1994/95	1995/96	1996/97	1997/98
Parole reports	6,636	5,151	4,970	3,885	2,879
Full psychiatric reports other than to court	450	1,492	1,834	2,111	1,975
Custody reports by MO to court – psychiatric	2,880	2,481	2,490	2,199	1,613
Custody reports by MO to court – physical health	780	197	376	437	264
Voluntary reports by MO to court – psychiatric	621	265	480	252	196
Voluntary reports by MO to court – health only	102	85	157	214	105
Court orders arising from MO (excluding S47 & S48)	–	–	316	265	224

Source: *Annual Report of the Director of Health Care 1997–98.*[48]

Health care services available in prisons for specific health problems

This remainder of this section considers the health services that are available to address the health problems discussed in the earlier section on the incidence and prevalence of health problems in prisons.

Services for minor illnesses

Self-care and informal care

Patient information

The range of patient information available to the public comes from multiple sources: leaflets, books, websites and internet resources. General practitioners are also obliged to produce practice leaflets explaining how to access their services. The contents of these leaflets vary from the minimum required

information to comprehensive explanations of practice policy and advice on how to deal with common health problems.

In prison, information is much less easy to obtain. Many prisons produce some information on how to access and make use of health services. Some also give basic advice on the management of minor illness. Leaflets are available on a number of prison related health topics such as hepatitis and drug misuse. However, these tend not to be directed towards encouraging self-care.

Over the counter medication

In general prisoners are not able to buy over the counter medications.

Resources within the prisoner community

As part of their strategy to prevent suicide and self-harm, many prisons have developed listener schemes. These use prisoners as lay counsellors. Some prisoners have undertaken training in First Aid and of those who have not, many express an interest when asked.[79]

Semi-formal care

Access to voluntary and self-help organisations

Prisoners have some access to voluntary and self-help organisations. For example, some prisons encourage contact with the Samaritans or groups such as Narcotics Anonymous.

Pharmacy and supply of drugs to patients

Health Care Standard No 9[74] requires prisons to provide a safe, efficient and cost-effective pharmaceutical service to prisoners which complies with legal requirements, professional standards and ethical codes, and is at least commensurate with that in the NHS and ensures that a comprehensive range of medicinal products is available for the prevention, diagnosis and treatment of clinical conditions. The force of this is blunted by the fact that the prison service claims Crown Immunity in this area.[82]

Prisoners are not allowed to keep any medicines that they have been taking outside of prison, so all medicines must be issued from the prison pharmacy. In many prisons a range of medications are available from the pharmacy or dispensary, on the basis of a protocol, following consultation with a health care worker.

Prescribing formularies are recommended and are evident in some prisons. A formulary is a compilation of medicines approved for use within the prison establishment that reflects the current judgement of managing medical officers, clinical doctors and pharmacists, on the basis of efficiency, safety and cost.

Complementary medical services

Some prisons provide complementary medicine such as acupuncture or aromatherapy. Services are generally at the initiative of individual health care workers who have an interest in these areas.

A limited range of complementary therapies may be made available to individual prisoners on the recommendation of the prison doctor. The doctor must be satisfied that the therapy is in the interests of the inmate's health; that it will be given by an appropriately qualified and experienced practitioner; and that the therapy represents value for money and can be funded from the establishment's health care

budget. This range of therapies includes acupuncture, osteopathy, chiropractic, yoga, meditation and movement therapies (T'ai Chi).

Primary care

Most minor illness is dealt with at the level of primary care. Following consultation with a health care worker or a doctor, patients are given advice, reassurance, specific treatment or are referred to a specialist.

Services for physical health problems

The scope of this report does not allow for a full description of all services that are available to address the physical health problems of prisoners. Essentially the services available to prisoners will mirror those available in the community although the way these services are delivered may be different. **Appendix 2** and **Appendix 3** include brief overviews of the management of physical health problems and drug or alcohol misuse in the community. Described below is some prison-specific information on the services available to address physical health problems.

Epilepsy

Most prisoners with epilepsy will have already been diagnosed prior to imprisonment. In this case, reception screening and liaison with the patient's GP are important in establishing the diagnosis and how epilepsy is currently being managed.

Attitudes to epilepsy by other prisoners, prison officers and other staff (such as those involved in prison education) are influenced by health education. This may also be important in the management of seizures when they do occur. In addition, patients themselves become informed through self-help groups, health care staff and other sources. This is important because many aspects of the management of epilepsy require the patient to engage in appropriate self-care.

Asthma

Most day-to-day management of asthma is by patients themselves. This involves the avoidance of known allergens, monitoring of symptoms and sometimes of peak expiratory flow and adjustment of medications.

A number of prisons provide respiratory care clinics. One example is the clinic which was established in HM Prison Wandsworth after a need was identified.[83] The clinic is set up to provide specialist respiratory care to inmates. Its purpose is to advise, treat and support inmates with respiratory disease. It also assesses inmates' respiratory function, establishes a baseline for those not on medication and monitors the progress of those on regular medication. It trains patients in the most effective use of the prescribed medicines, assesses those who are smokers and refers them to smoking cessation programmes. Finally it provides a resource base on smoking and respiratory diseases for the use of staff and inmates.

Diabetes

Again, self-care will be important in the management of diabetes. Patients with diabetes need to understand the importance of adhering to their diabetic diet, will need to monitor their own blood sugar and (in the case of insulin-dependent diabetes) may need to adjust their dose of insulin in response to this. They also need to be aware of the symptoms of impending hypoglycaemia so that they can take

appropriate steps to avoid it. It may also be important for other prison officers and prisoners to recognise the signs of hypoglycaemia, so that they can act to prevent diabetic coma.

Control of diabetes is improved if the patient follows a regular routine in their daily activities and mealtimes. Good diabetic control can be achieved in the majority of patients in prison, probably due to the rigid dietary regime, no alcohol and compliance with treatment.[84]

A number of problems of prison diabetes care have been reported from both prisoners and a diabetes specialist's viewpoint. These included no access to dieticians and/or diabetes specialists, lack of self-monitoring facilities, suboptimal diabetes care, unrecognised metabolic decompensation and self-induced ketoacidosis in order to gain admission to outside hospitals.[84] In addition prison staff may misinterpret the symptoms of poorly controlled diabetes as 'acting-up' by prisoners and inappropriate care may be given.

It has been said that there is generally no specialist knowledge of diabetes amongst prison medical officers.[84] They usually manage diabetic prisoners themselves and only refer for further advice if and when they deem it necessary. In large prisons there is usually a visiting physician from the local NHS hospital who may or may not be a diabetes specialist. Prisoners may also be referred to a local NHS diabetes clinics but this can be expensive, as transport and an accompanying prison guard is required, as well as time-consuming.

At Walton Prison in Liverpool the local hospital diabetes team started to run a fortnightly diabetes clinic in response to problems with diabetic prisoners.[85] During a two-year period (1989–1991) 42 male diabetic prisoners (23 who were insulin-dependent) were assessed. The diabetic metabolic control of these patients was significantly improved after several months in prison and no serious diabetic instability occurred. In this example prison allowed the opportunity for screening for diabetic complications and reassessment of treatment of a number of young men who had defaulted from their home diabetic clinics.

The Scottish prison service in 1994 produced a protocol for diabetes management which included such issues as the establishment of a diabetes register, a system of call and recall, procedures for regular review, care management plans and a referral policy.[86]

Ischaemic heart disease and cardiovascular risk factors

Prisoners have some influence over their own cardiovascular risk through their choice of diet, smoking behaviour and exercise, although diet and exercise are largely controlled by the institution. By offering a diet low in saturated fat and salt but high in polyunsaturates, fruit and vegetables, prisons can influence cholesterol levels, blood pressure and risk of heart disease.

Many activities, such as smoking cessation programmes, aimed at preventing ischaemic heart disease are carried out in prisons. Some prisons offer Well Man Clinics, where cardiovascular risk factors are systematically investigated.[31]

There appears to be demand from prisoners for services addressing cardiovascular risk. In a survey of three women prisons, 34% of inmates identified 'Help/advice about giving up smoking' as a health need, 49% identified 'Help/advice about exercise' as a health need and 36% identified 'Help/advice about diet'.[24] A similar survey in a male prison indicated that 43% wanted help with addiction to smoking.[79]

Infectious diseases

Sexually transmitted diseases

The management of most sexually transmitted diseases in prisons is carried out by visiting specialists in genito-urinary medicine (GUM). In 1997/98, inmates were referred to a visiting GUM specialist on 16 378 occasions (262 per 1000 ADP), 2637 sessions were held, amounting to an average of 6 inmates seen per session.[48]

Table 69 illustrates activity rates in the genito urinary medicine service of a large women's prison. Not every new patient has a genito-urinary infection diagnosed, but among those who do the most frequent diagnoses were *Gardnerella* vaginosis, *Candida albicans*, *Trichomonas vaginalis*, non-specific urethritis, genital warts, *Chlamydia* infection and gonorrhoea.

Table 69: Genito-urinary medicine services in a large women's prison.

	Year		
	1996	**1997**	**1998**
New patients	1,118	961	1,242
Follow up	1,289	1,359	1,614
Total	2,407	2,320	2,856
ADP	294	527	N/A
New receptions	2,749	3,987	N/A
Clinical sessions	295	219	–

Source: Gabriel G. Women's Health Clinic. Audit of clinic sessions and patient turnover for 1996/97. HMP Holloway (personal communication 2/7/99).

Bloodborne viruses

Prevention

The risk of acquiring hepatitis B, hepatitis C and HIV infection can be reduced by adopting safer sexual practices (such as the use of condoms) and by avoiding unsafe practices such as sharing injecting equipment by drug abusers.

Sterilisation tablets to clean needles used to inject drugs were reintroduced to prisons in England and Wales in 1997 via a pilot scheme. Disinfecting tablets were introduced into the Scottish prison system in 1993 following a serious outbreak at HMP Glenochil, when 14 prisoners were infected with HIV and 8 with hepatitis B as a result of needle sharing. Condoms can be prescribed by the medical officer if there are clinical grounds to believe that it is in the best interests of the prisoner's health.

Hepatitis B immunisation

There is a specific vaccine against hepatitis B, a complete course of which requires three injections over a period of three months (see **Box 5**). HM Prison Service recommends immunisation against hepatitis B for all prisoners and staff as good practice. This view is upheld by the Department of Health, who recommends that all those at current or possible future risk should be. In 1996 a protocol was circulated to all Heads of Health Care in prisons (DDL (1996) 2) to advise on action that should be taken to ensure this recommendation was implemented (see **Box 5**). Immunisation courses are not always completed because prisoners on remand or short sentences may be released from custody or transferred. From March 1996 the cost of hepatitis B vaccine has been financed by individual prisons.

Box 5: Action points from the protocol sent to all heads of health care on immunisation against hepatitis B (not all action points have been included).

- Immunisation against hepatitis B should be offered to every prisoner on reception and given within one week of reception.
- Signed informed consent should be obtained for the patient and recorded in the IMR.
- Consenting patients will be offered the accelerated schedule of immunisation, involving three injections at 0, 1 and 2 months.
- In the case of prisoners serving a sentence of sufficient length, a booster injection should be offered at month 12.
- Prisoners returning on subsequent remand or sentence should be offered completion of a course or booster as relevant.
- Prisoners/patients for whom the extended course has already been initiated should complete the extended timetable of immunisation (0, 1 and 6 months).

In a survey carried out in 1997,[35] only a small minority of adult prisoners report having been immunised against hepatitis B, although a similar number reported being unsure as to whether they had been immunised (see **Figure 11**). Of this minority about half (slightly less than half of female prisoners and slightly more than half of male prisoners) reported having received a full course of immunisation. Almost no young offenders seem to have been immunised against hepatitis B.

Hepatitis B immunisation: prisoners' self-perceived needs

In a survey of male prisoners in two prisons, there were marked differences in the proportion of inmates immunised. In one prison over half had been immunised and half the remainder had been offered immunisation (about three-quarters offered or immunised). In the other, a third had been immunised and only one in twenty of the remainder had been offered immunisation (just over a third offered or immunised). Overall, two-thirds of those who had neither been immunised nor offered immunisation said they would like to be immunised.[79] This suggests that prisoners perceive a need for protection against hepatitis B, which is not always being met.

Testing, counselling and advice

Prisoners may request voluntary testing to establish their HIV or hepatitis status. The level of counselling before and following this procedure in prisons has, however, been reported as derisory.[80]

Tuberculosis

Prisons pose particular problems in relation to tuberculosis. Incarceration, transfer or discharge may disrupt treatment. Contact tracing is also rendered more difficult by movement of prisoners and the crowded conditions found in prisons mean that a single patient may have many contacts.

Dental health

In the community, the NHS contributes 20% of the cost of most dental services and the patient pays 80%. A number of categories of patients are exempt from the patient's contribution. These are pregnant women,

women during the first year after childbirth and young people under 18. The prison service pays the patient's contribution for those patients who are not exempted. This means that, in effect, dental services are available to prisoners free of charge. There is a variety of dental health service provision in prisons, the majority by General Dental Practitioners. A smaller proportion is provided by Community Dental Health services through contracts with individual prisons. The prison service also provides dental equipment. At least £1.8 million is spent annually on dental services.

In most prisons dental appointments are booked via the medical officer. Because demand exceeds the supply of dentists, there are waiting lists for all but emergency treatments. In a survey of sentenced adult male prisoners over half of the prisoners had seen a dentist since imprisonment.[23]

In 1997/98, inmates were referred to a visiting dentist on 104 718 occasions. Dentists held 10 753 sessions with an average of 10 inmates per session.[48] The rate of dental consultations was 0.4 per new reception into custody and 1.7 per prisoner year. Consultation rates are high in all types of prisons (**Table 70**).

Table 70: Consultations with dentists and the consultation rate among prisoners (1996/97).

Type of prison	Dentist consultations		
	Numbers	Per ADP	Per new reception
Closed training (F)	2,186	2.7	0.6
Local (F)	1,591	2.4	0.3
Open training (F)	829	1.8	0.4
YOI (F)	19	0.2	0.0
Closed training (M)	34,082	2.0	1.2
Local (M)	33,097	1.4	0.3
Open training (M)	7,740	2.4	0.7
YOI (M)	14,141	1.5	0.4
All prisons	93,751	1.7	0.5

Source: Directorate of Health Care, Prison Service (unpublished).

The King's Community Dental Institute provides dental services for one YOI and one high security prison. Their activities give an indication of the type of activities which would be expected in typical prisons of these categories[87,88] (see **Table 71**). The great majority of prisoners who consult the dentist are seen twice. In general terms, oral health advice, scale and polish, fillings, dressings and extractions are the most common procedures in young offenders. Half of young offenders have mild to moderate plaque. Older prisoners have a similar range of problems but prosthetics are also common.

The transfer of commissioning health services from the prison to PCTs included the commissioning of dental services.

Special senses and disability

Services for deaf prisoners

Provision of services for deaf prisoners, whether for practical or therapeutic assistance, are reported to be lacking in prisons.[89] Access to mini-coms or other specialised equipment, prison officers who can use British Sign Language or who can lip-read, and policies/guidelines on the problems and care of deaf prisoners are a rare commodity.

Table 71: Clinical activity by King's Community Dental Service in prisons (1998–99).

	YOI	High security
Emergency	32%	13%
Consultation	51%	49%
Radiographs	78%	3%
Type of treatment		
Oral health advice	55%	8%
Scale and polish	20%	1%
Periodontal	1%	No data
Conservative (fillings)	44%	2%
Crown and bridge	1%	0%
Endodontics (root canal therapy)	1%	4%
Prosthetics	0.4%	9%
Extractions	17%	21%
Minor oral surgery	1%	2%
Dressing	18%	14%
Trauma	1%	0%
Type of pathology		
No plaque	45%	
Mild plaque	37%	
Moderate plaque	17%	
Severe plaque	0.3%	

Source: Annual reports of clinical activity undertaken by King's Community Dental Service 1998–99.[87,88]

Optical services

Optical services are available to prisoners. However, there may be a charge to prisoners depending on how long the prisoner has been in prison or how much of their sentence they still have to serve, and the type of treatment they require. As with dental appointments, most appointments to see an optician are arranged via the medical officer.

In 1997/98 inmates were referred to an optician on 13 631 occasions, visiting opticians held 2000 sessions with an average number of 7 inmates seen per session[48]

Pregnancy, maternal health and postnatal care

In the community, responsibility for maternity care is often shared between the general practitioner, community-based midwives and a specialist obstetrician. Postnatal care is initially the responsibility of the midwife (for at least 10 days after the birth). A health visitor will then visit the mother and baby in a developmental role, providing advice, assistance and social support.

In prison, pregnant women will receive their antenatal care either in the prison or at a nearby hospital. However, in 1994, in a survey of women prisoners[55] the majority of expectant mothers (63%, n=39) had not attended antenatal classes since arriving at their current prison. A more recent review of women's prisons found that contracts for maternity care are being agreed between local NHS Trusts and the prisons concerned.[26]

If a prisoner is pregnant and likely to have the baby whilst in prison or has recently given birth to a baby, they may be able to go to one of seven prisons with mother and baby units.

Mother and baby units

The main principle of a mother and baby unit in a prison is to enable the mother/baby relationship to develop whilst safeguarding and promoting the child's welfare.[11]

The capacity of each mother and baby unit is listed in **Table 72**. In 1994 a survey of 93% of women prisoners in England[55] found that there were 122 women potentially eligible for a place, of whom 82 mothers wanted a place. This was at a time when there were only 48 mother and baby unit places available. The same survey also found that information about mother and baby units was not readily available to women on reception to prison.

Table 72: Mother and baby units in prisons in England and Wales.

Prison	Capacity of M&BU	Age limit of babies	Type of prison	Age of prisoners	Type of prisoners
Askham Grange	20	Aged up to 18 months	Open	Adult	Sentenced
Holloway	13	Aged up to 9 months	Closed	Adult	Remand and sentenced
New Hall	9	Aged up to 9 months	Closed	Adult & YOI	Remand and sentenced
Styal	22	Aged up to 18 months	Open	Adult & YOI	Remand and sentenced

Source: Report of a review of principles, policies and procedures on mothers and babies/children in prison.[11]

Although a mother and baby unit is not a health care service, some of the services provided to mothers and babies within the unit are health care services and these have associated costs. As at present no separate budget is allocated for the mother and baby units and the cost of running the units is met from individual prison's central budget[11] these health care services should be considered. A breakdown of costs generated by the care for babies provided by the four existing mother and baby units shows a wide variation in spending between the units (see **Table 73**).

Table 73: Cost per baby place in Prison Service mother and baby units for health care services.

Item	Askam Grange	Holloway	New Hall	Styal
Escorts to outside hospital (to treat the baby)	£72 (mother on licence)	£4,000	Nil	£8,000
GP for babies	£3,153	£18,500	£3,000	£4,014
Pharmaceuticals for babies	£1,044	£4,000	Nil	£2,400

Adapted from: *Report of a Review of Principles, Policies and Procedures on Mothers and Babies/Children in Prison.*[11]

A health visiting service is provided to each mother and baby unit but it is often limited in its range and influence.[11] There are, however, proposals for an enhanced role for health visitors[90] and the new health care standard for women will require babies living in prison to be registered with a local general practitioner. The implementation of the latter standard should allow babies to access the full range of services available in primary care from the most appropriate professionals.[11]

Services for mental disorders

Mental health problems accounted for 35% of total in-patient admissions to health care centres in 1996/97 and 30% in 1997/98.[48] Inmates were referred to a psychiatrist on 28 437 occasions in 1997/98, the number of sessions held being 9491, with an average number of three inmates seen per session.

However, like physical health problems, the majority of mental health problems are dealt with through informal care and primary care. This is particularly true of less serious problems such as neurotic symptoms, which are likely to be self-limiting. The main regime of the prison determines how prisoners are occupied during the day, which is likely to have an influence on mental health. This is also true of educational activity, which from the mental health point of view involves time spent productively and some degree of social interaction. When they do experience mental health or emotional problems, many prisoners deal with this by talking to other inmates, or trusted staff members (such as prison officers on their wings). Some prisons build on these informal networks by training prisoners as 'listeners' or by using cell sharing to help prisoners and as a means of controlling self-harm.[66]

A remand counselling programme is operated in some prisons. Counselling is usually offered on a weekly basis to help prisoners on remand with the stress they experience and to enable them to cope with imprisonment.[26]

Less serious mental health problems (neurotic disorders) are dealt with by the primary care team: health care workers and prison doctors. More serious problems (severe neurotic disorders and psychoses) are more commonly dealt with by visiting psychiatrists. The prisons inspectorate expects mental health care to be given by or under the direction of a doctor whose name is on a relevant specialist register.[82]

The Mental Health Act enables patients to be detained in a psychiatric hospital for assessment without his consent. Under a different section of the same act, patients with serious psychiatric illness who are under the care of a hospital can be treated without their consent. The conditions under which compulsory detention for assessment or treatment can be carried out are contained in Section 2 and Section 3 respectively of the Mental Health Act. In brief, it must be the opinion of two doctors, at least one of whom is experienced in psychiatry, that the patient is suffering from a psychiatric disorder which can be improved by treatment and that they are at risk of causing harm to themselves or to others. Prisoners cannot be treated under the Mental Health Act. While prisons usually have in-patient beds where psychiatric emergencies are assessed and treated, these are not included in the definition of a psychiatric hospital. In other words, prison inmates cannot be treated without their consent. If this is deemed necessary they must be transferred to the care of a psychiatric hospital.

Remand prisoners

Remand prisoners requiring urgent in-patient psychiatric treatment can be transferred from prison service custody to hospital under section 48 of the Mental Health Act 1983 (England and Wales). The power to direct a transfer lies with the Home Secretary following reports from two doctors. To qualify for section 48 transfer, a prisoner's mental disorder must fall within the Mental Health Act categories of either mental illness or severe mental impairment and be of a nature which necessitates urgent treatment in hospital. In a sample of unsentenced prisoners transferred in 1992 (n=370), nearly two-thirds had previously received in-patient psychiatric treatment, just over a third of whom had been detained under the Mental Health Act.[91] The most common type of mental illness of those transferred was schizophrenia (56%), followed by depression (10%) and manias/other affective disorders (10%).

There has been an increase in the number of unsentenced prisoners transferred, from 77 cases in 1987 to 494 in 1997, with a high of 536 cases in 1994 (see **Table 74**). Of the sample mentioned above, over half

(54%) were transferred to medium secure hospitals, 29% went to Interim Secure Units or locked wards, 8% were transferred to special hospitals and 9% went to open hospital wards.[91]

When it is felt that a patient no longer needs treatment or that no effective treatment can be given, patients can be returned to prison. In most cases when patients are readmitted to prison assessment in hospital has shown that the person was suffering from a personality disorder or substance abuse rather than a mental illness.[91]

Table 74: Numbers of patients transferred from prison establishment to psychiatric hospital (1987 to 1997).

	Transfers from prison to psychiatric hospital		
Year	**Sentenced**	**Unsentenced or untried**	**All transfers**
1987	103	77	180
1988	94	82	176
1989	120	98	218
1990	145	180	325
1991	182	264	446
1992	227	378	605
1993	284	483	767
1994	249	536	785
1995	250	473	723
1996	264	481	745
1997	251	494	745

Source: Kershaw C and Renshaw D. *Statistics of Mentally Disordered Offenders in England and Wales 1997*. London: Home Office Research, Development and Statistics Directorate, 1998.

Sentenced prisoners

Following reports from two doctors, the Home Secretary may transfer a sentenced prisoner suffering from a severe mental disorder to hospital. This procedure is authorised under Section 47 of the Mental Health Act of 1983 (England and Wales) and is known as a 'transfer direction'.[92]

The grounds for making a transfer are listed in **Box 6**. The section lasts until the patient's earliest date of release from prison although they can be detained beyond this date if they remain mentally disordered, to a nature and degree to warrant in-patient treatment, under a notional Hospital Order. Similarly if their mental disorder responds to treatment they can be returned to prison to complete their sentence.

Box 6: Grounds for issuing a Section 47.

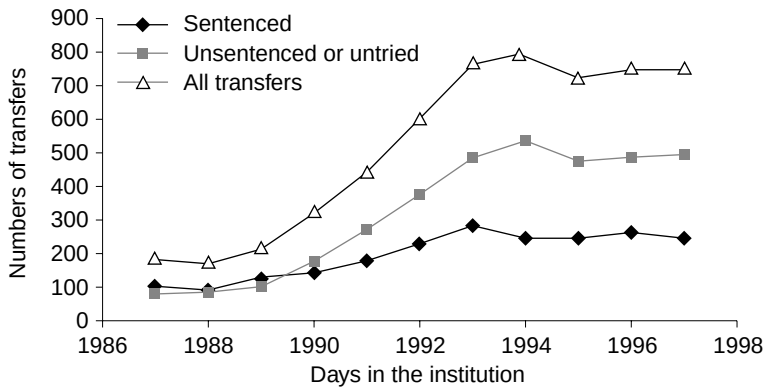
- The prisoner is suffering from mental illness, psychopathic disorder, mental impairment or severe mental impairment.
- The mental disorder is of a nature or degree which makes it appropriate for the patient to be detained in hospital for medical treatment.
- In the case of psychopathic disorder or mental impairment the treatment is likely to alleviate or prevent deterioration of the patient's condition.
- The Home Secretary is of the opinion, having regard to the public interest and all the circumstances, that the person's transfer is expedient.

Source: Huckle P.[92]

Table 74 and **Table 27** illustrate data released from the Home Office in 1998 on transfers to psychiatric hospital between 1987 and 1997. These indicate that there was a rapid rise in the number of transfers to psychiatric hospital between 1987 and 1994. This rise is most prominent among unsentenced and untried prisoners, which have risen more than six-fold. From 1994 to 1997 the number of transfers has been relatively constant.

In a survey of 29 prisoners transferred under Section 47, the most common type of mental illness was schizophrenia (50%), followed by recurrent depressive disorder (13%), personality disorder (7%), drug-induced psychosis (4%) and hypomania (4%).[92]

Prisoners who do not meet the criteria for detention receive treatment in prison, often as in-patients in the health care centre. Many have important health problems that outside of prison would be under the care of a consultant psychiatrist.



Source: Kershaw C and Renshaw D. *Statistics of Mentally Disordered Offenders in England and Wales 1997*. London: Home Office Research, Development and Statistics Directorate, 1998.

Figure 27: Patients transferred from prison establishment to psychiatric hospital (1987 to 1997).

Personality disorders

At present there are a number of specialist services for prisoners with psychopathic personality disorder. These include places in special hospitals (Broadmoor Hospital and Ashworth Hospital) and therapeutic communities such as those at HMP Grendon Underwood and the Max Glatt Centre within HMP Wormwood Scrubs. The prison service also intends to establish an additional therapeutic community with a further 250 places.[93]

The term 'therapeutic community' is used to refer to a residential, multi-modal treatment programme for people with a variety of mental health problems. Programmes typically include some formal therapeutic components such as group psychotherapy and art therapy, but the key and unique component of the approach involves the observation and analysis of daily interactions within the community. It is a contract-based regime – the prisoner needs to recognise they have a problem, be motivated to do something about it and be capable of entering into a therapeutic contract. Alternative treatment options for people with personality disorder include a range of outpatient based therapies, some of which will occur as part of a typical therapeutic community treatment programme, or an intense period of in-patient psychotherapy in an open ward.

Gunn *et al.* on looking at the treatment needs of male prisoners with psychiatric disorders found that approximately 6% of the men were judged to require treatment in a therapeutic community setting for personality disorders, substance misuse, or sexual disorder.[61] Maden *et al.*[94] suggest that 8% of sentenced women require therapeutic treatment. A review of women's prisons[26] found that many prisons have inadequate resources to help women with serious personality disorders.

Functional psychoses

The most common functional psychoses are schizophrenia and the delusional disorders. However, some patients suffer from severe depression or hypomania. These are all chronic disorders which are characterised by occasional episodes of mental disturbance interspersed with problem-free periods. Chronic mental illness is associated with a range of psychological, emotional, social and occupational problems. These can be addressed in a structured way known as a *care programme approach.*

The *care programme approach* is a standardised system which can incorporate statutory aftercare or other arrangements such as supervision orders or care management by social services. It is based on a multidisciplinary approach to care, but to avoid diffusion of responsibility a single *key worker* is identified as the lead person involved in care. The *key worker* has overall responsibility for overseeing and monitoring the services provided under the care plan. Alongside this a detailed and systematic assessment of the individual patient's needs is carried out, together with regular reviewing and recording of the care and support given. This should involve the patient and relevant informal carers wherever possible. Specific responsibilities are allocated to specific people (health and social services professionals and informal carers) involved in care. Care is planned on a proactive basis, in an attempt to anticipate problems, and is reviewed as circumstances change.

For most chronic mental illnesses an important role is played by the psychiatrist. The frequency and the duration of relapses can be significantly reduced with appropriate medications. In prisons chronic mental illnesses are generally managed by a psychiatrist. The more structured *care programme approach* is not widespread in prisons, often because of difficulties in co-ordinating care between prisons and outside agencies.

Neurotic disorders

Not all neurotic illness is detected in primary care, as patients also experience physical symptoms which may distract from the neurotic illness. Of those that are detected, the great majority are managed in a primary care setting.

The first step in the management of neurotic illness is often to validate the patient's experience and to reframe his or her symptoms as having a psychological element. Having diagnosed anxiety, depression or any of a range of neurotic symptoms (such as insomnia), general practitioners most commonly provide counselling or supportive care and arrange for subsequent follow-up. They may prescribe antidepressants or anxiolytic drugs or give specific advice with respect to neurotic symptoms. Supportive counselling, cognitive behaviour therapy or behaviour therapy or follow-up of patients with neurotic symptoms may also be carried out by another primary care professional such as a community psychiatric nurse, a social worker or a practice nurse trained in counselling or problem-solving.

In a minority of cases, patients are referred for specialist assessment by a clinical psychologist or psychiatrist. In the former case this may result in a psychotherapeutic intervention such as cognitive therapy or psychodynamic psychotherapy. In the latter case this usually results in prescription of medication (such as an antidepressant), but this may be combined with a psychotherapeutic approach.

Whether they are managed at a primary care or a secondary care level, patients with severe neurotic illness are managed using the care programme approach described above in functional psychoses. This essentially means that a systematic, multidisciplinary approach is taken to address all of their social, psychological and health needs.

Services for patients with neurotic disorders in prisons tend to parallel those in the community. However, at the primary care level, access to other primary care professionals such as counsellors or community psychiatric nurses may be limited in comparison to the situation in the community. At the secondary care level, psychiatric referral may be more common as access to clinical psychology is limited.

Help with emotional problems

A remand counselling programme is operated in some prisons. Counselling is usually offered on a weekly basis to help prisoners on remand with the stress they experience and to enable them to cope with imprisonment.[26]

Self-harm and suicide

The management of self-harm in the community

In the community deliberate self-harm is one of the top five causes of acute medical admissions for both men and women.[95] The usual management of persons who self-harm in the community is to treat the injury and then to assess the risk of mental illness or subsequent injury. Assessment may be carried out by a psychiatric social worker, a community psychiatric nurse or a doctor (either a psychiatric specialist or junior doctor specialising in psychiatry).

Specialist aftercare usually involves referral to psychiatric outpatients and social services. Around a quarter of hospitals have a dedicated self-harm team. About 5–10% of cases lead directly to a psychiatric admission.[96]

The management of self-harm in prisons

It is recognised that most prisoners who self-harm do not go on to kill themselves. There are however, links between self-harm and suicide: half of those who commit suicide in prison have previously injured themselves.[66]

It has been suggested that the Prison Service places a much greater emphasis on the prevention of the suicide than on tackling the problem of self-harm.[64] In August 1992 the Prison Service published an information paper entitled *The Way Forward*, as part of its work to develop a revised strategy towards the prevention of suicide. Following on from this, a piece of work looked at lists of risk behaviours which should alert staff to suicide vulnerability, and of triggers which may hasten the onset of suicidal feelings. This led to the Prison Service strategy *Caring for the Suicidal in Custody*, which was introduced in 1994. It provides a systematic approach to the identification, care and monitoring of those considered to be at risk of suicide. The main policy features of the strategy include the appointment of Suicide Awareness teams in each establishment, the introduction of a form for managing those considered as being at risk (F2052SH), involvement of the Samaritans and the development of listener schemes.

Assessment

Guidelines on assessment are included in *The Management of Deliberate Self-harm*, issued by the DHSS in 1984.[97] The guidelines recommend that every patient should have a specialist psychosocial assessment to identify factors associated with suicidal behaviour, to determine the motivation for the self-harm, to identify potentially treatable mental disorder and to assess continuing risk of suicidal behaviour. The DHSS guidelines recognise that assessment can be undertaken by staff other than psychiatrists providing they have had proper training. Social workers and psychiatric nurses are given as examples.

Interventions

A number of interventions are employed to address self-harm and suicide:

Informal and semi-formal care

Many prisons provide information to encourage use of informal and formal services when prisoners feel that they are in crisis. Some prisons provide *crisis cards*, which carry advice about seeking help in the event of future suicidal feelings.

Listener schemes were introduced to enable suitable prisoners to help other prisoners. The scheme operates according to the principles of the Samaritans. Most prisons have a listener scheme in operation and in a small number of establishments, listeners get paid for this service.[66]

A *self-help group* facilitated by staff at HMP Durham enables women with a history of self-injury to meet on a weekly basis and share their feelings and talk about their impulses to self injure.[66]

It may be appropriate to refer prisoners to *non-statutory agencies* or specialist services such as the Samaritans. The Samaritans visit 93% of prison establishments on a regular basis. However, a dedicated phone line to the Samaritans is only available in 40% of establishments.[66]

If a Prison Officer is confronted by a prisoner who has harmed themselves, or is talking about doing so, an *F2052SH booklet* is opened. This booklet is used by all staff to record the observations about the prisoner. It was designed to manage the measures to be taken to support an individual at a time of a suicidal crisis to the point where risk was reduced and the form could be closed. The booklet is intended as a framework not the answer to the problem.

Formal care

Prisoners who self-harm may also be managed by medical staff or other health care workers. The main approaches to self-harm are psychological and medical: either can be used alone or both in combination. Psychological approaches include problem-solving therapy and other behavioural approaches to self-harming behaviour. They also include the full range of psychological interventions for underlying neurotic disorders such as depression. Medical approaches include conventional psychiatric care, drug treatment for depression and specific drug treatments for impulsive behaviour.

Services for alcohol and drug misuse

Health Care Standard No 8[74] advises prisons to provide clinical services for the assessment, treatment and care of substance misusers comparable to those available in the community and appropriate to the prison setting. The Prison Service has also stated that it is committed to providing clinical services for substance misusers which are in line with the Department of Health guidelines. This includes a commitment that all prisons receiving remand prisoners should provide clinical detoxification services.

Drug abuse

Services for drug abuse in the community

In the community a minority of drug misusers come into contact with formal services. Those that do are dealt with by the primary care team, in drug-dependency clinics and sometimes by psychiatric services. A range of voluntary organisations also offer services for drug misusers.

Services for drug abuse in prisons

Drug strategies vary between prisons; in his 1996–97 Annual Report, the Chief Inspector of Prisons stated that, 'the employment of outside agencies, and the introduction of drug-free wings is very haphazard'. Some prisoners are aware of their needs with regard to drug misuse. In surveys 17% of male prisoners and 23% of female prisoners identified a need for help with addiction to illicit drugs.[24,79]

Between September 1995 and January 1997, 21 drug treatment and rehabilitation programmes were established in 19 prisons in England and Wales. These were intended to test a range of different drug treatment and rehabilitation services.[98]

The services included:

- counselling, advice and education services
- enhanced detoxification services
- 12-step programmes
- residential drug treatment programmes
- modified therapeutic communities
- therapeutic communities.

CARATs: Counselling, Assessment, Referral Advice and Throughcare

A support service for prisoners with drug problems was made available to all prisoners with drug problems from the end of October 1999. CARATs (Counselling, Assessment, Referral Advice and Throughcare) is a multi-agency approach to tackling drug abuse in prison. It co-ordinates approaches to tackling drug abuse

in prison with support for prisoners after release. It aims to identify drug misusers as soon as possible, provide ongoing support and advice throughout their sentence, work in conjunction with other agencies (inside and outside prison) and provide links between the various departments and agencies dealing with prisoners in order to provide continuity. The multi-agency approach involves drug agency staff, prison officers, probation officers, health care staff and psychologists.

CARATs is part of the Prison Service's new drug treatment framework, which promised to deliver 31 new drug rehabilitation programmes by the end of 1999 (in addition to the existing 18). Four new therapeutic communities for prisoners with the most severe drug problems and related offending behaviour were planned doubling the number of centres available.

Detoxification and withdrawal

Detoxification courses are provided in all prisons with remand prisoners. The total number of prisoners completing drug detox courses increased from 13 932 prisoners in 1996/97 to 17 696 in 1997/98. The average number of prisoners on drug detox courses on 31 March 1998 was 480.[48]

Examples of initiatives to address drug abuse in prisons

Winchester Prison's substance misuse team was expanded in 1991 when two outside part-time drug workers were brought in to provide amongst other things group counselling.[99] The services had been provided by statutory drug agencies for the catchment areas and the funding for these posts was shared between the prison service and the local health authority. Through care is also operated at Winchester. A drug worker will follow the misuser through the criminal justice system and ensure contact with a suitable agency/drug worker when they return to the community.

Alcohol misuse

Services for alcohol abuse in the community

In the community a small minority of alcohol misusers come into contact with formal services. Those that do are dealt with by the primary care team, by the voluntary sector, or in alcohol dependency clinics run by psychiatric services.

Services for alcohol abuse in prison

Alcohol abuse should not present a serious problem inside prisons as it is difficult for prisoners to get access to sufficient quantities for prisoners to maintain a state of dependency. However, it is thought that paradoxically, absence of alcohol makes it difficult to address drink problems inside prison. Alcohol becomes a problem when the prisoner is released.[73]

However, on arrival in prison, some prisoners are alcohol-dependent and will undergo acute withdrawal *delerium tremens*. These need to be identified and managed appropriately.

Services that may be offered by a prison include detoxification for prisoners who are dependent on alcohol, education programmes on alcohol misuse, counselling and visits from outside agencies such as Alcoholics Anonymous.

The total number of prisoners completing alcohol detoxification courses increased from 2345 prisoners in 1996/97 to 3942 prisoners in 1997/98. The average number of inmates on alcohol detoxification courses on 31 March 1997/98 was 87.[48]

Prisoners' self-perceived needs

Many prisoners are aware of their needs with regard to alcohol misuse. In separate surveys, 29% of male prisoners and 15% of female prisoners identified a need for help with addiction to alcohol.[24,79]

Cost of services

The proportion of costs borne by the NHS and the prison service for health care services varies with different types of health care. In some cases there will be cost implications on different parts of the prison

Table 75: Costs of different approaches to the management of health care problems.

Type of health care	General population	Prisoners		
		Costs to the prison service		Costs to the NHS
	Costs to the NHS	Health care costs	Other costs	
Health promotion				
Occupational advice or advice on main prison regime	Yes	None	In some cases	None
Nutritional or other lifestyle advice	Yes	None	In some cases	None
Informal and semi-formal care				
Over the counter (OTC) medication and self-care	None	Not available	–	None
Advice from a pharmacist	None	Yes	–	None
Advice and care from family or friends	None	Not available	–	None
Voluntary organisations	None	None	–	None
Self-help groups, e.g. Alcoholics Anonymous	None	None	–	None
NHS Direct or other telephone advice line	Yes	None	–	Yes
Formal care: primary care team				
Consultation with a practice nurse	Yes	Yes	–	None
Consultation with a general practitioner	Yes	Yes	–	None
Optician	Yes	Yes	–	None
Dentist	20% of cost	80% of cost	–	None
Consultation with an NHS specialist	Yes	None	Escorting costs	Yes
Formal care: secondary care				
Consultation with a visiting NHS specialist	–	Yes	–	None
Consultation with an outside specialist service	Yes	None	Escorting costs	Yes
In-patient care in a health care centre bed	–	Yes	–	None
In-patient care in an NHS hospital bed	Yes	None	Escorting costs	Yes
Formal care: other forms of direct access				
Accident and emergency	Yes	None	Escorting costs	Yes
Alternative and complimentary medicine	Sometimes	Yes	–	None
Self-referral to specialist services, e.g. genito-urinary medicine	Yes	Not available	–	None
Private health care, e.g. BUPA, private dental care	None	Rarely available	–	None

budget. The precise costs will vary from one prison to another. **Table 75** illustrates where costs of different types of care may fall.

In 1996, it was estimated that the prison service spent around £1000 per prisoner per year on health care. However, this figure conceals wide variation in expenditure on health care, with some institutions spending as little as a few hundred pounds per inmate and others as much as £9000, or between 3% and 20% of their total budget on health care.[13] Over three-quarters of prison health care expenditure is on the salaries of health care staff. The remainder is divided between pharmaceutical costs and various contracted-in specialist services (see **Table 76**).

The total number of health care staff employed by the Prison Service at 31 March 1998 was 2031; of these 216 were part-time the remaining 1815 were full-time[48] (see **Table 77**).

Table 76: Breakdown of costs of health care provision in the prison service (1996/97).

Type of health care	Cost (millions)	Percentage
Staff pay	£44.417	73.9%
Other locums and consultants	£5.060	8.4%
Medical supplies (very largely pharmacy drugs)	£4.872	8.1%
Dental treatment	£1.855	3.1%
Visiting psychiatrists	£1.621	2.7%
Nurses	£1.040	1.7%
Contracted out services	£0.503	0.8%
Optical treatment	£0.500	0.8%
Occupational health	£0.215	0.4%
Total	£60.083	100%

Source: Home Office statistics for 1996/97.

Table 77: Health care staff.

	Number employed on 31 March		
	1995/96	1996/97	1997/98
Total health care staff	2,056	1,958	2,031
Part-time	180	176	216
Full-time	1,876	1,782	1,815
Total nursing grades	684	718	879
Part-time	59	60	92
Full-time	625	658	783
Total unified grades	1,001	880	774
Part-time	6	5	2
Full-time	995	875	772
Total medical grades	222	1 90	213
Part-time	89	66	87
Full-time	133	124	126
Total pharmacy grades	77	85	75
Part-time	11	20	18
Full-time	66	65	57
Total admin grades	72	85	90
Part-time	15	25	17
Full-time	57	60	73

Source: *Annual Report of the Director of Health Care 1997–98.*[48]

6 Effectiveness of services and interventions

There have been few well conducted, randomised controlled trials of health care interventions in prisoners. However, based on our knowledge of an illness and an intervention it may be reasonable to extrapolate based on studies which have been carried out in other settings. For example, there are no direct studies of the effectiveness of hepatitis B vaccination in the prison population, but we know it is effective in a wide variety of other settings and it is probably reasonable to assume that it is effective in prisons.

It is beyond the scope of this document to review the effectiveness of all possible treatments or interventions for the health problems experienced by prisoners. On the one hand there is little evidence on the effectiveness of health care interventions specific to prisoners. On the other hand, however, there is a great deal of evidence on the effectiveness of interventions in other settings. Although this too is far from complete, some of it is relevant to the prison population. Unfortunately, such a range of evidence is too extensive to be reviewed in detail in a document such as this. It will therefore consider in a little more detail some health problems that are most pertinent to the prison population. Where conclusions have been reached, these are drawn from information on the effectiveness of health care interventions in the community. This section should not be considered a substitute for a systematic appraisal of the available evidence.

Effectiveness of health care services

Table 78 summarises, in broad terms, the types of evidence available for the main categories of health problems. Where evidence is available it is often not directly relevant to the prison setting and this should be borne in mind when recommendations are being made or guidelines drawn up.

Effectiveness of health care services specific to the prison service

Health screening on arrival in prison

The effectiveness of screening prisoners at reception (using form F2169) has been questioned.[62,63,71] The conditions and time constraints under which reception health screening is carried out have been found to militate against the detection of clinically important information. The validity of the screening questionnaires used has also been doubted. More specifically, the screening is neither sensitive nor specific for detecting mental disorder.[63]

Health screening at reception is not sensitive at picking up mental disorder. In one research project reception screening identified only 23% of 148 mentally disordered remand prisoners (95% CI 16–30%). This included only 25% of 24 who were acutely psychotic (95% CI 8–42%). Another study found that 18 out of 43 young inmates had failed to report their mental health problems at reception.[14] A study on substance use in remand prisoners also concluded that prison reception health screening consistently underestimates drug and alcohol use.[71]

In a further study the findings of the prison reception health screening of 546 consecutive new remand prisoners were compared with independent assessments carried out by research psychiatrists.[100] The independent assessments took from 20 minutes to an hour. The study concluded that a considerable amount of morbidity remained undetected by routine screening. Initial health screening (by prison hospital officers) and subsequent health assessments (by the prison doctors) picked up the great majority of prisoners with a history of self-harm. However, they only detected about half of those with a current

Table 78: Evidence of effectiveness of interventions for health problems found in prisons.

Type of health problem	Level of evidence of effectiveness	Is evidence generalisable to prisons?
Health services specific to the prison population	Primary care screening procedures compared with 'gold standard'.	Some evaluation of current practice in regard to screening.
Minor illness	Some evidence from controlled trials and systematic reviews. Some expert recommendations.	Evidence not based on a prison setting, but probably generalisable.
Physical health problems		
Epilepsy	Controlled trials of specific drugs. Expert recommendations and guidelines for usual management.	Evidence not based on a prison setting, but probably generalisable.
Diabetes	Controlled trials of glycaemic control and blood pressure control. Little evaluation of service delivery.	Evidence not based on a prison setting, but probably generalisable.
Ischaemic heart disease and cardiovascular risk factors	Controlled trials and systematic reviews of the management of cardiovascular disease and risk factors. Has been synthesised into evidence-based guidelines.	Evidence not based on a prison setting. See below for modelling and recommendations based on expected prevalence of cardiovascular risk factors in prisoners.
Infectious diseases	Evidence for specific interventions (antibiotics, immunisation). Some evidence for preventive strategies based on behavioural change.	Evidence on specific interventions probably generalisable to prisons. Evidence on preventive strategies based on behavioural change unlikely to be applicable.
Special senses and disability	Limited evidence. Expert recommendations.	Probably applicable to prisons.
Pregnancy and maternity care	Extensive evidence on specific interventions from controlled trials and systematic reviews in Cochrane Library. Limited evidence on delivery of care.	Evidence not based on a prison setting. Not clear how generalisable this is to prisoners.
Mental disorders		
Personality disorders	Very limited evidence.	Not clear how generalisable this is to prisoners.
Functional psychoses	Extensive evidence from controlled trials and systematic reviews in Cochrane Library.	
Neurotic disorders	Extensive evidence from controlled trials and systematic reviews in Cochrane Library.	
Self-harm and suicide	Some evidence from randomised controlled trials and systematic reviews.	Not clear how applicable evidence is to the prison setting. There are prison-based expert recommendations.
Alcohol and drug misuse		
Alcohol misuse	Some evidence from controlled trials. Expert recommendations.	Not clear how applicable evidence is to the prison setting.
Drug misuse	Some evidence from controlled trials. Expert recommendations.	Not clear how applicable evidence is to the prison setting.
Health promotion	Very little direct evidence.	

history of illicit drug use or a past psychiatric history (see **Table 79**). Most of the problems were detected during the initial screen (i.e. by prison hospital officers): little was added to the process by the doctor's routine assessment.

Table 79: Percentage of mental health problems detected by routine screening at reception.

Mental health problem	Percentage detected following initial screening by Hospital Officer and subsequent health assessment by medical officer
Current illicit drug use	56% (95% CI: 50–61%)
Past psychiatric history	52% (95% CI: 45–58%)
History of self-harm	82% (95% CI: 75–88%)

Source: Birmingham *et al.*[100]

Exit screening prior to release

In order to draw conclusions about the effectiveness of exit screening we need a clear idea of its objectives. These could be the detection of previously hidden illness, informing and guiding discharge arrangements or ruling out specific health problems. There is no published evidence on the effectiveness of exit screening. Nor is it clear what the primary purpose of exit screening is. It is therefore difficult to draw conclusions about its effectiveness.

Effectiveness of services for minor illness

For the majority of the minor illnesses that are prevalent in the prison population, and that are the most common reasons for consultation with health care staff, there are means of self-care. However, the evidence on the effectiveness of the various types of self-care is variable. There is little direct evidence on which health professionals should deal with minor illnesses, but there is some evidence that for a range of problems, professions allied to medicine following guidelines can successfully substitute the role of physicians.[101]

Skin conditions

The effectiveness of over the counter preparations and pharmaceutical advice on the burden of skin disease in the community is unknown.[102]

Acne

Topical treatments are effective for mild to moderate acne.[103] These include benzoyl peroxide preparations, which are available without a prescription. Systemic antibiotics remain the mainstay of treatment for acne, and tetracycline is the treatment of first choice.[103]

Dandruff

Shampoos containing zinc pyrithione seem to be more effective at controlling dandruff than those without.[104] There is also some evidence that selenium-containing shampoos may be more effective than standard commercial antidandruff preparations.[105] There is also evidence that shampoos containing polytar and specific antifungals are effective in controlling dandruff.[106] Shampoos containing the active ingredients selenium sulphide, coal tar extract and zinc pyrithione are available without prescription.

Psoriasis

Mild cases of psoriasis may be treated with a variety of effective topical treatments such as coal tar, dithranol, topical corticosteroids and calcipotriol.[102]

Atopic eczema

The main treatment for mild to moderate atopic eczema is with emoilients to moisturise the skin and mild to moderate potency corticosteroids.[102] A wide range of emollients and a small number of steroid-containing creams are available without a prescription. Severe atopic eczema is usually treated with potent topical corticosteroids[102] but these are only available with a prescription.

Other skin disorders

Many effective topical and systemic anti-fungal agents have been evaluated for the treatment of fungal infections of the skin, hair and nails. Controlled trials have shown that oral and topical antibiotics are effective in treating bacterial skin conditions such as impetigo. Herpes simplex infections may be treated effectively using specific anti-viral agents such as acyclovir, given topically or orally.[102]

Headache

Tension headache

Episodic tension headache can be treated with aspirin, paracetamol or ibuprofen. Combination treatments containing codeine or caffeine are best avoided because of the potential for dependence. Tension headaches which occur more than twice per week, are leading to medication misuse or are causing significant disability should be regarded as chronic tension headaches. There is some evidence that low dose amitriptyline (50–100 mg daily) is effective in reducing the frequency and duration of chronic headaches. Muscle relaxation, either with or without electromyographic biofeedback, may be effective in reducing the symptoms of chronic tension headache.[107] Behavioural treatments may also be effective when used by patients at home rather than in a clinic.[108] Spinal manipulation may be effective in reducing the frequency of tension headache.[109]

Migraine

Subcutaneous sumatriptan is probably the most effective treatment for acute migraine attacks. Oral sumatriptan, intranasal sumatriptan and any of a range of similar drugs (zolmitriptan and rizatriptan) are the next most effective treatments and oral aspirin with metoclopramide is of similar effectiveness. The cost per treatment of sumatriptan is approximately £21 for subcutaneous administration, £6 orally and £8 to £16 intranasally. Zolmitriptan and rizatriptan cost between £4 and £9 depending on the dose used. Aspirin 900 mg with metoclopramide 10 mg (issued as separate tablets) costs £0.03.[110,111]

Beta-blockers, in particular metoprolol, propranolol and alenolol; a range of non-steroidal anti-inflammatory drugs; amitryptyline; methylsergide, dihydroergotamine and pizotifen; and certain anti-convulsant drugs are effective in the prevention of migraine.[112] There is some evidence that feverfew may be effective in reducing the frequency of episodes of migraine.[113]

Upper respiratory infection

Common cold

Antibiotics are ineffective in treating the common cold.[114] However, there is evidence that suggests that some *Echinacea* preparations may be effective in the prevention and treatment of the common cold.[115] There also appears to be a modest benefit in reducing duration of cold symptoms from ingestion of relatively high doses of vitamin C although long-term daily supplementation with vitamin C in large doses does not appear to prevent colds.[116] The evidence for the effectiveness of zinc for treating the common cold is inconclusive.[117] Intranasal ipatropium bromide spray, and to a lesser extent topical oxymetalozine and some antihistamines, are probably effective for nasal symptoms only.[118]

Acute sinusitis

Current evidence is limited but supports penicillin or amoxicillin for 7 to 14 days for acute maxillary sinusitis confirmed radigraphically or by aspiration. Clinicians should weigh the moderate benefits of antibiotic treatment against the potential for adverse effects.[119]

Sore throat

The benefits of treating a sore throat with antibiotics are small and may be outweighed by the disadvantages of antibiotics.[120] It also seems to be the case that patients who are prescribed antibiotics for sore throat are more likely than those who are managed without antibiotics to consult with the problem in the future.[121]

Acute cough

Patients with acute cough who are treated with antibiotics are twice as likely to suffer side effects as those treated with placebo: that is, about one in five suffer from side effects. Antibiotics do not significantly shorten the duration of the illness. This suggests that antibiotics offer no advantages over placebo in the treatment of acute cough.[122]

Acute bronchitis

Patients with acute bronchitis who are treated with antibiotics return to work or usual activities about one day sooner. Adverse effects such as nausea, vomiting, headache, skin rash or vaginitis were reported by 18% of patients treated with antibiotics, compared to 12% of those given placebo. The advantages and disadvantages of treatment are fairly evenly balanced.[123]

Musculoskeletal disorders

Back pain

In the care of patients with back pain, there is evidence that nurses following guidelines can provide superior outcomes to general practitioners.[124] Guidelines on acute back pain emphasise that bed rest should be avoided and pain treated with regular paracetamol or ibuprofen. They also emphasise the role of exercise to prevent recurrences or to treat chronic pain. It is recommended that physical activity is guided by setting goals (even if there is some discomfort) rather than to allow pain to restrict activities.[125] However, the recommendations of the guidelines with respect to clinical examination have been criticised as not evidence-based.[126] It is not clear whether acupuncture is effective in back pain.[127]

A needs assessment on low back pain in *Health Care Needs Assessment 2nd Series* provides a useful summary of effectiveness and cost-effectiveness material.[128]

Various musculoskeletal disorders

A range of rubefacients and simple analgesics are available without prescription for the relief of muscular pain. There is some evidence that ibuprofen may be more effective than opiates in the treatment of musculoskeletal pain.[129]

Naproxen 750 mg a day and aspirin 2000 mg a day seem to be of similar effectiveness in sports injuries.[130]

There is little evidence on the effectiveness of various interventions for shoulder pain.[131]

There is no evidence that patient education helps reduce pain in mechanical neck disorders.[132]

Menstrual disorders

A range of non-steroidal anti-inflammatory drugs (including ibuprofen) are effective in the treatment of dysmenorrhoea. Ibuprofen is thought to have the most favourable risk–benefit ratio. Paracetamol is probably less effective than the non-steroidal anti-inflammatory drugs.[133]

The progestagen-releasing intrauterine system (LNG IUS) is more effective at reducing menstrual blood loss than oral progestagen therapy administered from day 5 to 26 of the menstrual cycle. Oral progestagen therapy seems to offer no advantages over tranexamic acid or non-steroidal anti-inflammatory drugs.[134] Until recently, norethisterone was the most widely used treatment for menorrhagia and tranexamic acid the least widely used treatment, despite evidence suggesting the former to be ineffective and the latter effective.[135] Non-steroidal anti-inflammatory drugs (including ibuprofen) are more effective than placebo in the treatment of menorrhagia, although they seem to be less effective than tranexamic acid.[136]

There is insufficient evidence to be certain which treatments are effective in the premenstrual syndrome.[137]

A needs assessment on gynaecology in *The Health Care Needs Assessment 2nd Series* provides a useful summary of relevant effectiveness and cost-effectiveness material.[138]

Effectiveness of services for physical health problems

Reviewing the effectiveness data for all services available to address the physical health problems of prisoners would be an enormous task and is not within the scope of this review. Instead for each health problem appropriate reference material has been listed. The list of guidelines is by no means exhaustive and the guidelines themselves are constantly being updated and new ones being produced.

Epilepsy

Some indicators of sources of evidence are provided in **Appendix 4**.

Asthma

A number of widely accepted guidelines are available on the management of asthma. These are based on a mixture of evidence and expert recommendations. Further information on these is provided in **Appendix 4**.

Diabetes

There are a number of widely accepted guidelines, based on expert recommendations and some evidence, on the management of diabetes. Further information on these is provided in **Appendix 4**. In addition, the *Health Care Needs Assessment* series includes an epidemiological needs assessment of diabetes mellitus.

Ischaemic heart disease and cardiovascular risk factors

Raised blood pressure and raised cholesterol

Extensive evidence on the management of ischaemic heart disease and cardiovascular risk factors has been synthesised into a number of evidence-based guidelines. These have in common an increasing emphasis on estimation of the *absolute risk* of cardiovascular events and using this as a basis for the decision to treat. This can be summarised as follows.

Guidelines recommend that anyone whose systolic blood pressure exceeds 180 mmHg or whose diastolic blood pressure exceeds 105 mmHg should be treated irrespective of their estimated vascular risk. This is because in persons with very high blood pressure the estimated vascular risk may underestimate their true risk. In addition, any patient whose estimated annual risk of a vascular event is greater than 2% (10% five year risk), should be considered for treatment if their blood pressure is raised (i.e. over 140 mmHg systolic or 90 mmHg diastolic). There remains some doubt about whether lowering systolic blood pressure to below 140 mmHg (or diastolic to below 90 mmHg) confers any advantages.

The guidelines are similar for cholesterol-lowering drugs (statins). Guidelines recommend treating anyone whose estimated annual risk of a vascular event is greater than 3% (15% five year risk), provided their total cholesterol to HDL cholesterol ratio is average or above average. In addition, anyone with a total cholesterol to HDL cholesterol ratio of 8 or higher should be offered treatment, irrespective of their estimated vascular risk. This is because the estimated vascular risk may underestimate their true risk.

The approach that only patients in whom there is a reasonable chance that treatment may be offered should be screened has important implications for who should be screened for high blood pressure and raised serum lipids. The information in **Appendix 4** uses data on the prevalence of cardiovascular risk factors such as raised blood pressure and raised cholesterol to estimate the likelihood of encountering patients who need treatment in different age-groups. Among younger patients a very small proportion are at high risk of a cardiovascular event, whereas among older patients, a high proportion are at high risk. What this means in practical terms is that it is likely to be unproductive screening male or female prisoners under 40 for high blood pressure or raised cholesterol. Because a higher proportion of blacks have high blood pressure, it may be worthwhile screening black prisoners between the ages of 30 and 39.

Smoking cessation

Appendix 4 summarises some of the evidence for the benefits of interventions to assist smoking cessation.

Infectious diseases

Hepatitis B

Vaccination against hepatitis B is given as a course of three injections. Once completed it provides very effective protection against infection especially in younger people. Present Home Office recommendations are that this is offered to all prisoners (see **Box 5**).

Tuberculosis

On average, immunisation with BCG reduces the risk of tuberculosis by half.[139] Further sources of information on effective interventions for the control and treatment on tuberculosis are listed in **Appendix 4**.

Sexually transmitted diseases (STDs)

There is evidence that educational interventions targeting socially and economically disadvantaged women can, at least in the short-term, lead to reductions in risky sexual behaviour. The educational intervention included information provision and was complemented by sexual negotiation skill development. The focus of this research was reduction in the transmission of human papilloma virus to reduce the incidence of cervical carcinoma, however it has implications for the prevention of other sexually transmitted diseases.[140]

Special senses and disability

There is evidence that speech therapy is effective for treating stuttering and stammering.[141,142]

Pregnancy, maternity and postnatal care

There is evidence to suggest that women in custody may have better birth outcomes in terms of weight and risk of stillbirth.[143,144] This is thought to be because of lifestyle changes – improved diet, removal from domestic stresses, decreased consumption of alcohol and drugs and reduced smoking. In addition, another study has shown that women imprisoned for longer periods (over 120 days as opposed to fewer than 90 days) appear to benefit from better prenatal care, improved nutrition, and a structured environment and thus a more favourable perinatal outcome.[145]

Mother and baby units

A study by Catan in 1989[146] looked at the progress of babies in prison in mother and baby units. The development of unit babies was compared with babies separated from their imprisoned mothers and cared for in the community. Both groups of babies showed normal, healthy physical growth and their overall development fell within accepted norms. However, the babies who stayed in the units for four months or more showed a slight and gradual decline in locomotor and cognitive scores. When babies left the units, there was a significant increase in their general development scores, whereas the development of babies left outside remained stable over the follow up period.

Parent education

Outcomes of prison parenting programs in the US included improved self-esteem, behavioural expectations, empathy, discipline, family roles, relationships and a commitment to avoid substance use and reincarceration.[147]

Effectiveness of services for mental health problems

Personality disorders

An evaluation of the effectiveness of the therapeutic community approach for treating borderline personality disorder concluded that there has been a number of observational studies that showed potentially important clinical effects which may be associated with some savings to secondary care and prison services. However, the validity of the findings remained open to some doubt.[148]

Dialectical behaviour therapy may be of value to patients with personality disorders and judicious use of drug therapy (monoamine oxidase inhibitors, carbamazepine and neuroleptics) is likely to be beneficial.[149]

Functional psychoses

Schizophrenia

All antipsychotic medications are superior to placebo in the treatment of schizophrenia. They lessen positive symptoms and gradually diminish disturbed thought processes, but are not curative.[150] A group of drugs generally termed as atypical antipsychotic drugs (clozapine, risperidone, olanzapine and quetiapine) have a greater efficacy, especially for negative symptoms, and a better clinical response in patients than traditional antipsychotics.[150,151] At present beta-blockers as an adjunct to antipsychotic medication cannot be recommended in the treatment of schizophrenia.[152]

A review of the effects of cognitive behaviour therapy (CBT) for patients with schizophrenia found that for those who were willing to receive CBT, access to this treatment approach is associated with a substantially reduced risk of relapse.[153] However, the review highlighted that at present CBT is a rare commodity often provided by highly skilled and experienced therapists and therefore its application in day-to-day practice may be limited by the availability of suitable practitioners.

There is some evidence to support the use of electroconvulsive therapy (ECT) for patients with schizophrenia for short-term relief of symptoms. ECT may be advocated as an adjunct to antipsychotic medication for patients who show limited response to medication alone but the evidence for this is not strong.[154]

Neurotic disorders

As neurotic disorders are very common in the prison population, they have been addressed in some detail. Effective interventions for neurotic disorders are dealt with under three headings: prevention (mental health promotion), recognition (detection) and treatment. Since depression, or depression with anxiety, are by far the most common neurotic disorders, the focus has been on these. Mental health promotion consists of general measures to reduce the occurrence of a range of neurotic symptoms and neurotic disorders. Recognition of mental health problems focuses more on the identification of neurotic disorders, particularly depression. Treatment is partly dictated by the nature of the disorder itself and the patient's preferences. Nevertheless, there are some common elements, such as the need for a therapeutic alliance with a single key carer and the need to consider social and psychological aspects of the problem.

Prevention of neurotic disorders: mental health promotion

The national service framework for mental health[155] specifically identifies the value of promoting mental health in prisons. Strategies to achieve this include anti-bullying strategies, regular physical exercise and contact with family friends and the outside community.

Box 7: The three elements of crisis support.

- The presence of someone close in whom the person at risk may confide about the crisis event (e.g. conviction, sentencing or imprisonment).
- Active ongoing emotional support from the supporting person.
- During the period of support, no negative comments made by the supporting person about the person seeking help.

Adapted from: Brown (1992).[156]

Many prisoners' personal social circumstances and psychological histories mean that they are predisposed to depression prior to their arrival in prison. For most, imprisonment is a life event which has the potential to precipitate depression. There is evidence that in a situation where depression is likely, crisis support may be associated with a substantially reduced risk of depression.[156] There is also evidence that if crisis support is expected but not provided, patients are even more likely to become depressed than if it were not expected. The elements of crisis support are shown in **Box 7**.

Recognition of neurotic disorders

Recognition of depression is an essential prerequisite to establishing a therapeutic alliance between patient and carer. This therapeutic alliance is believed to be an important factor in aiding recovery.[157] It is also necessary to recognise depression before treatment can be initiated.

Depression is commonly missed, especially in patients with chronic physical disease, who are five times more likely to have their depression missed.[158,159] It is thought that up to 50% of patients with depression are missed.[160] It is therefore likely that this also holds true in the prison population. Detection and treatment of depression considerably improves the prognosis.[161,162]

The ability to detect emotional distress among patients is linked to specific interview skills. In brief these include making eye contact with the patient, clarifying the complaint, attention to verbal and non-verbal cues and asking specific psychiatric questions.[163] Recognition and diagnosis of depression can be carried out by all members of the primary health care team. It is possible to teach improved interview skills to primary care team members.[164]

Treatment of neurotic disorders

The great majority of neurotic disorders can be treated in a primary care setting. In the community this is usually the case. Drugs are the mainstay of treatment in the community despite some commonly used drugs having significant disadvantages (such as dependency). Where skills are available, psychological treatments (in particular cognitive behaviour therapy) and some effective pharmacological treatments (plant extracts) are available without prescription. There does not appear to be evidence that any particular professional is required for the recognition or treatment of neurotic disorders. It follows that appropriate skills may be more important than specific qualifications.

Depression

Both psychological and drug treatments are effective in the treatment of depression. **Table 80** illustrates the range of treatments and with their main advantages and disadvantages. The most effective approach to treating depression seems to be a combination of drug therapy and psychotherapy.[165]

There is good evidence that cognitive behaviour therapy is effective in the treatment of depression. It is of similar effectiveness to drug treatments or possibly more effective. There is also good evidence that interpersonal therapy is effective in the treatment of depression.[166–168] It is difficult to estimate the effectiveness of counselling services as many patients recover spontaneously. The best evidence of effectiveness comes from studies of counselling which incorporates modified versions of specific therapeutic models such as interpersonal counselling, exploratory therapy and behaviour therapy.

Antidepressant drugs are generally effective in treating depression and different types of antidepressants are equally efficacious[169,170] Antidepressant drugs are also effective in treating depressed patients who are physically ill.[171] In addition, extract of St. John's Wort (*Hypericum perforatum*) is more effective than placebo in the treatment of depression and patients report fewer side effects than with low dose antidepressants.[172,173] Because it is not classified as a drug, it can be sold over the counter and issued without a doctor's prescription.

Benzodiazepine drugs do not generally seem to be effective in treating depression.[174] In view of their addictive properties and potential for abuse it is recommended that they are not generally be used for depression.

A depressed patient is more likely to take treatment if he is educated about its potential side effects and the likelihood of success. If a treatment is going to be successful, the patient should have shown a 50% reduction in symptoms after a 4–6 week trial of medication or a 6–8 week trial of cognitive behaviour therapy or other therapy. The patient needs to be reassessed at this point: if there has been no response an alternative drug or therapy should be tried (i.e. a treatment from a different row in **Table 80**). If the patient does respond to treatment, it should be continued for a further 4–9 months.[166–168]

Dysthymia (chronic mild depression)

Antidepressant drugs are also effective in treating dysthymia (chronic mild depression). Again, there are no significant differences in effectiveness between different groups of drugs, such as tricyclic antidepressants, selective serotonin reuptake inhibitors (SSRIs) and monoamine oxidase inhibitors (MAOIs).[175]

It is not yet clear whether psychotherapy is effective in treating dysthymia and drug treatment has been recommended as the first line treatment.[166–168]

Generalised anxiety disorder and other neurotic disorders

There is evidence that generalised anxiety disorder, panic disorder (and dysthymia) can be effectively treated with tricyclic antidepressants, self-help or cognitive behaviour therapy. Benzodiazepines are less effective than these three approaches.[176,177] The self-help approach involves teaching procedures for managing somatic and cognitive symptoms and for dealing with avoidance and low self-confidence.[178] It may be relevant to the prison setting that there is some evidence that the self-help approach is less effective and antidepressants more effective in patients with personality disorders.[179]

Cognitive therapy is probably more effective in the long term than anxiety management training. However, treatment requires 8–10 individual sessions. Both cognitive therapy and anxiety management training seem to be more effective than psychodynamic (analytic) psychotherapy. Behaviourally based anxiety management can be carried out by health professionals after only brief instruction.[180] Anxiety

Table 80: The main types of effective treatments for depression.

Psychological treatments

Type of treatment	Advantages	Resource implications	Disadvantages
Therapeutic support: by GP or nurse	Beneficial effect in mild to moderate depression. Can be combined with drug treatment.	Individual counselling requires a lot of staff time and may not offer advantages over GP counselling or nurse follow-up. Requires minimal training and support for practitioners. Involves only small changes to usual practice.	
Non-directive counselling	Beneficial effect in mild to moderate depression. Can be combined with drug treatment.	Resource-intensive: ideally 8 to 12 one hour sessions. Can be carried out by clinical psychologists, nurses, doctors and other health professionals. Need to arrange for supervision of therapists.	May offer little advantage over therapeutic support by GP or nurse.
Cognitive behaviour therapy	Effective. Can be combined with drug treatment.		

Drug treatments

Type of treatment	Advantages	Resource implications	Disadvantages
Older tricyclic antidepressants (imipramine, amitriptyline, clomipramine etc.)	Effective.	Imipramine £2 a month. Amitriptyline £2 a month. Clomipramine £10 a month.	Side effects such as dry mouth, constipation and sedation. May be fatal in overdose. Often prescribed in inadequate doses.
Newer tricyclic antidepressants and similar (mianserin, lofepramine etc.)	Effective. Generally better tolerated than older tricyclic antidepressants.	Lofepramine £10 to £15 a month. Mianserin £10 to £15 a month.	Side effects such as dry mouth and constipation are less frequent than with older tricyclic antidepressants. Not commonly fatal in overdose. Sometimes prescribed in inadequate doses. Patients on mianserin require monthly blood counts.

Table 80: Continued.

Drug treatments

Type of treatment	Advantages	Resource implications	Disadvantages
SSRIs (fluoxetine, citalopram, fluvoxamine, paroxetine, sertraline etc.)	Effective. Adequate doses are generally prescribed. Generally better tolerated than older tricyclic antidepressants.	Fluoxetine £21 to £42 a month. Citalopram £21 to £42 a month. Fluvoxamine £19 a month. Paroxetine £21 to £31 a month. Sertraline £26 to £40 a month.	Side effects such as agitation, sleeplessness, nausea and diarrhoea. Dangerous interaction with MAOIs if one is prescribed at the same time as or within two weeks of stopping the other.
St. John's Wort (*Hypericum perforatum*)	Effective. Not legally classified as a drug: can be bought over the counter and could be issued without a doctor's prescription. Low incidence of side effects.	Cost varies with source, generally £10 to £20 per month.	Side effects are very infrequent, similar to SSRIs. Believed to be safe in overdose. Possibly similar dangerous interaction with MAOIs and SSRIs.
MAOIs (moclobemide, phenelzine)	Effective.	Phenelzine £6 a month. Moclobemide £16 to £32.	Dangerous interaction with SSRIs (see above). Dangerous interaction with decongestant medications and certain foods: cheese, pickled herring, yeast extract and broad bean pods. Dietary interactions less of a problem with moclobemide

management can also be effectively organised for groups of six to eight patients.[181] The advantages and disadvantages of different approaches to treating anxiety are summarised in **Table 81**.

Table 81: Treatments for neurotic disorders such as generalised anxiety disorder, panic disorder and dysthymia.

Intervention	Effectiveness	Resource implications	Personnel and training implications
Benzodiazepines	Effective, but less so than antidepressants. May lead to dependence. Commonly relapses after discontinuation.	Inexpensive. Drug costs are very low.	Requires prescription by medical practitioner.
Antidepressants	Effective. May be more effective in patients with personality disorder. Commonly relapses after discontinuation.	Depends on choice of drug: tricyclics are inexpensive, SSRI more expensive (£12 to £150 for 6 months' treatment).	Requires prescription by medical practitioner.
Cognitive behaviour therapy	Effective. In the long term this may be the most effective approach.	Individual therapy: 8–10 therapist hours (approximately £400 to £500) per patient. (One hour a week over 8–10 weeks.)	Following appropriate training can be carried out by various health professionals. Supervision arrangements are necessary.
Self-help (anxiety management training)	Effective. May be less effective in patients with personality disorder.	Group therapy possible: $1\frac{1}{2}$ therapist hours (approximately £75) per patient. (Six to eight patients per group, $1\frac{1}{2}$ hours a week for 6 weeks.)	Some therapist training is required.
Psychodynamic (analytic) therapy	Relatively ineffective.	Individual therapy: 8–10 therapist hours (approximately £400 to £500) per patient. (One hour a week over 8–10 weeks.)	Extensive training is required although this can be undertaken by various health professionals. Supervision arrangements are necessary.

Antidepressants (tricyclic antidepressants, SSRIs and MAOIs), benzodiazepines and cognitive-behavioural treatments all are more effective than control treatments. Cognitive-behavioural treatments seem to be the most effective. Benzodiazepines have the disadvantage of dependence.[182] For many anxiety-related conditions, the benefits of drug treatment may cease when medication is withdrawn. This means that psychological treatments may offer significant long-term advantages.[166]

Obsessive-compulsive disorder

Psychological treatments which include exposure to the trigger stimulus and prevention of the compulsive response are effective in the treatment of obsessive-compulsive disorder. This essentially means that

treatment should include elements of behavioural therapy. Psychological treatments which do not include exposure and response prevention are not effective.[183,184] Improvements after behaviour therapy seem to be maintained in the long term.[185]

Obsessive-compulsive disorder can be effectively treated with clomipramine (a tricyclic antidepressant which has some effects on serotinin reuptake) and the selective serotinin reuptake inhibitors (SSRI). It is not clear whether there is a difference between these drugs on effectiveness grounds: they are either equally effective or clomipramine may be more effective.[186,187] A month's treatment with clomipramine is considerably less costly than a typical SSRI (£10 versus £21 to £63).

Relapse is common after discontinuation of drug therapy and long-term outcomes are clearly better with behaviour therapy (exposure and response prevention).[166]

Treatment of neurotic symptoms: insomnia

A number of effective non-drug treatments for insomnia are listed in **Box 8**. Stimulus control therapy consists of instructions designed to curtail sleep-incompatible behaviours and to regulate sleep-wake schedules. Sleep restriction therapy involves curtailing the amount of time spent in bed to time actually spent asleep (i.e. patients are encouraged to get up if they cannot sleep). Relaxation therapies include progressive muscle relaxation, biofeedback and meditation. They are intended to alleviate somatic or cognitive arousal. Paradoxical intention involves persuading the patient to engage in their most feared behaviour (staying awake) to induce sleep. Sleep hygiene education means the regulation of health and environmental factors that may be detrimental or beneficial to sleep.

Box 8: Non-drug treatments for insomnia.

- Relaxation approaches incorporating progressive muscle relaxation.
- Meditation.
- Desensitisation.
- Imagery.
- Hypnosis and autogenic training.
- Stimulus control.
- Paradoxical intervention.
- Sleep restriction therapy.
- Combination treatment: consisting largely of composites of stimulus control and relaxation.

One review concluded that psychological interventions were effective in reducing the time taken to fall asleep, increasing the length of time asleep, reducing awakenings and improving the quality of sleep. The improvements were both short-term and long-term. Insomniacs who were *not* using sleep medications seemed to benefit more from these approaches than those who were users.[188]

A second review of non-drug treatments for insomnia found that psychological interventions averaging 5 hours of therapy time produced reliable changes in two of the four sleep measures (sleep onset latency and for time awake after sleep onset). Stimulus control was the most effective single therapy procedure. The review concluded that although psychological treatment may be more expensive and time-consuming than pharmacotherapy, the current data indicate that it may prove more cost-effective in the long term.[189]

Hypnotic drugs and anxiolytics are effective in the short-term treatment of insomnia. Prescribing of these drugs is widespread but dependence and tolerance occurs. This may lead to difficulty in withdrawing the drug after the patient has been taking it regularly for more than a few weeks.[190]

Prevention and treatment of post-traumatic stress disorder

Although debriefing is widely practised, there is no current evidence that psychological debriefing is a useful treatment for the prevention of post traumatic stress disorder after traumatic incidents. The accumulated evidence to date suggests that psychological debriefing may increase the numbers who suffer from post-traumatic stress disorder one year after the event.[191]

There is some evidence that psychological and pharmacological treatments for post-traumatic stress disorder are more effective at reducing symptoms than placebo. Behaviour therapy and eye-movement desensitisation and reprocessing seem to be effective psychological treatments. There is no evidence that biofeedback-guided relaxation, dynamic psychotherapy or hypnotherapy are effective. Evidence for the effectiveness of pharmacological treatments is most convincing for SSRIs. These are used in relatively high doses (e.g. fluoxetine 60 mg). There is some evidence that carbamazepine may be effective. There is no evidence that tricyclic antidepressants, monoamine oxidase inhibitors or benzodiazepines are effective.[192]

Effectiveness of services for self-harm and suicide

A number of systematic reviews evaluating the effectiveness of interventions aimed at preventing suicide and self-harm have been published in recent years.[193–195] A review by Hawton *et al*[195] concluded that there remains considerable uncertainty about which forms of psychosocial and physical treatments of self-harm patients are the most effective.

An approach in the USA to preventing suicides among inmates has reduced suicides in New York City's jails to five or fewer each year. Prisoners, who are paid 23 pence an hour, act as monitors keeping an eye on fellow prisoners most at risk of suicide. Selected inmates are specially screened, trained and tested before they become observation aides. Prison officers also have suicide prevention training and mental health staff play a big role.[196]

Effectiveness of services for alcohol misuse

A report on the effectiveness of brief interventions in reducing harm associated with alcohol consumption[197] concluded that:

- simple screening instruments are available for the routine detection of people drinking harmful levels of alcohol which can easily be applied opportunistically in both primary and secondary care health settings. These include the validated AUDIT questionnaire which initial estimates indicated detection levels of 92% of harmful or hazardous drinkers (sensitivity) and identification of 94% of people who consume below the harmful levels (specificity)[198]
- brief interventions consisting of assessment of intake and provision of information and advice are effective in reducing alcohol consumption by over 20% in the large group of people with raised alcohol consumption. However, it is not clear how this translates into changes in health status
- evidence from clinical trials suggests that brief interventions are as effective as more specialist treatments (counselling/therapy sessions, skills training etc.)

Pharmacotherapy for alcohol dependence

A review of the evidence for the efficacy of pharmacotherapy for alcohol dependence found the following:[199]

- **Disulfiram:** There is little evidence that disulfiram enhances abstinence, but there is evidence that it reduces drinking days. Studies of disulfiram implants are methodologically weak and generally without good evidence of bioavailability.
- **Naltrexone:** There is good evidence that naltrexone reduces relapse and number of drinking days in alcohol dependent subjects. There is some evidence that it reduces craving and enhances abstinence and there is good evidence that it has a favourable harms profile.
- **Acamprosate:** There is good evidence that acamprosate enhances abstinence and reduces drinking days in alcohol dependent subjects, there is minimal evidence on its effects on craving or rates of severe relapse and there is good evidence that it is well tolerated and without serious harms.
- **Serotonergic agents:** There is minimal evidence on the efficacy of serotonergic agents for treatment of the core symptoms of alcohol dependence but there is some evidence for the treatment of alcohol-dependent symptoms in patients with co-morbid mood or anxiety disorders, although data are limited.
- **Lithium:** There is evidence that lithium is not efficacious in the treatment of the core symptoms of alcohol dependence. There is minimal evidence for efficacy of lithium for the treatment of alcohol-dependent symptoms in co-morbid depression.

A Health Care Needs Assessment on Alcohol Misuse in the *Health Care Needs Assessment series* summarises the effectiveness of services available to address alcohol misuse.[200]

Effectiveness of services for drug misuse

The Department of Health has published evidence based guidelines on the Clinical Management of Drug Misuse and Dependence in 1999.[201] The guidelines have been written with a particular focus on generalist practitioners.

A Health Care Needs Assessment on Drug Abuse in the *Health Care Needs Assessment series* summarises the effectiveness of services available to address drug misuse.[202]

Effectiveness of health promotion

There is very little evidence on the effectiveness of health promotion interventions in a prison setting. Some published research literature does exist, much of it related to HIV and drug education. Useful unpublished reports of individual initiatives can also sometimes be accessed, but many – like most of those described in the Directorate of Health Care's 1998 *Good Practice Guide to Health Promotion in Prisons* – have not been rigorously evaluated.

Looking to the literature of a more general nature which could be drawn upon, a majority of health promotion initiatives which have been evaluated/written up are based on poorly designed research and evaluation, and are in the main descriptive. Indeed, health promotion in general does not routinely have access to the funding and expertise for comprehensive evaluative research. Nevertheless, research-based knowledge is available, such as meta-analyses produced by the NHS Centre fore Reviews and Dissemination at the University of York on various topics of relevance to prisons, e.g. 'Smoking Cessation: what the Health Service Can Do', with advice on what works best in the wider community, and which could be

adapted to the prison setting.[203] Similarly there is more general research which could be adapted in publications such as the *Health Education Journal* and specialist journals such as *Addiction*. A King's Fund literature search carried out in 1998 and going back five years found 45 references for 'prisons and health promotion', the majority about HIV and drug use. However, a further search 'evaluation/effectiveness of health promotion' was so extensive it needed to be restricted to 1998 to be manageable, covering a variety of topics as well as evaluation in general (carried out by Paul Hayton).

A literature review[204] commissioned by the Directorate of Health Care in 1998 recorded that, 'Common characteristics have emerged from this review that appear to increase the effectiveness of health promotion. Their transferability to the prison setting have not been adequately demonstrated through existing identified research.' Nevertheless, the same factors that characterise effective health promotion interventions in other settings were considered likely to render health promotion in prisons more effective. The main features of effective health promotion interventions are described in **Box 9**.

Box 9: Features of effective health promotion interventions.

Effective health promotion interventions:

- are strategic and comprehensive with multiple rather that individual initiatives
- occur in a supportive environment through addressing organisational, policy and structural issues
- are needs-based
- are appropriate to the target group
- actively involve participants
- use peer support or are peer-led
- give basic information relevant to the needs and concerns of the target group, although giving information alone is rarely sufficient to change behaviour
- address self-esteem, values and life-skills training
- are ongoing: effectiveness appears to decline over time once the intervention ceased.

7 Models of care and recommendations

The role of health care needs assessment

The need for health care should be the central consideration when planning health care services in prisons. By need we mean the prison populations' ability to benefit from health care. Planning on the basis of need requires assessment of the health care needs of the prison population and because different prisons have different problems, these should be *local* assessments of need. In the short term, it may seem easier to simply adapt services which are currently available in the light of present demands. However, this does not constitute needs-based planning and where possible should be avoided.

The range of health problems experienced by prisoners

The prison population, on the whole, is a population of young adults. Many of the needs of prisoners are the same as those of any population of young adults. Prisoners therefore need access to the full range of services, ranging from informal care and primary care through to highly specialised interventions, which are available to young adults in the community.

Special circumstances of the prison setting

A number of special circumstances affect the delivery of health care in a prison setting and should be considered in addressing the health care needs of prisoners. Ethnic minorities are over-represented in prisons and many prisoners have had little formal education. Services need to be sensitive to the special needs of patients from these groups. Prisons isolate inmates from their families and social networks. This has important implications for the degree of informal support available to prisoners. Self-harm and suicide are not uncommon among prisoners. Because of this and because of the occurrence of drug misuse on the prison wings, prisoners cannot be given open access to medications which are freely available in the community. The culture which prisoners are drawn from and indeed the culture of prisons themselves does not always place a high priority on health concerns. There are a range of problems related to the primacy of security in a prison setting and the high turnover of the prison population.

Co-operating with the NHS also presents a range of problems. The transfer of patient records from NHS to prisons and from prisons to the NHS is by no means easy. Finally, there can be considerable problems transferring patients from prison to NHS facilities during or at the end of their sentences. Many problems are attributable to issues related to areas of residence. In addition, NHS facilities are responsible for residents within defined geographical areas, but the district of residence of prisoners can be difficult to pin down.

Incidence and prevalence of health problems

Prisoners are heavy users of primary care. Although direct data on the reasons for primary care consultations among prisoners is lacking, it is likely that the commonest reasons for consultation are similar to those among young adults in the community. This suggests that minor illnesses and other problems dealt with at the level of primary care are the commonest reasons for prisoners using health care. In the terminology of needs assessment, minor illnesses and other primary care problems are the largest *demands* on the health care services. However, most minor illnesses are (by definition) self-limiting. In some cases, medical treatment is as likely to do harm as to improve the outcome. In those cases where there is effective treatment, this is often available without a doctor's prescription. In needs assessment terminology, there is little *need* for health care for minor illnesses and in those cases where there is need it may be most cost-effective for patients to access it themselves.

In the prison setting mental health problems are very common. Of these, neurotic disorders such as depression and anxiety are by far the most prevalent. There are effective interventions for all the common neurotic disorders. In other words, the greatest health care *needs* among prisoners are services for mental health, whereas the greatest health care *demands* are for the treatment of minor illness.

Health services

Where evidence of effectiveness for services is available, those services that are provided should be those that are effective. Services which are known to be ineffective should not be provided. In addition, where there is cost effectiveness information, the most cost-effective services should be chosen. In many cases there is no direct evidence of the effectiveness or cost-effectiveness of health care services in prisons. In all cases, it is reasonable to try to provide effective services equivalent to those found in the community.

The relationship between informal and formal health care

Male and female prisoners respectively consult primary health care workers 77 and 197 times more frequently and prison doctors three times more frequently than young adults in the community. However, since prisoners do not suffer from over 70 times as much minor illness as young adults in the community, it follows that community populations deal with much minor illness without using the formal health services. This difference is not surprising: prisoners have good access to primary health care and face a number of barriers to informal care. Lack of access to informal care diverts prisoners into the formal health care system. **Figure 28** illustrates this problem. To address this, specific efforts should be made to identify barriers to informal methods of care and strategies should be developed to promote informal care and to encourage prisoners to make use of it. Alongside this it is probably reasonable to use an appointments system to regulate access to the formal health care system. Approaches to the problem of informal care are discussed in **Appendix 6**.

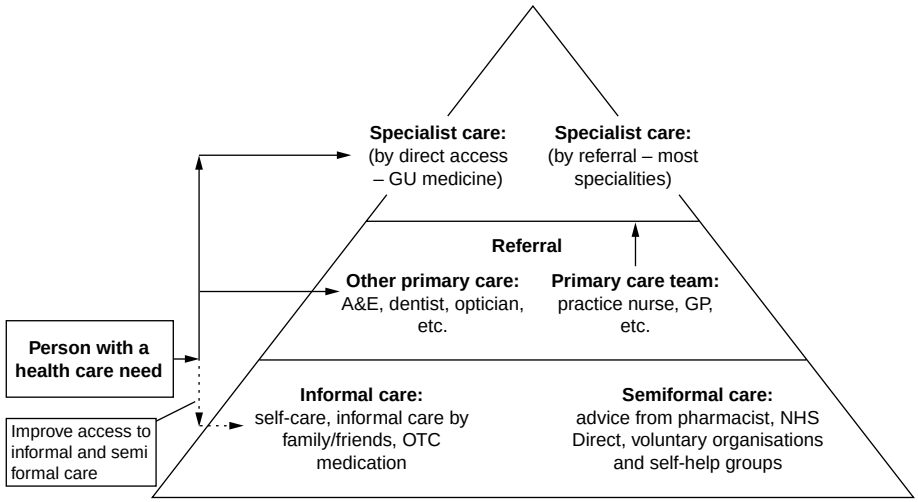


Figure 28: Providing services to prisoners similar to those available to a person in the community.

The use of in-patient beds

Prisoners have access to the full range of NHS beds. Their admission rates to NHS beds are slightly lower than admission rates for young adults in the community. This is not surprising, since imprisonment makes access to NHS hospital beds more difficult and health care staff are likely to have a higher threshold for

hospital admission. It is likely that the pattern of admissions differs to that in the community, since some health problems (traumatic injuries and road accidents) are less common in prisoners and others (mental health problems) are more common.

Prisoners also have access to a large number of health care centre beds in prisons. These amount to 29 hospital beds per 1000 inmates, i.e. around six times the per capita number of hospital beds available to the UK population as a whole. Because prisoners have easy access to such a large number of hospital beds, admission rates are very high. Women prisoners are admitted 16 times more frequently to health care centre beds than young women in the community; inmates in local prisons are admitted 14 times more frequently; young offenders nine times more frequently; and inmates in training prisons twice as frequently. These are very high admission rates. A small proportion of admissions are for reasons which are not frequently encountered in the community. These include sanctuary (to avoid bullying) and for supervision following self-harm.

While there is no doubt that there is *demand* for health care centre beds, it is not clear whether this is always the most appropriate or cost-effective way of meeting health care *needs*. For example, there does not seem to be a need for 'cottage hospital' facilities for young adults in the community. Young adults with physical and mental health problems are managed either in NHS hospitals or at home. Relying on in-patient health care also inhibits the development of community-based health care. If the management of prisoners with health care problems includes removing them from the prison wings, this means that health care may be seen as solely the responsibility of the health care centre. This is inimical to fostering a prison culture which puts a concern for health at the centre of all prison life.

It is difficult to make specific recommendations with regard to the provision of health care centre beds. Undoubtedly the provision of in-patient beds in prisons should be reviewed. It is likely that provision should be reduced. This is likely to be easiest in those prisons were occupancy rates are not high (see **Appendix 5** for further information).

Communication

In many cases communication between NHS and prison health services is far from ideal. The national service framework for mental health emphasises the need to involve health and local authorities in preparation for release of prisoners: this is no less true of prisoners with other kinds of chronic health problems. Any review of services should review communications between NHS facilities and prison services. Procedures should be in place to facilitate communication about individual patients, about changes in policy and about public health issues such as outbreaks of communicable disease.

Training and professional development

The quality of health care is critical and is dependent on the skills of health care professionals. Any changes in health care services or policy must be supported by appropriate training. This is equally true of informal as of formal health care. This needs assessment has identified the lack of informal care as a key problem in the delivery of prison health care. This needs to be addressed by the provision of training and information for prison inmates. While it may not be realistic to provide training for prisoners, it is entirely possible to provide information on the more common minor illnesses, guidelines on how to manage them and guidelines on how to make use of the prison health services.

As there is evidence that professions allied to medicine can successfully manage a range of conditions by following guidelines, there is also a case for developing locally agreed guidelines for the management of minor illness. These can also encourage consistency in the management of minor illness. If brief outlines of the guidelines were included in the information provided to prisoners, they could also promote individual responsibility and shared care.

This document has also identified neurotic disorders as a particularly great health care need among prison inmates. The identification and management of neurotic disorders can be improved with training. This suggests that training in the management of neurotic disorders should be given a high priority for all prison health care staff.

8 Outcome measures

A number of health problems are common in all prisons and some general recommendations can be made about the provision of health care services to meet the health care needs created by these problems. However, since many health care problems of prisoners vary from one prison to another it is not possible to make recommendations about the total provision of health care services in all prisons.

Health promotion

A 'settings' or 'whole institution' approach to health promotion should be adopted and developed with support of local NHS health promotion specialists, considering the needs of both staff and prisoners. Links should be made to initiatives and documents of the Prison Health Promotion Development Project and the WHO (Europe) Health in Prisons Project – both of which can be contacted through the Directorate of Health Care or via the Project website (www.euro.who.int/prisons).

Prisons have a unique ability to control the occupational and dietary regimes of their inmates. Advice should be sought from appropriate specialists (in particular occupational therapists and dieticians) on how to organise the prisons main regime to optimise prisoners' health.

Primary care trusts and public health departments who have experience in promoting health and well-being should be contacted. Health promotion is not just the concern of health care staff, other prison workers should also be encouraged to be actively involved in providing a 'health promoting' environment. Health promotion should concentrate on areas appropriate to the prison population. In addition, efforts should be made to encourage prisoners to adopt healthy lifestyles by means of health promotion and illness prevention initiatives.

Physical health problems

A system should be in place to allow all prisoners with chronic illnesses such as epilepsy, asthma and ischaemic heart disease to be identified. In most cases it will be helpful to contact their general practitioners to confirm the diagnosis and any other related problems and to establish what medications they are taking. All prisoners with chronic illnesses should be reviewed by appropriate specialists and treated following evidence-based guidelines.

Cardiovascular risk factors

In the absence of specific indications (such as diabetes or pre-existing ischaemic heart disease), prisoners under 45 should not routinely have their cholesterol levels checked. Few will be at sufficiently high risk to be treated. In the absence of specific indications (such as diabetes or pre-existing ischaemic heart disease),

white prisoners under 45 should not routinely have their blood pressure checked. Although a small number will have raised blood pressure, few will be at sufficiently high risk to be treated.

Black prisoners are an exception to this rule. Black prisoners over 30 should have their blood pressure checked because of the high prevalence of raised blood pressure in the black population.

Infectious diseases

Immunisation against hepatitis B should be offered to all prisoners and uptake should be actively encouraged.

Patients consulting with suspected sexually transmitted diseases should be seen by a genito-urinary medicine specialist and should be offered health education (either by video or face to face) on risk factors for sexually transmitted diseases.

Special senses and disability

A system should be in place to identify prisoners with disabilities including speech and language difficulties. They should be offered appropriate advice and support.

Mental disorders

In 2001, Prison Health (the Department of Health) published *Changing the Outlook: a strategy for developing and modernising mental health services in prison*. This document sets out a 3–5-year vision for prison mental health services.

The underlying ethos of the prison mental health programme has always been that NHS services should be 'mainstreamed' into prisons, in other words, the same standards of care should be available to prisoners as to people living in the community. Reflecting this mainstream approach, responsibility for implementing the prison mental health programme passed from the Department of Health to the National Institute for Mental Health in England (NIMHE) in 2003. Just as NIMHE is supporting NHS Trusts and PCTs to implement the National Service Framework for Mental Health, so it will support the prison service.

Functional psychoses

An improved system should be developed for the identification of patients with serious mental illness. All such patients should be managed using a care programme approach. If necessary, staff should undergo training in the care programme approach to mental health care.

Neurotic disorders

The primary health care team should undergo systematic training in the detection and management of depression. This should be repeated on a regular basis to allow for turnover of staff.

Psychological therapies are very underused in prisons. Prisons should get access to these skills either by contracting in a clinical psychologist or by nominating and training existing staff in the use of behaviour therapy, cognitive behaviour therapy and anxiety management training.

Creating some supportive social networks within the prison community is likely to be important in the prevention of mental health problems. In the first place the health service should have a register of all those prisoners at risk of mental health problems. This includes all prisoners in the first four weeks after

reception (and in some cases after sentencing), all young prisoners and all prisoners whose mental health continues to be a concern. It is unrealistic to expect health care staff to have time to build up relationships with these prisoners. However, each could be allocated to and encouraged (at least once) to meet with a named prisoner in a 'befriending' or 'listening' scheme.

Prisoners at high risk of mental health problems should be offered crisis support. Those at high risk are those with known mental health problems who are considered a suicide risk and any others who become known to the health services or 'befriending' scheme. In theory crisis support can be provided by a health professional or prison officer, but as 24-hour access is required it may be more practical for this to be provided as an extension of a 'befriending' or 'listening' scheme. The Ranby Care Support Scheme combines 'befriending' with 'shared accommodation'. However, if this is not practical, it may be possible to use alternative approaches. These include providing wing staff with 24-hour access to a list of prisoners and their befrienders or during periods of personal crisis, providing a mobile phone with access to the befrienders pager or mobile phone (and access to other numbers blocked).

The Prison Service has produced guidelines on how to set up and monitor such schemes in the document *Caring for the Suicidal in Custody: involving prisoners*. Further advice is available from the Suicide Awareness Support Unit or the Samaritans' Prison Liaison Officer. Not every prisoner will be able or willing to use a 'befriending' scheme or crisis support. Alternatives should also be made available, such as access to the Samaritans.

Prisons should run group courses in anxiety management training and behavioural interventions for insomnia. These should be led by prison staff who have themselves undergone training in behaviour therapy for groups.

Self-harm and suicide

An Effective Health Care Bulletin[96] builds on the review by Hawton *et al.*[195] evaluating the effectiveness of interventions following deliberate self-harm. This review also considers the research evidence on the characteristics of an effective clinical service for the assessment and aftercare of people who present following an episode of deliberate self-harm. The authors note that most research has been conducted on deliberate self-poisoning rather than other forms of self-harm such as cutting. The Effective Health Care bulletin suggests a number of recommendations for practice. These are listed in **Box 10**.

Box 10: Recommendations for the management of self-harm.

Assessment

- All hospital attendance following deliberate self-harm should lead to a psychosocial assessment. This should aim to identify motives for the act and associated problems which are potentially amenable to intervention such as psychological or social problems, mental disorder and alcohol and substance misuse.
- Staff who undertake assessments should receive specialist training and have supervision available.

Intervention

- There is insufficient evidence to recommend a specific clinical intervention after deliberate self-harm.
- Brief psychological therapies such as interpersonal therapy and problem solving therapy are effective in the treatment of depression in similar clinical settings, and the latter has been shown to have benefits after self-harm.

Aftercare

- Direct discharge from A&E should only be contemplated if a psychosocial assessment and aftercare plan can be arranged in A&E prior to discharge.
- Aftercare arrangements should include the provision of verbal and written information on services available for people who are contemplating self-harm.

General

- GPs should have ready access to training and advice about the assessment and management of self-harm patients.
- Accessible and comprehensive services will need a mechanism for engaging people who do not attend routine clinic appointments. Access to follow-up needs to be rapid.
- Service providers should work to improve attitudes towards self-harming patients.

Source: Effective Health Care Bulletin, *Deliberate Self-harm*, Dec 1998, Vol 4, No. 6, NHS Centre for Reviews & Dissemination.

Alcohol and drug misuse

Alcohol misuse

Primary care staff should be trained in the use of screening tools for the identification of prisoners with alcohol problems. Protocols should be in place for the management of acute alcohol withdrawal and for referral of prisoners with alcohol problems to appropriate services prior to discharge.

Drug misuse

Protocols should be in place for the management of acute drug withdrawal and for referral of prisoners with drug problems to appropriate services prior to discharge. A framework for the provision of a drug treatment service has been drawn up by PDM Consulting Limited after a comprehensive evaluation of drug treatment in prisons (see **Table 82**).[98] These are in line with treatment guidelines issued by the Department of Health.

Table 82: Framework for provision of Drug Treatment Service (*Source*: PDM Consulting Ltd, 1998).[98]

Service type	Location	Time in sentence	Intensity	Threshold	Supervision	Tolerance
Voluntary testing unit	All prisons B, C, D, including Women's, YOI and high security	Any time	Low	Medium	High	Low
Drug worker offering: time-limited, sessional, group and individual counselling, education and advice; assistance with assessments and applications for treatment in prison and in community; aftercare; and release planning		Any time	Low	low	Low	High
Basic detoxification services and longer-term prescribing	Local/remand prisons	Early	Low	Low	High	High
Drug and HIV/hepatitis awareness and education for all prisoners		Early	Low	Low	Low	High
Detoxification centres with NHS specialist input methadone maintenance	Local/remand on area basis	Early	Low	Low	High	High
8–12 week programmes, using group work. Participants located either on a residual unit or on a VTU. Models include 12-step and cognitive-behavioural programmes	Area basis Category B and C. Including Women's, YOI & High Security	Early or late*	Medium	Medium	High	Medium
12 month rehabilitation programmes – therapeutic communities	National basis Category B & C, Women's, YOI	Late	High	High	Medium	Low

* Some programmes should aim at harm minimisation and relapse prevention in the prison setting; these should be targeted at prisoners early in their sentence. Other programmes should be aimed at pre-release planning, living without drugs, personal relationships etc. These would be best suited to prisoners in the last year of their sentence.

Notes:

Intensity: intensity of the programme content, the demands placed on participants and the period of time spent in therapeutic contact.

Threshold: the lower the threshold, the lower the requirements for entry. High threshold programmes have strict criteria for admission.

Supervision: frequency of urine testing degree of segregation from other prisoners. A high level of supervision consists of weekly urine testing and strict segregation. A medium level may be monthly testing and strict segregation; or more frequent testing and a lesser degree of segregation.

Tolerance: action taken on a urine test positive for drugs. A programme with a low tolerance would dismiss prisoners instantly. A programme with a high tolerance may operate a policy of dismissal after three positive test, for example.

9 Information and research requirements

There are a number of areas where research is a priority.

Higher primary-care consultation rates

Prisoners make much greater use of primary care services than equivalent populations in the community. One important area for research is to determine what the main reasons for these higher consultation rates. This requires collection of routine data on the reasons for prisoners' consultations.

Following this, research should be directed at finding interventions to address prisoners' high demand for primary health care. This might involve greater use of informal care; greater access to over the counter medications; or use of primary care staff other than physicians.

Management of chronic diseases

A number of chronic diseases (mental health problems, epilepsy, asthma, diabetes) are common within the prison population. Research should be directed towards improving the identification and systematic management of these patients. Current models for chronic disease management in primary care emphasise the need for disease registers and active case management.

Co-ordination of care within and outside the prison sector

Research should investigate ways of improving communication of health information between prisons and from within to outside prison sector. This may involve shared records or the use of information technology.

Monitoring the prevalence of risky behaviour and bloodborne viral infections

There should be continuing monitoring of the prevalence of bloodborne viral infections in the prison population.

Assessment of the prevalence of disorders of the special senses

The prevalence of hearing, speech and language problems should be assessed in the prison population.

Appendix 1: The Initial Interview Questionnaire: a screening tool for speech and language problems

Initial interview questionnaire

1 The client is seen individually.
2 Social greetings are exchanged.
3 The client is asked for his name and number and these are recorded on the Assessment Sheet.
4 Throughout the interview he is called by his first name.
5 The Speech and Language Therapist introduces herself and describes her role, in terms of total communication.
6 The client is asked if he is willing to answer any questions about speech, language and communication.
7 If this is agreed, the following questions are asked:
   (a) Do you have any problems with hearing?
   (b) Do you lack any rhythm in speech, do you stammer or stutter over words?
   (c) Do you have any problems understanding what is said to you?
   (d) Do other people understand what you say?
   (e) Do you think you have any memory loss associated with drug abuse or accident, which has affected your ability to think, speak and communicate?
   (f) Have you ever had an accident to the face, head or throat which has affected your speech and communication?
   (g) Can you read, write and spell easily?
   (h) Do you think you have any problems with:
   speech
   language
   communicating with other people?

If any question evokes a response which needs expansion, these are elaborated and discussed as the questionnaire is administered.

(Time taken: 3–5 minutes)

Source: *A Review of Communication Therapy with Young Male Offenders: internal report.*[54]

Appendix 2: Services available for the management of physical health problems in the community

Epilepsy

Diagnosis

The diagnosis of epilepsy is usually made by a neurologist on the basis of a history of more than one epileptic seizure. A number of investigations – electroencephalograms (EEG), brain imaging scans (computerised tomography or magnetic resonance imaging) – may also be carried out.

Self-management

Many aspects of the management of epilepsy require the patient to engage in appropriate self-care. This includes avoiding situations which they know may bring on a seizure, for example, lack of sleep, too much alcohol, emotional upsets or non-compliance with medication. It also involves an awareness of the hazards of seizures and recognition of the pre-ictal aura (which gives warning of a seizure). Occupational activities and general education are also important because of the effects of epilepsy on self-confidence and because of the occurrence of mental retardation in some patients with epilepsy.

Treatment

The mainstay of epilepsy management is drug treatment, usually with one of the first-line drugs such as sodium valproate, carbamazepine, phenytoin or ethosuxemide. Some patients require more than one medication. Patients also receive education about the side effects and interactions of these drugs (such as their interaction with the oral contraceptive pill), regular follow-up and monitoring of drug levels. This follow-up may be provided either by a neurologist, a specialist epilepsy nurse or a general practitioner.

Patients with epilepsy are also frequently referred to a psychiatrist for assessment, in particular if they are also affected by mental retardation.

Emergency treatment

In cases where seizures become very prolonged or repeated seizures occur, patients require intravenous diazepam, followed by transfer to hospital.

Other treatments

The National Society for Epilepsy report that complementary therapies such as relaxation, aromatherapy, acupuncture, bio-feedback and ketogenic diets have been used to help people with epilepsy to complement drug treatment. Vagal nerve stimulation (mild electrical stimulation of the vagus nerve) has received some interest in the UK for the treatment of epilepsy. In addition a small minority of patients with epilepsy are helped by neurosurgery.

Asthma

Self care

Most day-to-day management of asthma is by patients themselves. This involves the avoidance of known allergens (such as grass pollen), monitoring of symptoms and sometimes of peak expiratory flow rate (using a Wright's peak expiratory flow meter) and adjustment of medications. For this to be successful, patients need knowledge of the uses of their medications and the distinction between those inhalers which relieve symptoms (mainly salbutamol) and those which prevent the occurrence of symptoms (inhaled steroids such as beclomethasone). They also need training in inhaler technique. Patients who smoke should be offered support to give up smoking, such as smoking cessation programmes or nicotine replacement therapy.

Primary care management of asthma

Asthma is normally diagnosed, treated and followed-up in a primary care setting. The most widely followed guidelines for asthma advocate a stepped care programme. Initially patients are treated only with inhaled salbutamol as required. If this is needed once a day or more, patients are prescribed regular corticosteroid (beclomethasone) inhalers to reduce the frequency of attacks. This can be increased or decreased as the situation demands. If corticosteroid (beclomethasone) at high doses is considered insufficient, oral medications (such as aminophylline) can be added. At this stage, it is often considered appropriate to seek specialist advice. In practice, a minority of patients with asthma will require referral and assessment by specialist physicians.

Prevention of complications

Patients with asthma may be immunised against influenza and pneumococcal infection, to prevent the occurrence of these infections.

Diabetes

Self-care and informal care

Self care is important in the management of diabetes for a number of reasons. Patients with diabetes need to understand the importance of adhering to their diabetic diet. They need to monitor their own blood sugar and (in the case of insulin-dependent diabetes) may need to adjust their dose of insulin in response to this. They also need to be aware of the symptoms of impending hypoglycaemia so that they can take appropriate steps to avoid it.

Control of diabetes is improved if the patient follows a regular routine in their daily activities and mealtimes.

Primary and secondary care

In the community the main components of diabetes services are the hospital-based diabetes team or teams (usually one or more consultant diabetologist, other specialist physicians, specialist nurse, dietician and podiatrist, with suitable junior, medical, laboratory and administrative support), the primary care team

(general practitioner, practice nurse and administrative support) and other community support (podiatrist, dietician and community nurse). Diabetes centres often provide the hub of the local diabetes service.[205]

Diabetics are normally reviewed in clinic twice a year. The main purpose of the review is to ensure that blood sugar control is adequate and detect the complications of diabetes before they become serious. Diabetic control is monitored by blood tests (glycosylated haemoglobin and glucose). Complications are detected by examination of the feet and injection sites, analysis of urine for protein, blood tests for creatinine and fundoscopy. In addition the review is an opportunity to identify and treat risk factors for cardiovascular disease (which is more common in diabetics) and to discuss other problems associated with the condition.

These six monthly reviews may be carried out by a GP with an interest in diabetes (usually supported by a nurse), a specialist diabetic nurse or by a diabetologist. In particular it is important that the person who undertakes fundoscopy is experienced in the examination of eyes. In 1992 the British Diabetic Association produced a 'Patients' Charter' on the diabetic care patients should expect (see **Box A2.1**). This gives an indication of the services that would be expected to be available to a person with diabetes in the general population.

Box A2.1: 'What diabetic care to expect' The British Diabetic Association Patients' Charter.

When you have been diagnosed, you should have:

- a full medical examination
- a talk with a registered nurse who has a specialist interest in diabetes. They will explain what diabetes is and talk to you about individual treatment
- a talk with a state registered dietician who will want to know what you are used to eating and will give you basic advice on what to eat in the future. A follow up-meeting should be arranged for more detailed advice
- a discussion on the implications of diabetes on your job, driving insurance prescription charges etc. and whether you need to inform the DVLA and your insurance company if you are a driver
- information about the BDA's services and details of your local BDA group
- ongoing education about your diabetes and the beneficial effects of exercise, and assessments of your control.

Plus
If you are treated by insulin:

- frequent sessions for basic instruction in injection technique, looking after insulin and syringes, blood glucose and ketone testing and what the results mean
- supplies of relevant equipment
- discussions about hypoglycaemia (hypos): when and why it may happen and how to deal with it.

If you are treated by tablets:

- a discussion about the possibility of hypoglycaemia (hypos) and how to deal with it
- instruction on blood or urine testing and what the results mean, and supplies of relevant equipment.

If you are treated by diet alone:

- instruction on blood or urine testing and what the results mean, and supplies of relevant equipment.

Once your diabetes is reasonably controlled, you should:

- have access to the diabetes team at regular intervals – annually if necessary. These meetings should give time for discussion as well as assessing diabetes control

- be able to contact any member of the health care team for specialist advice when you need it
- have more education sessions as you are ready for them
- have a formal medical review once a year by a doctor experienced in diabetes.

At this review:

- your weight should be recorded
- your urine should be tested for protein
- your blood should be tested to measure long-term control
- you should discuss control, including your home monitoring results
- your blood pressure should be checked
- your vision should be checked and the back of your eyes examined
- your legs and feet should be examined to check your circulation and nerve supply
- if you are on insulin, your injection sites should be examined
- you should have the opportunity to discuss how you are coping at home and at work.

Your role:

- you are an important member of the care team so it is essential that you understand your own diabetes to enable you to be in control of your condition
- you should ensure you receive the described care from your local diabetes clinic, practice or hospital. If these services are not available to you, you should:
  - contact your GP to discuss the diabetes care available in your area
  - contact your local community health council
  - contact the BDA or your local branch.

Source: British Diabetic Association. *Diabetes Care: what you should expect*. London: BDA, 1992.

Ischaemic heart disease and cardiovascular risk factors

Primary prevention

Patients have some influence over their own cardiovascular risk through their choice of diet, smoking behaviour and exercise. In prisons, diet and exercise are largely controlled by the institution. By offering a diet low in saturated fat and salt but high in polyunsaturates, fruit and vegetables, prisons can influence cholesterol levels, blood pressure and risk of heart disease.

Primary care management of cardiovascular risk factors

Patients often have their blood pressure and other cardiovascular risk factors monitored in a primary care setting. This may be carried out by GPs or other primary care workers. If their blood pressure is found to be raised, patients are usually monitored on an ongoing basis and treated with anti-hypertensive drugs. If their cholesterol levels are found to be raised or they are overweight, patients are often referred to a dietician. They may also be prescribed a cholesterol-lowering drug. Patients who smoke are usually advised to give up and may be referred to a smoking cessation programme. Some of these programmes incorporate nicotine replacement therapy, such as nicotine containing gum or patches.

Management of patients with cardiovascular disease

GPs are expected to be able to identify all of their patients with cardiovascular disease. These patients require regular follow-up, monitoring of their condition and management of their cardiovascular risk factors. In the period immediately after diagnosis this may be done by a specialist physician, but later on it can be carried out by the GP and other members of the primary care team.

In 1998, the British Cardiac Society, the British Hyperlipidaemia Association and the British Hypertension Society published national guidelines for the prevention of coronary heart disease in clinical practice. A summary their of their recommendations is given in **Box A2.2**.

Box A2.2: Summary of Joint British recommendations on prevention of CHD in clinical practice.

Lifestyle

- Discontinue smoking, make healthier food choices, increase aerobic exercise and moderate alcohol consumption.

Other risk factors

- Body Mass Index <25 kg/m^2 is desirable with no central obesity.
- Blood pressure <140 mmHg systolic and <85 mmHg diastolic.
- Total cholesterol <5.0 mmol/l (LDL cholesterol <3.0 mmol/l).
- Optimal control of diabetes mellitus and BP reduced to <130 mmHg systolic and <80 mmHg diastolic (and where there is proteinuria BP <125 mmHg systolic and <75 mmHg).

Cardioprotective drug therapy

- Aspirin for all coronary patients and those with other major atherosclerotic disease, and for healthy individuals who are older than 50 years and are either well-controlled hypertensive patients or men at risk of CHD.
- Beta-blockers at the doses prescribed in the clinical trials following MI, particularly in high-risk patients, and for at least 3 years.
- Cholesterol-lowering therapy (statins) at the doses prescribed in the clinical trials.
- ACE inhibitors at the doses prescribed in the clinical trials for patients with symptoms or signs of heart failure at the time of MI, or for those with persistent left ventricular systolic dysfunction (ejection fraction <40%).
- Anticoagulants for patients at risk of systemic embolisation.

Screening of first-degree blood relatives

- Screening of first-degree blood relatives of patients with premature CHD or other atherosclerotic disease is encouraged, and in the context of familial dyslipidaemias is essential.

Infectious diseases

Sexually transmitted diseases

The management of most sexually transmitted diseases is carried out by specialists in genito-urinary (GU) clinics. These investigate, diagnose and treat patients as appropriate. Patients may be referred to GU clinics by their GPs but the public also enjoy direct access and more commonly patients self-refer. GU clinics also arrange follow-up and trace the sexual contacts of patients so that they too can be offered investigation and treatment. This is an important part of the control of sexually transmitted diseases because disease is often asymptomatic and contacts would not otherwise seek medical advice. In some sexually transmitted disease

clinics all new patients are offered individual personal sexual health counselling in order to promote safer sexual practices.

Bloodborne viruses

Prevention

The risk of acquiring hepatitis B, hepatitis C and HIV infection can be reduced by adopting safer sexual practices (such as the use of condoms) and by avoiding unsafe practices such as drug abusers sharing injecting equipment.

Because staff may come into contact with infectious material of patients, it is routine practice in the health service to require all staff involved in patient care to show evidence of vaccination against hepatitis B. This is considered good risk management in the health service.

Testing, counselling and advice

Chronic HIV infection and chronic hepatitis are diagnosed by blood tests. If they feel they are at risk, patients may request voluntary testing to establish their HIV or hepatitis status. Patients so doing are often referred to a specialist service such as a GU clinic to ensure that they receive appropriate counselling about the implications of both testing and viral infection. In the community there is a wide range of advice and support available for those who are concerned about HIV, e.g. National AIDS Helpline.

Treatment

Patients with chronic hepatitis B or hepatitis C infection may develop chronic liver disease. Because of this they require management by an appropriate medical specialist. There is no specific treatment for chronic hepatitis B infection, but interferon is used in the treatment of hepatitis C infection. Chronic HIV infection also requires specialist referral and treatment. Patients are usually treated with combination therapy (simultaneous treatment with several anti-retroviral therapies) to delay the onset of immunodeficiency problems.

Tuberculosis

The risk of tuberculosis infection can be reduced by administration of the live BCG vaccination, which requires only one injection. BCG vaccination is contraindicated in patients with impaired cell-mediated immunity, for example those with HIV infection.

Patients can be screened for possible tuberculosis by Heaf testing. This is a skin-prick test which separates patients into those likely and those who are unlikely to be infected. Diagnosis is confirmed by chest x-ray and by microbiological examination of sputum. Because many of the symptoms of tuberculosis (persistent cough and weight loss) are common, diagnosis of tuberculosis depends on vigilance by the primary care team. Tuberculosis is treated with a combination of specific anti-tubercular antibiotics, for a period of four to six months. Treatment is usually initiated and monitored by a specialist. To avoid the emergence of multi-drug-resistant tuberculosis, it is important to ensure that treatment is completed. Contacts of patients should be are traced and screened for possible infection. This is usually undertaken by the public health department of the local health authority.

Dental health

Persons receiving income support, pregnant women and women who are in the postnatal period are entitled to free dental care from NHS general dental practitioners. NHS general dental practitioners provide most dental procedures to all other persons at 80% of the cost. Private dental practitioners provide dental care at full cost. In practice, access to an NHS general dental practitioner may be difficult as all NHS dentists in an area may be oversubscribed. In addition, because there is a fee for dental care, many patients attend their dentists infrequently.

General dental practitioners provide preventive care and treatment of dental problems.

Appendix 3: Services for drug and alcohol misuse in the community

Drug abuse

Services for drug abuse in the community

In the community a minority of drug misusers come into contact with formal services. Those that do are dealt with by the primary care team, in drug-dependency clinics and sometimes by psychiatric services. A range of voluntary organisations also offer services for drug misusers.

There are two main approaches to managing drug abuse; services designed to minimise harm and services intended to help users to abstain from drugs. Harm minimisation services include information and advice on drugs misuse, free access to injecting or sterilisation equipment and in some cases methadone maintenance. Because some drug misusers are not registered with a general practitioner, they may also be offered general medical services and other preventive measures such as contraceptive advice and hepatitis B immunisation. When methadone is provided it is part of an agreed programme with clearly defined rules. If drug misusers deviate from these rules, methadone maintenance is withdrawn.

Those drug misusers who are deemed suitable are offered services designed to help them abstain from drugs. These are generally organised on an outpatient basis but some services are residential. Some of these services are organised by the voluntary sector. Such programmes operate on the basis of a contract, where participation is dependent on the client not misusing drugs. The main features of such programmes are psychotherapeutic support individually or as a group exercise and monitoring of participants to ensure that they do not misuse drugs. Some programmes offer detoxification, i.e. short reducing courses of medication to attenuate the symptoms of withdrawal during the initial stages of the programme. Some emphasise behavioural interventions to promote abstinence. Others are based on a psychodynamic approach to drug misuse.

Alcohol misuse

Services for alcohol abuse in the community

In the community a small minority of alcohol misusers come into contact with formal services. Those that do are dealt with by the primary care team, by the voluntary sector, or in alcohol dependency clinics run by psychiatric services.

The simplest intervention in primary care is for general practitioners to give clear advice to reduce intake of alcohol. This may be backed up by liver function tests to demonstrate liver damage. Those alcohol misusers who are supported by voluntary agencies or formal psychiatric services are usually offered either psychological or pharmacological support to help reduce consumption or to promote abstention. Psychological support may involve group therapy, skills training to promote abstinence, counselling or psychodynamic psychotherapy. Pharmacological support may involve the use of drugs to promote abstinence such as disulphiram (which causes unpleasant symptoms if alcohol is consumed). Patients take this once a day under supervision to act as a disincentive to consumption of alcohol.

Unlike drug withdrawal, *delerium tremens* is a potentially dangerous medical condition. Patients withdrawing from alcohol need to be nursed in a well-lit room. They also need to be given appropriate doses of chlormethiazole or a benzodiazepine to replace alcohol consumption. This medication is then gradually withdrawn.

Appendix 4: Sources of information, guidelines and effectiveness material of health care interventions for physical health problems

Epilepsy

- The Scottish Intercollegiate Guidelines Network (SIGN) has produced evidence-based guidelines on the diagnosis and management of epilepsy in adults (*Diagnosis and Management of Epilepsy in Adults: A Quick Reference Guide*, SIGN Publication No. 21, November 1997).
- The Royal College of Physicians, the Institute of Neurology and the National Society for Epilepsy funded by the NHS Executive have produced evidence-based guidelines on *Adults with Poorly Controlled Epilepsy*. The guidelines are in two parts. Part 1 is *Clinical Guidelines for Treatment* whilst Part 2 is *Practical Tools for Aiding Epilepsy Management*, comprising various checklists and protocols to provide information to assist GPs, specialists, other health professionals and providers in the care and management of epilepsy patients. The guidelines have been appraised by the Health Care Evaluation Unit at St George's Hospital Medical School (www.sghms.ac.uk/phs/hceu//report01.htm).

Asthma

- The North of England Asthma Guideline Group has produced evidence-based guidelines for the primary care management of asthma in adults (North of England Asthma Guideline Development Group. *North of England Evidence Based Guideline Development Project: evidence based guideline for the primary care management of recurrent wheeze in adults*. Newcastle upon Tyne: Centre for Health services Research, 1995). These give guidance on diagnosis, management, drug treatment, non-drug treatment and referral and have been commended by the NHS Executive.
- The British Thoracic Society has produced guidelines on the management of asthma. The guideline comprises two journal articles (*Thorax* 1997; **52**(Suppl 1): S1–S21 and *Thorax* 1993; **48**(2): S1–S24). It is recommended that the papers are viewed as one complete document.
- The Scottish Intercollegiate Guidelines Network (SIGN) has produced evidence-based guidelines on the management of asthma in primary care (*Primary Care Management of Asthma: a quick reference guide*. SIGN Publication No. 33, December 1998).
- A systematic review assessing education programmes that teach people with asthma how to self-manage their medication concluded that training in asthma self-management which involves self-monitoring by either peak expiratory flow or symptoms, coupled with regular medical review and a written action plan appears to improve health outcomes for adults with asthma.[206]

Diabetes

- The British Diabetic Association has produced guidelines on *Recommendations for the Management of Diabetes in Primary Care* in 1997. These have been commended by the NHS Executive.
- The NHS Executive in England has produced health service guidelines that outline the key features of a good diabetes service (NHS Executive. *Key Features of a Good Diabetes Service*. HSG (97)45, October 1997).

- The European NIDDM policy group has produced *A Desktop Guide for the Management of Non-insulin-dependent Diabetes Mellitus*. This is available from the International Diabetes Federation (1 rue Defaqz, B-1000 Brussels, Belgium).
- A health care needs assessment on diabetes in the *Health Care Needs Assessment* series also provides a useful summary of effectiveness and cost-effectiveness material.[207]

Ischaemic heart disease and cardiovascular risk factors

The most recent international and UK guidelines on the management of cardiovascular risk factors[208,209] emphasise the identification of patients by their cardiovascular risk rather than simply by the presence or absence of particular risk factors. The rationale for this is that those at highest risk of future cardiovasular or cerebrovascular events are those who benefit most from preventive treatment.

However, in order to calculate patients' risk of future vascular events, it is necessary to know the patients blood pressure and cholesterol in addition to their age, sex, smoking status and medical history. Checking of blood pressure and cholesterol is not routinely carried out on every patient in primary care or in prisons. It is therefore important to consider which patients it might be useful to investigate either by measuring their blood pressure or their cholesterol level. Logically it is only useful to investigate if there is a possibility that the patient may be found to be at sufficiently high risk to benefit from treatment. This question is discussed below.

High risk groups

Patients with ischaemic heart disease or cardiovascular disease

Patients who already suffer from ischaemic heart disease or have previously suffered from a stroke or a myocardial infarction are at high risk of subsequent vascular events. Since they are at highest risk these patients benefit most from treatment. These patients should all be offered aspirin, beta-blockers and cholesterol-lowering therapy (statins). Those who have suffered myocardial infarction or who have a reduced ejection fraction should be offered angiotensin-converting enzyme inhibitors.[209] Because the prison population is young, few will have a diagnosis of ischaemic heart disease. However, it is important to be able to identify these patients and to provide them with appropriate treatment.

Patients with diabetes

Patients with diabetes are at a higher risk of vascular events than non-diabetics. This risk can be reduced by the treatment of raised blood pressure.[210] Part of the routine follow-up of diabetics should therefore involve assessing and managing cardiovascular risk.

Low risk groups: blood pressure testing and treatment

The objective of treating high blood pressure is to reduce the risk of ischaemic heart disease and stroke (vascular events). The benefits of treatment are greatest in those at greatest initial risk. The risk of a vascular event increases with age and in the presence of specific risk factors: cigarette smoking, diabetes, raised blood pressure, male sex and raised cholesterol levels. Typically, drug treatment lowers systolic blood pressure by about 10 to 12 mmHg and reduces risk by about 30%. This means that we would have to treat 33 persons who were at 10% risk of a vascular event in the next five years in order to prevent one of them from suffering from a vascular event. In other words, 32 out of the 33 would not benefit from the

treatment; 30 would not suffer a vascular event anyway and 2 would suffer a vascular event whether or not they were treated. Since treatment carries its own drawbacks, such as the effects of labelling, side effects and medicalisation, it has been suggested that it is probably only worth considering drug treatment of high blood pressure in two groups:

- those whose systolic blood pressure exceeds 140 (or diastolic >90) *and* whose risk of a vascular event is more than 10% in the next five years
- those with very high blood pressures (systolic >180 or diastolic >110) should be treated, irrespective of their vascular risk (because of the risk of accelerated hypertension).

Using data on the distribution of blood pressures and total cholesterol to high density cholesterol ratios in the UK population it is possible to estimate the age-sex specific percentage of the population who might benefit from anti-hypertensive treatment. From this we can estimate the number of prisoners who will have to have their blood pressure treated in order to find one who might benefit from treatment (see **Table A4.1**). The blood pressure data has been taken from the Health Survey for England[29] and the data on total cholesterol to high density cholesterol ratios were provided by the University of Newcastle.

Despite the fact that most smoke, very few inmates are at greater than 10% risk of a vascular event: this is largely because the prison population is young. Among those aged 35–44, only one in 39 men and one in 99 women might benefit from anti-hypertensive treatment. The implication of this is that it is only worthwhile checking the blood pressure of men and women over 45.

Table A4.1: Age-sex specific prevalence of need for blood pressure treatment: UK population.

Age band	What percentage need an antihypertensive?		How many prisoners' blood pressure need to be checked to find one needing an antihypertensive?	
	Males	Females	Males	Females
16–24	0%	0%	∞	∞
25–34	1%	0%	100	∞
35–44	3%	1%	39	99
45–54	36%	21%	3	5
55–64	59%	56%	2	2
65–74	68%	68%	1	1
75+	72%	79%	1	1

All those with >10% 5-year risk and a bp of at least 140/90 need treatment *and* all those with a bp of at least 180/110, irrespective of the risk. Vascular risk is calculated on the assumption that all prisoners are smokers.

High blood pressure is more prevalent among blacks than whites. As it is difficult to obtain data on the distribution of blood pressure in UK blacks, data on the distribution of blood pressures in US blacks have been used instead. These originate from the US National Health Survey (quoted in Baba *et al.*[211]). The number of prisoners who will need blood pressure treated in order to find one who might benefit from treatment is shown in **Table A4.2**. Based on this estimate, one in 18 black men aged 30–39 and one in 30 black women would benefit from blood pressure treatment.

Table A4.2: Age-sex specific prevalence of need for blood pressure treatment: US blacks.

Age band	What percentage need an antihypertensive?		How many prisoners' blood pressure needs to be checked to find one needing an antihypertensive?	
	Males	Females	Males	Females
30–39	6%	3%	18	30
40–49	31%	18%	3	6
50–59	51%	64%	2	2
60–69	74%	71%	1	1
70–75	67%	72%	1	1

All those with >10% 5-year risk and a bp of at least 140/90 need treatment *and* all those with a bp of at least 180/110, irrespective of the risk. Vascular risk is calculated on the assumption that all prisoners are smokers.

Cholesterol testing and drug treatment

It has already been noted that blood cholesterol alone is a relatively poor predictor of individual cardiovascular risk. The majority of cardiovascular events occur in people with average or low blood cholesterol levels. Therefore cholesterol screening is unlikely to reduce mortality and can be misleading.[212]

A similar analysis to that for treating raised blood pressure can be applied to the percentage of persons who need treatment for raised cholesterol levels. Drug treatment to lower cholesterol levels reduces the risk of a vascular event by about 30%. Those at highest risk therefore benefit most. Current guidelines recommend treatment for patients whose risk of a cardiovascular event is more than 15% in the next five years (>3% annual risk), provided their cholesterol is average or higher. The calculated risk of patients with very high cholesterol ratios may underestimate their true risk. The *Joint British Recommendations on the Prevention of CHD in Clinical Practice*[209] do not provide clear guidance on whether some patients should be treated irrespective of their estimated vascular risk. The recommendations of the New Zealand guidelines have therefore been followed in this report. These suggest that patients with a total cholesterol to high density lipoprotein cholesterol ratio of 8 or more should also be treated.[213]

Table A4.3 and **Table A4.4** show the estimated age-specific prevalence of patients who need statin treatment. Before the age of 45, very few patients are at sufficiently high risk to warrant treatment. In addition, many of those who are at high risk will also be candidates for blood pressure lowering: which should lower their risk. This suggests that it is probably not worth carrying out cholesterol testing on any prisoners under the age of 45. The estimated appropriate age threshold for cholesterol estimation in blacks is similar to that for the general UK population (see **Table A4.4**).

Table A4.3: Age-sex specific prevalence of need for statins: UK population.

Age band	What percentage need a statin?		How many prisoners' lipids need to be checked to find one needing a statin?	
	Males	Females	Males	Females
16–24	4%	0%	23	82,807
25–34	4%	0%	23	83,643
35–44	2%	0%	53	3,778
45–54	19%	3%	5	29
55–64	59%	43%	2	2
65–74	67%	51%	1	2
75+	68%	48%	1	2

Those who need treatment are all those at greater than 15% 5-year risk with a total cholesterol to HDL cholesterol of at least 4. In addition all those whose total cholesterol to HDL cholesterol is 8 or greater need treatment, irrespective of the estimated risk.

Table A4.4: Age-sex specific prevalence of need for lipid-lowering treatment: US blacks.

Age band	What percentage need a statin?		How many prisoners' lipids need to be checked to find one needing a statin?	
	Males	Females	Males	Females
30–39	0%	0%	453	217,927
40–49	2%	0%	41	430
50–59	16%	16%	6	6
60–69	55%	41%	2	2
70–75	69%	55%	1	2

Smoking cessation

The risks of diseases such as lung cancer and heart disease are reduced following smoking cessation and those smokers who stop before middle age can avoid most of the excess risk they would have suffered.[214]

A number of smoking cessation interventions seem to be ineffective. These include acupuncture, aversive smoking, hypnotherapy and the drug lobeline.[215–218]

Clonidine seems to be effective at helping smokers to quit, but side effects limit its usefulness.[219]

However, there are also a number of practical smoking cessation interventions which are effective. These are: advice and counselling given by nurses, brief advice from a physician, the use of nicotine replacement therapy and individual behavioural counselling.[220–223]

There is also evidence that group behaviour therapy programmes for smoking cessation are better than self-help and other less intensive interventions.[224] The provision of self-help materials is more effective than no intervention and training health professionals in smoking cessation has a modest effect on patient cessation rates.[225,226]

Advice and support to pregnant women also increases rates of smoking cessation.[227]

Much of this evidence is summarised in the NHS Centre for Reviews and Dissemination bulletin on smoking cessation.[203]

Infectious diseases

Hepatitis B

Vaccination against hepatitis B is given as a course of three injections. Once completed it provides very effective protection against infection especially in younger people. Present Home Office recommendations are that this is offered to all prisoners (see **Box 5**).

Tuberculosis

General guidance on tuberculosis control and detailed guidance on the drug treatment of tuberculosis can be obtained from the following publications.

- The Interdepartmental Working group on Tuberculosis. *The Prevention and Control of Tuberculosis in the United Kingdom: recommendations for the prevention and control of tuberculosis at local level.* Department of Health and the Welsh Office, 1996.
- Joint Tuberculosis Committee of the British Thoracic Society. Control and prevention of tuberculosis in the UK: code of practice 1994. *Thorax* 1994; **49**: 1193–1200.
- Joint Tuberculosis Committee of the British Thoracic Society. Chemotherapy and management of tuberculosis in the United Kingdom: recommendations 1998. *Thorax* 1998; **53**: 536–48.

Guidance on the prevention and control of transmission of HIV-related Tuberculosis and drug-resistant, including multiple-drug-resistant, tuberculosis has also been published by the Department of Health.

- The Interdepartmental Working Group on Tuberculosis. *The Prevention and Control of Tuberculosis in the United Kingdom: UK guidance on the prevention and control of transmission of HIV-related tuberculosis and drug resistant, including multiple drug-resistant, tuberculosis.* London: Department of Health, 1998.

Sexually transmitted diseases (STDs)

There is evidence that health education by video in the setting of a genito-urinary medicine clinic has an effect on knowledge and attitudes about STDs and condoms.[228]

There are a limited number of evidence-based guidelines on the management of common sexually transmitted diseases. These are listed below.

- Herpes Viruses Association. *Management Guidelines for Herpes Simplex.*
- Stokes T. *Leicestershire Genital Chlamydia Guidelines.* Leicestershire Health Authority, 1997.

A health care needs assessment of Genito-urinary Services in the *Health Care Needs Assessment 2nd Series* provides a useful summary of other relevant effectiveness and cost effectiveness material.[39]

Appendix 5: Recommendations on the provision of health care centre beds

Health care centre beds

In all health care systems, the use of in-patient beds is at least partly driven by the supply of beds. If beds are available, the threshold for admitting a patient tends to be lower and the threshold for discharge higher. This means that more patients are admitted for longer periods of time if more beds are available. In the community this may be an inefficient approach to dealing with illness, as hospital admission is expensive compared to community-based treatment. The fact that hospital admission is possible can inhibit the development of community-based services, which may in turn make it difficult to manage problems in the community or reduce length of stay.

The situation in prisons differs in some respects. Health care centre beds are not as intensively staffed as hospital beds and caring for prisoners on the wings has its own costs. Because of this, in-patient care in health care centre beds may cost little more than care in the main prison. In other respects, the situation is similar to that in the community. Access to hospital beds may inhibit the development of health care in the main prison and this in turn makes it difficult to manage health problems without admission to health care centre beds. This is particularly likely to be the case when hospital beds are available within the prison site. This is an important consideration, given that in addition to access to NHS beds, prisons have five times as many health care centre beds per prisoner as the general population has hospital beds.

Appendix 6: Promoting self-care in prisons

Recommendations for promoting self-care of minor illness

A systematic attempt should be made to reduce the rate of primary care consultation and to substitute consultations with other health care workers for medical consultations with doctors. One strategy would be to provide all prisoners with information on common minor illness and how to manage them. This could be supported by guidance on how to make appropriate use of the health care services. To ensure consistency, this guidance should be consistent with guidelines used by primary health care staff.

Access to self-care

Supply of pharmaceuticals and safety

A policy should be developed to give prisoners better access to over the counter medications. This will necessitate setting up a group of interested stakeholders (the pharmacist, medical officer, prison governor, health care officers and nurses) to draw up a list of medications and the conditions under which they can be made available to prisoners. It is important that any change in policy on medications should command widespread support in the prison.

Table A6.1 illustrates some of the more common over the counter medications, the potential hazards of improved access and suggested solutions. Some medications have a low potential for misuse. Where these can be legally sold to the public it may be possible to provide prisoners with more or less free access. To introduce a small element of control, prisoners might be obliged to bring their prisoners' health booklet and state the indication for the medication. If some medications (such as emollients and shampoos) are to be made available to prisoners through the prison shop, it may be necessary to provide them at reduced cost or at no cost. Otherwise, prisoners will continue to consult health care workers in order to obtain medications for free. If this seems inequitable to staff (who have to pay for similar medications in the community), these preparations could be made available to staff at the same low cost.

Other medications are legally available from pharmacists. In these cases, medications would have to be made available from health care workers following the guidance of a pharmacy protocol. Medications with a low potential for misuse include certain treatments for dyspepsia such as aluminium hydroxide, magnesium trisilicate and cimetidine; a wide range of skin preparations for acne, dandruff, eczema, psoriasis and fungal infections; clotrimazole pessaries and cream for vaginal candidiasis.

Some useful medications have a potential for misuse or overdose. This could be addressed by making available only a limited supply on a named-patient basis. Paracetamol is particularly dangerous in overdose. Methionine is an antidote to paracetamol overdose reducing the incidence of hepatic damage and death. In one study methionine given within ten hours of overdose reduced hepatic damage from 18% (with 1.5% mortality) to 7% (with no mortality), compared to patients given methionine up to 24 hours after ingestion.[229] In animal studies the combined preparation has been shown to be less toxic in overdose.[230] A preparation of paracetamol containing methionine (co-methiamol) is available in the UK. The risk of overdose could be minimised by only providing co-methiamol and by restricting access to 2 g of paracetamol (4 tablets) a week per named-patient.

Because aspirin and ibuprofen could potentially be dangerous in overdose, the quantity available could be restricted to 2.4 g aspirin per prisoner per week and 1.6 g ibuprofen per prisoner per week. By switching from one painkiller to another, three or four days of analgesia could be provided without a medical consultation.

Table A6.1: Medications for minor illnesses: factors relevant to custodial setting and suggested availability in prisons.

Medication	Cost (NHS prices)	Potential hazards and factors relevant to a custodial setting	Legal limits on availability	Suggested availability
Analgesics and antipyretics				
Aspirin 300 mg	£0.08 for 20 tablets	>20 tablets potentially dangerous in overdose.	Up to 16 tablets can be sold from any retailer. Greater number from pharmacist.	Up to 4 tablets a week to each prisoner. More could be made available on the basis of pharmacy protocol.
Co-methiamol 500 mg	£2.77 for 96 tablets	>20 paracetamol tablets potentially dangerous in overdose. Co-methiamol less toxic than paracetamol alone.		
Ibuprofen 200 mg	£0.14 for 20 tablets	>25 tablets potentially dangerous in overdose.		
Skin preparations				
Hydrous ointment	£0.30 for 100g	Low potential for misuse.	Unrestricted sale.	Unrestricted. Could keep supply in cell.
White soft paraffin	£0.31 for 100g		Unrestricted sale.	
Hydrocortisone 1%	£0.27 for 15g		From pharmacist.	On the basis of pharmacy protocol. Could keep supply in cell.
Coal tar (Alphosyl)	£2.44 for 100g		From pharmacist.	
Benzoyl peroxide 5%	£3.00 for 60g		From pharmacist.	
Drugs for dyspepsia				
Aluminium hydroxide	£0.41 for 200ml	Low potential for misuse.	Unrestricted sale.	Unrestricted. Could keep supply in cell.
Magnesium carbonate	£0.59 per 200ml		Unrestricted sale.	Unrestricted. Could keep supply in cell.
Antispasmodics				
Hyoscine butylbromide	£2.59 for 56 tablets	Potentially toxic in overdose. Possible misuse.	From pharmacist.	Up to 80 mg a week on the basis of pharmacy protocol
Antihistamines				
Chlorpheniramine	£0.20 for 20 tablets	Sedating. Possibility of misuse.	From pharmacist.	
Cetirizine	£8.73 for 30 tablets	Low potential for misuse.	Up to 10 from pharmacist.	
Preparations which may be useful in the common cold				
Echinacea	Prices vary with preparation.	Low potential for misuse.	Unrestricted sale.	Unrestricted. Could keep supply in cell.
Zinc lozenges			Unrestricted sale.	
Vitamin C			Unrestricted sale.	
Preparations for neurotic disorders				
Hypericum perforatum	£10 to £20 for 900 mg daily for one month	Low potential for misuse.	Unrestricted sale.	Supplied by nurses with mental training.
This list is not intended to be exhaustive.				

Information

It is recommended that prisoners are provided with information on how to access and make best use of the prison health services. This should include what services they can expect (e.g. 'all medical consultations are regarded as confidential') and what they cannot expect (e.g. 'it is policy not to offer medications to relieve the symptoms of amphetamine withdrawal'; 'it is the policy of the health care centre not to prescribe sleeping tablets').

Prisoners could, where appropriate, also be provided with information on the self-care of many common minor illnesses. The simplest way to provide this would be in the form of a booklet issued to all prisoners on arrival in prison. Such a booklet could be produced centrally with local adaptations to suit each prison. It could be developed from a range of pre-existing sources of patient information. While it is probably unrealistic to expect more than a minority of prisoners to use a booklet, even use by a minority could have a significant impact on consultations.

A general plan of the type of information provided in such a booklet is listed in **Table A6.2**. Essentially it would consist of an alphabetic list of common conditions with a few lines explaining what this condition is. It would also include a list of simple self-care measures to help the condition. It would then explain what medications or remedies were available for each problem. It would indicate which of these were available to prisoners without prescription and how these could be obtained. The rules (such as the number of tablets per week) under which these could be made available would also be spelled out. Finally it would explain when it was appropriate to seek medical advice about these conditions.

In order to be consistent and to ensure that the booklet was used, it would be important for health care staff and others to be aware of the booklet and to follow its recommendations. Appointment cards to see the prison medical officer would include a line asking prisoners whether they had previously consulted the booklet. Alternatively, the appointment cards could be printed as part of the booklet, so prisoners were obliged at least to open the booklet before making an appointment.

Table A6.2: Common symptoms and minor illnesses, information needs and appropriate care.

Minor illness or symptom	Information needs	Appropriate self-care	Appropriate use of formal health care
Headache: tension headache migraine	Explanation of the causes of tension headache and that it is self-limiting. Self-care and the use of simple painkillers. The causes of migraine and appropriate self-care.	Anxiety management training and other self-help approaches. Paracetamol with methionine, aspirin, ibuprofen.	Diagnosis of mental health problems (depression) presenting with physical symptoms. Management of chronic tension headache; management of migraine; diagnosis of rare causes of headache.
Skin conditions: acne, dandruff dermatitis/eczema psoriasis tinea infections	Recognition and self-care of common skin conditions.	Benzoyl peroxide, shampoos, emollients and topical hydrocortisone, coal tar preparations, clotrimazole and other anti-fungals.	Management of severe psoriasis; eczema needing potent steriods; acne needing tetracyclines.
Upper respiratory infections: cough cold sore-throat	Recognition and self-care of upper respiratory infections and their usually benign prognosis.	Echinacea, ephedrine, zinc, oxymetalozine, vitamin C, paracetamol with methionine, aspirin and ibuprofen.	Diagnosis of chest infection or exacerbation of lung disease (antibiotics rarely indicated).
Gastro-intestinal problems: constipation diarrhoea dyspepsia (indigestion)	Recognition and self-care of gastro-intestinal problems and their usually benign prognosis.	Magnesium sulphate, loperamide, co-magaldrox suspension and cimetidine 100 mg.	Diagnosis of infectious diarrhoea. Diagnosis of rare causes of diarrhoea such as inflammatory bowel disease and, in older prisoners, colorectal cancer. Diagnosis of ulcers.
Allergies: hayfever/allergic rhinitis	Recognition and self-care of allergies.	Antihistamines.	Management of severe allergies. Referral for allergen desensitisation.
Psychological symptoms: insomnia/sleep problems anxiety	Recognition and self-care of common psychological symptoms.	Self-help approaches to insomnia.	Diagnosis and treatment of mental health problems (depression) presenting with physical symptoms.
Musculoskeletal problems: low back pain minor injuries	Recognition and self-care of minor injuries and low back pain.	Rubifacients. Access to gymnasium.	Diagnosis and treatment of mental health problems (depression) presenting with physical symptoms. Diagnosis and referral of rare causes of low back pain (e.g. disc prolapse). Diagnosis and referral of serious injuries.

Table A6.2: Continued.

Menstrual disorders: menstrual mood changes dysmenorrhoea menorrhagia menstrual irregularities	Recognition and self-care of menstrual disorders.	Ibuprofen, paracetamol with methionine, aspirin. Hyoscine butylbromide.	Diagnosis of mental health problems (depression) presenting with physical symptoms. Prescription of tranexamic acid for menorrhagia; antidepressants for mood changes; combined oral contraceptive for menstrual irregularities etc.
Genito-urinary infections: candidiasis (thrush) cystitis	Recognition and self-care of genito-urinary infections.	Clotrimazole, additional fluid consumption.	Diagnosis and prescription of appropriate antifungal or antibiotics. Diagnosis and management of STDs

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