

**Leicester City Primary Care Trust
Directorate of Public Health and Health Improvement**

Health Care Needs Assessment HMP Leicester

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Executive Summary

The population of HMP Leicester is male, generally young and has a very turnover. About 60% of inmates are under 30 years old. In general prisoners are drawn from lower socio-economic groups and have poor levels of education. At HMP Leicester the population is diverse, 17% of the prisoners are black African-Caribbean and 14% are from an Asian background. As a local prison, HMP Leicester receives many remand prisoners, those who are awaiting legal proceedings or sentencing.

The range and frequency of physical health problems experienced by prisoners appears to be similar to that of young adults in the community. In terms of physical illness, asthma and epilepsy are particular problems along with sexually transmitted disease and blood borne infections. 78% of prisoners at HMP Leicester smoke, and drug use is a frequent problem with 36% of prisoners having used heroin.

Prisoners have a very high incidence of mental health problems, in particular neurotic disorders, compared to the general population. In general, 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, and as a local prison with many remand prisoners there may be a high risk of suicide at HMP Leicester. In a survey of 94 of the prisoners 24.5% had either harmed themselves or thought of taking their own lives. There were 4 suicides in HMP Leicester in 2007.

Planning of health care should be based on an understanding of health care needs and not by historical precedent. Leicester City Primary Care Trust (LCPCT) commissions a model of healthcare in which primary care is contracted out to SERCO, which provides general practice and nursing care. LCPCT also commissions mental health care from Leicestershire Partnership Trust, and a range of services such as podiatry and dentistry. Waiting lists were few in number, but there were long waiting times for some clinics. There is limited scope for self care, and efforts should be made to reduce prisoners' dependence on the formal health care system.

Prisoners' opinions about healthcare at HMP Leicester have improved since 2006.

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July 2008

1. Introduction

1.1 Aims of the Health Care Needs Assessment

Since 2005 commissioning for health services for the prison population of England and Wales has been the responsibility of local Primary Care Trusts (PCTs). This health care needs assessment should be seen in that context. It will provide public health intelligence about the provision of health care in Her Majesty's Prison (HMP) Leicester in order to set priorities in the purchasing of health care. In so doing, it will identify health care interventions which help to meet health problems and make recommendations about which interventions should be provided to meet the health care needs of the prisoners.

1.2 Type of Prison

HMP Leicester is a Category B Local Prison, for adult males. Of the four security categories for adult male prisoners, Category B refers to prisoners for whom escape must be made very difficult, at Leicester this includes both sentenced and unconvicted adult prisoners, those commonly referred to as remand prisoners. The designation of HMP Leicester as a local prison reinforces its role as a remand centre, because local prisons are places that hold prisoners who have been remanded in custody by the courts. In addition, prisoners are often held in local prisons when they are first sentenced or if they are sentenced to a short term of imprisonment, whereas those whose sentence is longer than a few months are usually transferred to training prisons.

HMP Leicester was opened in 1828. The oldest part of the building, the Gatehouse dates from 1825, remains intact. However, the prison as a whole has been developed over time, most recently with the building of a visitor and administration block, adjoining the Gatehouse in 1990, and the health care centre in 1996. The main living accommodation in HMP Leicester is a long rectangular cell block with four landings. This accommodation has full integral sanitation and most cells accommodate 2 prisoners. In brief the different landings have the following occupants:

- Landing 1- First Night Centre, Segregation Unit and Behavioural Improvement landing
- Landing 2- Self Contained Detoxification Landing, Vulnerable Prisoner Unit and prisoners who are unable to climb stairs (locate flat)
- Landings 3 and 4 - Prisoners on basic, standard and enhanced status.

Up to 11 prisoners may be accommodated in the Healthcare Centre and 12 on the Short Term Offender Rehabilitation Management landing. The prison also comprises other facilities for learning and skills, domestic visits, gym and administration. Education provision is commissioned by the Learning and Skills Council and is currently provided by City College Manchester.

1.3 Prison Population

1.3.1 Operating Capacity of HMP Leicester

At the time of writing, the operating capacity of HMP Leicester is 385 adult males. This figure refers to the maximum number of prisoners which may be accommodated at one time according to the standard specified for crowded conditions. However, the operational capacity is guidance rather than an absolute limit, and prison staff can use their knowledge of the establishment and its infrastructure to determine whether the number of prisoners might pose a serious risk to good order, security and the proper running of the planned regime, which would thus affect the capacity.

Members of the Prison staff use assessments of the building and the prisoners to underpin their knowledge of the establishment, which have an impact on the operating capacity of the prison. For example, the Prison Service undertakes assessments of the fabric of the building, by which they ensure that each cell used for the confinement of prisoners has sufficient heating, lighting and ventilation and is of adequate size for the number of prisoners. The Certified Normal Accommodation (CAN) at the prison which is available for immediate use excludes cells that are damaged or affected by building work, and by the staffing capacity at the prison.

The prisoners are themselves assessed in terms of cell sharing risk. The purpose of this assessment is partly to support staff judgement about the allocation of prisoners to cells, identifying racist, homophobic or violent prisoners or prisoners with mental health conditions. On some occasions cell sharing may be a medical recommendation, for instance a prisoner suffering an illness may have a cell mate identified who would call for assistance in an emergency.

1.3.2 Average Daily Population

The Average Daily Population (ADP) of a prison refers to the average number of prisoners in the prison at any one time. The ADP of any prison is affected by the constant throughput of prisoners. On a daily basis prisoners are released, to be replaced by new receptions to the prison of either newly remanded or sentenced prisoners or prisoners who have been transferred from other prisons.

It is currently estimated that the ADP of HMP Leicester is 355 prisoners. In this needs assessment 355 is used as the standard population of HMP Leicester. Where it is necessary, therefore, the frequency and proportion of prisoners suffering with a particular illness is calculated to this standard population.

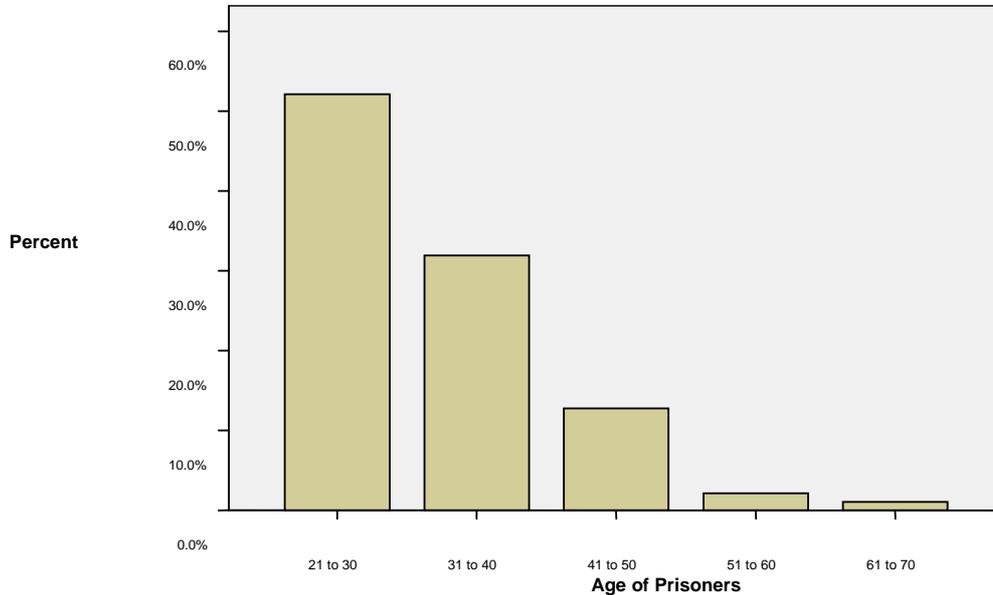
In line with its status as a Category B Local Prison, HMP Leicester accommodates a number of prisoners on remand and on short sentences. This means that the turnover of population of the prison is high. Information about the turnover of the numbers of prisoners can be found in the Daily Operational Report, a roll call of the prisoners recorded everyday, which is useful as a way of providing a "snapshot" of the frequency and characteristics of the prison population at a particular point in time. The Daily Operational Report of 7th September 2007 shows that the prison roll was 349 prisoners. On this particular day 33 prisoners, or 9.45% of the prison roll, were discharged through reception; 22 to the courts, 6 transferred and 5 discharged.

1.3.3 Age

In a study of 94 prisoners at HMP Leicester the ages of the prisoners studied ranged from 21 to 61 years; the median age was 30 years. The proportions found were

almost exactly the same as the age range of the prison population found by the Office of National Statistics 1995. Figure 1 shows that the majority (52%, 95% CI 46.8%, 57.1%) of the prisoners were aged between 21 and 30 years, with the frequency decreasing with age.

Figure 1: Bar chart showing age of Prisoners at HMP Leicester



The data in Table 1 shows that when these figures are standardised to a population of 355 the following numbers are expected:

Table 1: Age-group of the population of HMP Leicester standardised to ADP of 355.

Age-group	Proportion %	Expected frequency (n=355)	95% Confidence Intervals (n=355)	
			Lower	Upper
21 to 30	52	184	166	203
31 to 40	31.9	113	97	131
41 to 50	12.8	45	34	59
51 to 60	2.1	8	4	15
61 +	1.1	4	1	10

1.3.4 Ethnicity

HMP Leicester has a full time Race Equality Officer (REO, previously known as the Race Relations Liaison Officer) who investigates all aspects of prison life related to diversity and manages large quantities of information relating to racial equality. In addition two committees have been set up under the name Diversity and Race Relations Equality Action Team (DREAT), to look at the diversity needs of prisoners and staff.

The prison is required to provide a breakdown of its population at the end of each month as part of a Race Equality Information Report. In July 2007 ethnic minority

groups accounted for 38% of the population of HMP Leicester, of this population 20.5% were foreign nationals. When these figures are standardised to an ADP of 355 they equate to 135 people from a BME background, and 73 people who are foreign nationals. In comparison to the general population of the city, data from the 2001 census shows that around 34% of the city of Leicester would classify themselves as coming from a minority ethnic background. Whilst the two populations are equally diverse, HMP Leicester has a far higher number of foreign nationals among its population. Table 2 shows the ethnicity of the population of HMP Leicester, which was reported at the end of July 2007, and Table 3 shows the nationality of prisoners in the same month:

Table 2: Frequency and proportion of ethnicity of the population of HMP Leicester

Ethnicity	Number	Percentage	95% Confidence Interval	
			Upper	Lower
Asian	47	13.7	10.5	17.8
Black	57	16.7	13.1	21.0
Mixed	12	3.5	2.0	6.0
Other	14	4.1	2.5	6.8
White	212	62.0	56.7	67.0
Not stated	0	0.0		
Total	342	100.0		
Total BME Population	130	38.0	33.0	43.3
Total Foreign National Population	70	20.5	16.5	25.1

Table 3: Nationality of Prisoners at HMP Leicester 31/7/07

Country of birth	Number of Prisoners	Percentage	95% Confidence Interval	
			Upper	Lower
Bangladesh	2	0.6	0.2	2.1
Cameroon	6	1.8	0.8	3.8
India	10	2.9	1.6	5.3
Iran	5	1.5	0.6	3.4
Iraq	2	0.6	0.2	2.1
Ireland	2	0.6	0.2	2.1
Nigeria	3	1.5	0.6	3.4
Poland	4	1.2	0.3	3.0
Somalia	3	1.5	0.6	3.4
Sudan	2	0.6	0.2	2.1
Vietnam	5	1.5	0.6	3.4
South Africa	4	1.2	0.3	3.0
UK	272	79.5	74.9	83.5
Other	16	4.7	2.9	7.5
Not Known	6	1.8	0.8	3.8
Total	342			

1.3.5. Religion

Although it is difficult to distinguish between someone who is actively involved in religion from those who have a religious affiliation, information about a prisoners' religion is collected at HMP Leicester. This may be important as there is some evidence to suggest that involvement in religion or 'spirituality' may be an important factor in 'mental well being'. Some studies have shown that religious involvement is associated with a lower prevalence of depression. HMP Leicester has a pattern of religion which reflects the multicultural mix of the prison population. Table 4 shows that the religion with the highest number of prisoners was Christianity. However, a substantial proportion of the prison population comprises men from a Muslim background.

Table 4: Religion of Prisoners at HMP Leicester

Religious Affiliation	Number of Prisoners	Proportion %	95%CI	
			Lower	Upper
Atheist	1	0.3	0.1	1.6
Baptist	1	0.3	0.1	1.6
Buddhist	9	2.6	1.4	4.9
Church of England	93	27.1	22.7	32.1
Christian Scientist	1	0.3	0.1	1.6
Hindu	8	2.3	1.2	4.5
Jehovah's Witness	3	0.9	0.3	2.5
Jewish	1	0.3	0.1	1.6
Methodist	3	0.9	0.3	2.5
Muslim	46	13.4	10.2	17.4
Other Christian	3	0.9	0.3	2.5
Orthodox	1	0.3	0.1	1.6
Rastafarian	1	0.3	0.1	1.6
Roman Catholic	39	11.4	8.4	15.2
Sikh	9	2.6	1.4	4.9
None stated	124	41.4	36.3	46.7
Total	343			

2. Statement of the problem

The purpose of this paper is to highlight the health needs of prisoners at HMP Leicester, in order to facilitate better commissioning of health services. The prison population nationally is highly vulnerable and has the following characteristics:

- At any given time, around 20% of the prison population is on remand
- About 18% of the prison population is from a minority ethnic group; this includes a significant proportion of foreign nationals.
- Almost half of all prisoners have no educational qualifications and were unemployed prior to entering prison.
- Prisoners experience high levels of adverse family and social experience prior to entering prison.

Prisoners are also exposed to risk factors that predate the onset of mental ill health, and are associated with an increased likelihood of developing mental illness. According to *Psychiatric Morbidity among Prisoners in England and Wales* (1998) the vast majority of prisoners, over 96% in all groups, had suffered at least one stressful life event and about half had experienced five or more. Commonly reported stressful events for all groups of prisoners included: running away from home, serious money problems, separation or the breakdown of a steady relationship

Table 5: Childhood factors and adverse life events reported by prisoners in England and Wales (Source: Office of National Statistics 1996)

Childhood Factors and Adverse Life Events	Male Prisoners in England and Wales (%)	
	Remand	Sentenced
Reports having suffered from...		
violence at home	28	25
bullying	30	30
sexual abuse	9	8
serious or life threatening illness/injury	18	14
violence at work	6	6
separation due to marital difficulties or breakdown of steady relationship	42	45
death of a close friend or other relative	46	47
death of parent or sibling	24	29
death of spouse or child	6	6
stillbirth of baby	8	7
being expelled from school	55	49
running away from home	51	47
being homeless	47	37
serious money problems	55	50
being sacked or made redundant	44	49

As they hold a large number of remand prisoners and prisoners with short sentences, local prisons have a very high turnover. In addition, this population may consist of a high proportion of prisoners who may be experiencing difficulties in adjusting to their recent incarceration or recent sentencing.

3. Context

The commissioning for health services for prisoners is the now responsibility of local PCTs. This transfer of this commissioning role was based upon resolving concerns about the health of prisoners and the quality of care that they were receiving at a time when the responsibility for health in the prison service was discharged through prison governors. In 1996, Her Majesty's Chief Inspector of Prisons, Sir David Ramsbotham said

“Prisoners should be entitled to the same level of health care as that provided in society at large. Those who are sick, addicted, mentally ill or disabled should be treated, counselled and nursed to the same standards demanded within the National Health Service.” (HM Inspectorate of Prisons, 1996)

Further guidance has required PCTs to assess the needs of prisoners and to prioritise the development and implementation of prison health delivery plans. The funding responsibility for prison health services was transferred to the Department of Health from the Home Office in April 2003.

Currently the Healthcare Unit at HMP Leicester is managed by SERCO. HMP Leicester has an in-patient facility housing 11 beds comprising 2 single rooms, 3 double rooms and a dormitory with 3 beds. Further medical services include dentistry, physiotherapy, G.U. clinics and psychotherapists, an optician and a podiatrist. The Leicester Partnership Trust provides an In-reach Team. The prison dispensary is located in a small area on landing 2 next to the kitchen serving area, which causes problems of confidentiality for prisoners and prison officers

4. Prevalence of disease

In the *Survey of the Physical Health of Prisoners 1994*, Bridgwood and Malbon showed that generally the physical health of male prisoners is worse than that of people of equivalent age in the population as a whole. Although 60% of men rated their health as good or very good, 48% said they had a long-standing illness or disability. Male prisoners, aged between 18 and 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.

Reception screening of health problems is undertaken in order to assess the needs of prisoners, when they arrive at HMP Leicester. One of the problems with looking at prevalence rates of disease in prison is the fact that not everything may be disclosed by the prisoner during the reception interview. However, a paper-based record of health problems is kept by the prison health care team and in the last year a new computer based record keeping system has been utilised. From these sources, the following health care issues merit discussion.

- Asthma
- Diabetes
- Epilepsy
- Coronary Heart Disease
- Blood borne infection
- Oral Health
- Mental Health
- Smoking
- Substance misuse

4.1 Asthma

The prevalence of asthma tends to be more common in the young, and as the prison population is predominantly young, the overall prevalence of asthma is likely to be higher than that of the general population. Table 6 shows data for the prevalence of self-reported wheezing, asthma which has been diagnosed in general practice and treated asthma in both the general population, and extrapolated for an average population of 355 at HMP Leicester. The figures, taken from Marshall et al (2000), were based on the *Health Survey for England 1996* and *Key Health Statistics from General Practice 1996*. In the period between January and September 2007 there had been 99 prisoners who disclosed that they were asthmatic as they passed through reception at HMP Leicester. On 26th June 2008 there were 57 prisoners out of a population of 368 on the day, who had disclosed that they were asthmatic to the health care staff at HMP Leicester; 15% of the prison population (95% CI 12.2%, 19.5%).

Table 6: Prevalence of wheezing, doctor-diagnosed asthma and treated asthma in the general male population extrapolated for HMP Leicester based on an Average Daily Population of 355 prisoners. (Source: Marshall et al., 2000)

Age Range	Average Daily Population of HMP Leicester	Wheezing in Last year	Estimated Number Wheezing based on ADP of 355	Diagnosed with Asthma%	Estimated Number diagnosed with Asthma based on ADP of 355	Treated for Asthma %	Estimated number treated for Asthma based on ADP of 355
21-24	120	20%	24	19%	23	7%	8
25-34	134	19%	25	12%	16	5%	7
35-44	62	18%	11	11%	7	4%	2
45+	39	19%	7	8%	3	4%	2
Total	355	19%	67	14%	49	5%	19

4.2 Diabetes

Table 7 shows the estimated prevalence of diabetes in the prison population, taken from Marshall et al (2000), which were extrapolated from the age-specific prevalence of diabetes in community populations. As the age profile of the prison population is generally young, the number of Type 2, insulin dependent, diabetics is likely to be much more common than that of Type 1.

Based on these data Marshall et al suggested that the expected rate of diabetes would be between 0.6% and 0.8% of the prison population. Extrapolated for HMP Leicester (ADP=355) this would give an expected number of diabetics of 2 or 3 prisoners. On 26th June 2008 there were in fact 14 prisoners, out of a prison roll of 368, who had declared themselves to be diabetic a prevalence of 3.8% (95% CI 2.3%, 6.3%) of the prison population at that time, far higher than expected. This would concur with research, such as that presented by Biswas et al (1997) which suggested that the real rate likely to be higher than expected estimates. In this study the health needs of the prison population were found to be far higher than the community as a whole, and implied that the prevalence of diabetes is 2 to 8 times greater, suggesting a hidden health care need among the prison population.

Table 7: Age specific prevalence of diabetes in the community and the estimated prevalence in the population of HMP Leicester (Source: Marshall et al., 2000)

Age range	Population of HMP Leicester based on ADP of 355	Type 2 Diabetes Prevalence in Prison in England and Wales %	Estimated number of Type 2 diabetics at HMP Leicester based on ADP of 355	Type 1 Diabetes Prevalence in Prison in England and Wales %	Estimated number of Type 1 diabetics at HMP Leicester based on ADP of 355
21-24	120	0.3	0	0.0	0
25-34	134	0.5	1	0.1	0
35-44	62	0.6	0	0.3	0
45-54	26	0.6	0	1.0	0
55-64	10	0.9	1	2.8	0
>64	3	1.1	0	4.2	0
Estimated number of diabetics at HMP Leicester based on ADP of 355			2		0

4.3 Epilepsy

The collection of data for epilepsy at HMP Leicester includes alcohol induced seizures. On 26th June 2008 epilepsy was prevalent in 14 out of 368 prisoners. This is a prevalence of 3.8% (95% CI 2.3%, 6.3%) of the prison population at that time. According to Marshall et al (2000) if the prevalence of epilepsy in the prison population is similar to that in the community as a whole then it would be expected that about 0.4% of the prison population to suffer from epilepsy. The prevalence of epilepsy therefore is likely to be significantly higher than the general population, and based on an ADP of 355 there is likely to be between 8 and 22 prisoners with epilepsy in HMP Leicester at any one time.

4.4 Cardiovascular disease

Heart Disease

Table 8 shows the age-specific prevalence of coronary heart disease in the general population and the estimated prevalence of heart disease for HMP Leicester. Based on these figures about 0.5% of male inmates are likely to suffer from coronary heart disease, or 2 inmates in an average daily population of 355.

However, evidence suggests that there are significant social class differences in cardiovascular disease morbidity and mortality, with the socio-economically disadvantaged groups having higher risk. As prison inmates are drawn largely from lower social classes 0.5% may be an underestimate. Marshall et al (2000) suggest an adjustment for the social class of prisoners in which the age-standardised prevalence of heart disease in social class I was half as much as that in social class IIIM and V. When this adjustment is taken into account, the estimated numbers of prisoners suffering with coronary heart disease, based on an average daily

population of 355, is 4 (1.1% of the prison population 95% CI 0.4, 2.9).

Table 8: Age specific prevalence of coronary heart disease in the community and the estimated prevalence in the population of HMP Leicester

Age range	Population of HMP Leicester based on ADP of 355	General Population %	Adjusted for Social Class of Prisoners %	Estimated number of Prisoners at HMP Leicester based on ADP of 355 adjusted for social class
21-24	120	0.0	0.0	0
25-34	134	0.3	0.5	1
35-44	62	0.5	0.8	0
45-54	26	3.0	4.5	1
55-64	13	10.3	15.5	2
Total	355			4

During the period January to September 2007, 12 prisoners reported themselves to be suffering with coronary heart disease. On 7th September 2007 there were 9 prisoners who reported themselves to be suffering with coronary heart disease.

Blood Pressure

As part of a survey of 94 prisoners at HMP Leicester, systolic blood pressure data was collected for 78 of the prisoners. Left untreated high blood pressure increases the risk of serious illnesses, and could be a strong independent predictor of heart attack, kidney failure or stroke. Figure 2 shows that systolic blood pressure is normally distributed amongst the sample, so it was possible to compute summary measures for systolic blood pressure against certain exposure variables, including homelessness, body mass index (BMI), drug and alcohol dependency and suicide ideation.

Figure 2: Systolic Blood Pressure of Prisoners at HMP Leicester

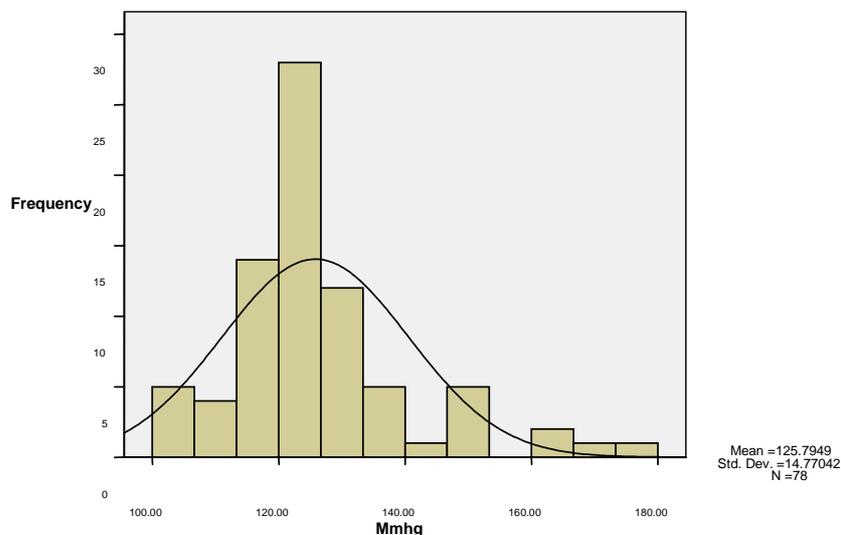


Table 9 shows that as a result of these tests there were no significant associations between systolic blood pressure and variables such as mental ill health,

homelessness, or with drug and alcohol dependence, although there was weak evidence of differences in the means which could be noted. The mean difference in the systolic blood pressure was higher amongst prisoners with mental ill health, homelessness and alcohol dependence. It was slightly lower for those who were drug dependent. There was a significant association between age and systolic blood pressure, linear regression suggested that for every increase in year systolic blood pressure increases by 0.38 (95% CI 0.0, 0.8) mmHg.

There was also a strong association in the difference in mean systolic blood pressure between those prisoners with a BMI below and above a BMI of 24.9 Kg/m². The mean difference was 7.91 mmHg lower in those with a lower BMI (95% CI -14.7, -1 mmHg). Linear regression suggested that for every increase in Kg/m² there is an increase in systolic blood pressure by 0.85 (95% CI 0.16, 1.53) mmHg.

Table 9: Association of systolic blood pressure with BMI, suicide ideation, homelessness, drug and alcohol dependency

	Frequency	Mean (mmhg)	Hypothesis test	Mean difference (mmhg)	95% confidence Interval of the difference	
Total	78				Lower	Upper
BMI						
<24.9	47	122.9	0.024	-7.91	-14.7	-1
>25	28	130.9				
Suicide Ideation and self harm						
Yes	20	127.7	0.5	2.56	-10	5.1
No	58	125.1				
Homelessness						
Yes	20	125.8	0.9	1	-9.5	9.3
No	58	125.7				
Drug dependent						
Yes	38	125.6	0.93	-3	-6.4	7
No	40	125.9				
Alcohol dependent						
Yes	20	128.8	0.28	2.9	-11.7	3.5
No	58	124.7				
Mental Ill Health						
Yes	44	127.1	0.37	3	-9.8	3.7
No	34	124.1				

Chest Pain

As part of the routine health screen the presence of chest pain is recorded, although the cause of the pain is not. As such the data probably indicates the prevalence of heart disease, other physical illnesses and somatisation disorder. The prevalence of chest pain amongst prisoners was 25 out of 368, 6.8% (95% CI 4.6%, 9.8%) of the

population on the day.

4.5 Prevalence of blood borne viral infections

About one in ten prisoners have antibodies to Hepatitis B and Hepatitis C, indicative of previous exposure to infection. Furthermore, of course, this also suggests that other prisoners who may share injecting equipment with these prisoners, their sexual partners within and outside of prison and persons who come into contact with their blood or saliva are at risk of infection.

The data for blood borne infection for HMP Leicester includes HIV. In the period between January and September 2007 there were 6 prisoners in HMP Leicester who had declared that they had Hepatitis C or HIV. ON 7th September 2007, all 6 prisoners were still inmates at HMP Leicester.

Data from a sample of 94 prisoners showed that 13 of the prisoners, 13.8% (95% CI 8.3%, 22.2%) were recorded as having a blood borne infection. Based on an ADP of 355 this would indicate a range of between 29 and 79 prisoners. This data was tested for association between blood borne infection and drug dependency and homelessness (Table 10). The chi-squared test confirmed an association between blood borne infection and drug and alcohol dependence and homelessness, each resulting in a P-value <0.05. The odds ratios show the drug dependent prisoners were 6 times (95% CI 1.9, 29.9) more likely and those who were homeless in the year prior to conviction 4 times (95% CI 1.1, 14.4) more likely to have reported a blood borne infection to the health care staff.

Table 10: Association of blood borne infection with drug dependency and homelessness.

	Frequency	Sample %	Have blood borne infection	P value	Odds	95% CI OR
Total	94	100	13			
Drug Dependence						
Yes	49	52.1	11	0.01	6.2	1.3, 29.9
No	45	47.9				
Homelessness						
Yes	16	17	5	0.03	4	1.1, 14.4
No	78	83				

4.6 Sexually transmitted diseases (STD)

There are no direct estimates of the prevalence of other sexually transmitted diseases in the UK prison population. However, according to Marshall et al (2000) it is possible to make an indirect estimate of the prevalence from national data sources as all genitourinary medicine (GUM) clinics in England submit KC60 statistical returns to the HIV and STD Division of the Public Health Laboratory Service.

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). A very large proportion of sexually transmitted infections remain undiagnosed and asymptomatic.

4.7 Dental health

A major determinant of poor oral health within the general population is the socio-economic circumstances in which individuals live (Daly et al 2002). Significant numbers of adults in social classes IV and V have substantial numbers of filled, decayed or unsound teeth. As the prison population is disproportionately from these social classes, dental health is significantly worse in prisoners than in the general population.

In the Scottish Prisons' Dental Health Survey 2002, prisoners had fewer standing and filled teeth but more decayed teeth than the general population. The prevalence of severe decay, classified by teeth with decay which has extended into the dental pulp was found to be three times higher than the general population.

This survey also found, for example, that 76% of adult male prisoners had a recognised need to visit a dentist, 42% reported bleeding gums and 7.3% of adult male prisoners were edentulous, they had no natural teeth. Extrapolating this data for HMP Leicester, based on an average daily population of 355, this would equate to 270 prisoners who are likely to have a recognised need to visit a dentist.

The Scottish Prisons' Dental Health Survey also found that there is a statistically significant relationship between the length of time spent in prison and the number of decayed and filled teeth. The survey found that it takes two years for the dental needs of prisoners to be addressed so that their needs improved to a stable level.

4.8 Mental Health

There is a high prevalence of mental illness in prisons. At HMP Leicester this is indicated by the fact that in June 2008 343 out of 368 prisoners had been prescribed medication for mental illness, this was 93.2% of the population (95% CI, 90.2%, 95.4%).

Data was collected on 94 prisoners, showing whether they had been referred to mental health services and whether a prisoner had previously tried to harm himself or take his own life. Of the prisoners in the sample, 57 (60.6%) had a mental health problem which required referral, such as depression, panic attacks and insomnia. The prevalence of such conditions in prison, according to the *Psychiatric Morbidity among Prisoners* (ONS, 1995) was 59%.

Table 11 shows the frequency, proportion and expected number of prisoners based on an average daily population of 355 prisoners for problems which have been shown to have an impact on mental ill health. It shows that the majority of prisoners are likely to suffer with mental health problems; there are also high rates of drug and alcohol dependency, suicide ideation or self-harm and homelessness.

Table 11: Frequency and proportion of mental illness, drug and alcohol dependence, suicide and homelessness in a sample of prisoners at HMP Leicester

	Frequency	Proportion %	95% Confidence Interval		Range based on ADP = 355
			Lower	Upper	
Total prisoners studied	94	100			
Have mental ill health problems	57	60.6	50.5	69.9	179-248
Have drug dependency	49	52.1	42.1	61.9	149-219
Have alcohol dependence	28	29.8	21.5	39.7	76-141
Suicide ideation/Self-harm	23	24.5	16.9	34.0	60-121
Homeless	16	17	10.8	25.9	38-92

As part of the study, mental health was cross tabulated with exposure variables (Table 12). The cross tabulations suggest that there appears to be an association between mental health, drug and alcohol dependence and homelessness. However, there was not a definite association with age.

Table 12: Association of mental illness with age, drug dependence, homelessness in a sample of prisoners at HMP Leicester

	Frequency	Sample %	Have mental illness	P value	Odds	95% CI OR
Total	94	100	57(60.6%)			
Age						
21 to 30	49	52.1	30	0.9		
31 to 40	30	31.9	18		0.95	0.38, 2.40
41 to 50	12	12.8	7		0.89	0.25, 3.20
51 to 60	2	2.1	1		0.63	0.04, 10.7
61 +	2	1.1	1		1.03	0.97, 1.1
Drug Dependence						
Yes	49	52.1	41	<0.001	9.3	3.5, 27.6
No	45	47.9				
Alcohol Dependence						
Yes	28	32	24	0.01	6	1.87, 19.20
No	66	68				
Homelessness						
Yes	16	17	14	0.016	5.70	1.21,26.77
No	78	83				

A chi-squared test was applied to determine the statistical significance of the associations and an odds ratio was gained to show the odds of having mental ill health when exposed to these variables. The chi-squared test confirmed an association with drug and alcohol dependence and homelessness, each resulting in a P-value <0.05. The P-value for a trend between age and mental health was 0.9, suggesting no statistically significant association between the two. However, there were low numbers of prisoners aged over 50 in the sample, most of whom had mental ill health problems. The odds ratios show the drug dependent prisoners were 9 times more likely, those who were alcohol dependent were 6 times more likely and

those who were homeless in the year prior to conviction 5.7 times more likely to have mental illness. The 95% confidence intervals around the odds ratios show that the association is strong, because the upper and lower limits do not cross an odds ratio of 1.

With respect to the association between suicide ideation and self harm amongst the prison population, Table 13 shows that there were no strong associations in the study sample. However, proportionately fewer of the 31 to 40 age group had tried to harm themselves or had contemplated suicide than the other age groups.

Table 13: Association of suicide ideation and self harm with age, drug dependence, homelessness in a sample of prisoners at HMP Leicester

	Frequency	Sample %	Have suicide ideation/self harm	P value	Odds Ratio	95% CI OR
Total	94	100	23(24.5%)			
Age						
21 to 30	49	52.1	15	0.15		
31 to 40	30	31.9	4		0.35	0.10, 1.18
41 to 50	12	12.8	3		0.76	0.18, 3.19
51 to 60	2	2.1	0		0.94	0.87, 1.02
61 +	2	1.1	1		1.07	0.94, 1.21
Drug Dependence						
Yes	49	52.1	14	0.33	1.6	0.61, 4.17
No	45	47.9				
Alcohol Dependence						
Yes	28	29.8	9	0.26	1.76	0.65, 4.73
No	66	70.2				
Homelessness						
Yes	16	17	6	0.18	2.15	0.68, 6.77
No	78	83				

4.9 Smoking

Although smoking is a high priority area for public policy, evidence suggests that a high proportion of inmates smoke. With respect to the prevalence of smoking at HMP Leicester, in a review it was found that 288 of 368 prisoners in HMP Leicester were recorded as smokers, a prevalence of 78.3% (95% CI 73.8, 82.2). Based on an ADP of 355 this would mean that between 262 and 292 prisoners are likely to smoke.

4.10 Substance misuse

Drug use often contributes to imprisonment. In 2002, 16% of male sentenced prisoners were convicted of drug offences. In a study by Borrill et al (2003), a small sample of men from minority ethnic groups were found to have substance misuse problems which included hazardous or harmful levels of alcohol consumption in the

year before imprisonment while 95% had used at least one drug in the same period.

Table 14: Recorded drug use by prisoners at HMP Leicester

Drug Used	Frequency /362	Proportion %	95% CI		Range based on ADP = 355
			Lower	Upper	
Crack Cocaine	117	32.3	27.7	37.3	98 - 132
Heroin	132	36.5	31.7	41.5	112 - 147
Amphetamines	83	22.9	18.9	27.5	67 - 98
Methadone	97	26.8	22.5	31.6	80 - 112
Benzodiazepines	105	29	24.6	33.9	87 - 120
Other substances	63	17.4	13.8	21.6	49 - 77

Recorded drug use at HMP Leicester suggests that there are high rates among the prison population. Of the most frequently used groups those derived from opiates have the highest use, with heroin used by 36.5% of prisoners (95% CI 31.7%, 41.5%) and Crack Cocaine by 32.3% of prisoners (95% CI 27.7%, 37.3%). Previous or present intravenous drug use was prevalent among 23.9% (95% CI 19.8%, 28.5%).

Data from the survey of 94 prisoners at HMP Leicester also allowed hypothesis testing on the impact of drug and alcohol use on BMI. These tests showed that there was no association between a prisoners BMI and alcohol dependency. However, there was a strong association ($p = 0.07$) between those with a BMI of less than 20 Kg/m² and drug dependency. 83% of those prisoners with a BMI under 20 had a drug dependency.

4.11 Summary

Table 15 (overleaf) shows a summary of the prevalence of the health issues discussed in this assessment, with the 95% confidence intervals around the proportions and the number of prisoners expected to be suffering from those illnesses based on a standard population of 355 prisoners. It shows the high levels of mental health needs, drug and alcohol use and the likely prevalence of dental health need.

Table 15: Summary of disease at HMP Leicester

Disease	Prevalence %	95% Confidence Interval %		Prisoners with condition based on ADP 355		
		Lower	Upper	Number	Lower	Upper
Asthma	15	12.2	19.5	53	43	67
Diabetes	3.8	2.3	6.3	13	8	22
Epilepsy	3.8	2.3	6.3	13	8	22
Heart disease	1.1	0.4	2.9	4	1	10
Chest Pain	6.8	4.6	9.8	24	16	35
Hepatitis C/HIV	1.7	0.8	3.7	6	3	13
Any Blood Borne Infection	13.8	8.3	22.2	49	29	79
Dental Health Need	76	71.4	80.2	270	253	285
Have mental ill health problems	60.6	50.5	69.9	215	179	248
Have drug dependence	52.1	42.1	61.9	185	149	219
Have alcohol dependence	29.8	21.5	39.7	106	76	141
Suicide ideation/Self-harm	24.5	16.9	34	87	60	121
Homeless prior to imprisonment	17	10.8	25.9	60	38	92

5. Services Currently available

In this section the current range of health services available to prisoners at HMP Leicester are discussed. These range from advice to specialist investigation and management. The services are also compared those available to the general population. There are different models of health care services across the prison estate, which have been categorised into five models by the Joint Prison Service and National Health Service Executive Working Group (1998).

Table 16: The five main models of health care provision in prisons.

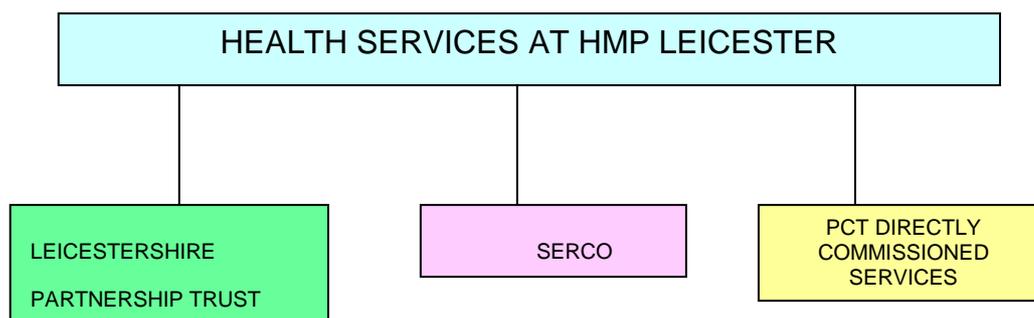
	Model
1	One or more directly employed full time prison doctor supported by a mix of health care officers and nurses provide primary care. External NHS specialists provide specialist care. A variety of local contractual arrangements exist to support this requirement. The prison may have its own pharmacy 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 in 1. This applies to predominantly smaller establishments.
3	Primary care contracted out to a local service provider to provide full time medical services again supported as in 1.
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.

Marshall et al (2000) suggest that these models serve as a general description, and that there are prisons, where different combinations of the models are implemented. However, the models of care show the range of different clinicians who may be directly employed or contracted to deliver health care in prisons. Health care at HMP Leicester is provided under a variation of model 3.

5.1 Health Services at HMP Leicester

The categories of services available to the prison population are broadly the same as those in the community in that they include informal self-care, primary care and secondary care. However, access to these services is different. In addition the high rate of turnover of prisoners makes it difficult to communicate results and to arrange follow-up.

Figure 3: Health Services delivered at HMP Leicester



The delivery of primary health services at HMP Leicester can be placed under three broad headings. Firstly, general health care is delivered by Serco. This includes general nursing care and General Practice. Secondly, Leicester City Primary Care Trust directly commissions a number of services, for example dentistry and genito-urinary medicine. Thirdly, there are a number of psychiatric primary care services, commissioned by LCPCT which are delivered by Leicestershire Partnership Trust (LPT).

There are other types of care which should be considered. If a prisoner requires acute health care, this is likely to be delivered in a secondary care facility, for example University Hospitals Leicester or a psychiatric inpatient facility operated by LPT. With regard to informal care, it is important to consider the care and support which are not available to prisoners, for example access to health information, the advice of family members and over the counter medication.

Figure 3 shows the organisation of healthcare delivered at HMP Leicester and Table 17 shows the timetable of healthcare clinics at the prison, which are held weekly unless otherwise stated.

Table 17: Healthcare clinics at HMP Leicester

Monday am	Monday pm
GP Clinic	Hep B Vaccination clinic
Tuesday am	Tuesday pm
GP Clinic	Physiotherapy
Cognitive Behavioural Therapy	
Optician (Monthly)	
Podiatrist (Monthly)	
Wednesday am	Wednesday pm
GP Clinic	Dentist
Phlebotomy (if required)	Phlebotomy (if required)
	Smoking Cessation
Thursday am	Thursday pm
GP Clinic	

Friday am	Friday pm
GP Clinic	

Nurse Clinical Interventions on a daily basis.

5.2 Serco Services

The *Health Care Standards for Prisons in England and Wales* 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, counselling and health promotion. It also includes education of HMP Leicester prison staff about illness, co-operation with governance issues such as infection control and the delivery of prison healthcare key performance indicators.

HMP Leicester has a health care manager, who is a registered senior nurse, a full time GP, and a number of registered and unregistered nurses. The care offered by this service includes 24 hour nursing cover, with an enhanced health care facility.

5.2.1 Health screening on arrival at and leaving HMP Leicester

The Health Care Standards for Prisons in England and Wales require all prisoners to undergo health screening on arrival at prison and assessment following transfer between prisons or from an outside hospital for in-patient care. Prisoners at HMP Leicester are seen by a healthcare worker on the day of their arrival and by the GP within 24 hours, if necessary. At this assessment prisoners are given an induction to the prison health care services.

As HMP Leicester is a local prison, the services provided by Serco have to cope with the large numbers of prisoners received every day. Depending on the number of prisoners being received, the initial screening service is often rushed and it can be difficult to identify all health problems. Thus a follow up to the initial assessment, is available to prisoners, when required. The Reed Committee recommended that prisoners should be subject to discharge planning, in a similar way to patients being discharged from hospital. Prisoners are examined by the GP prior to discharge, when it is possible so to do.

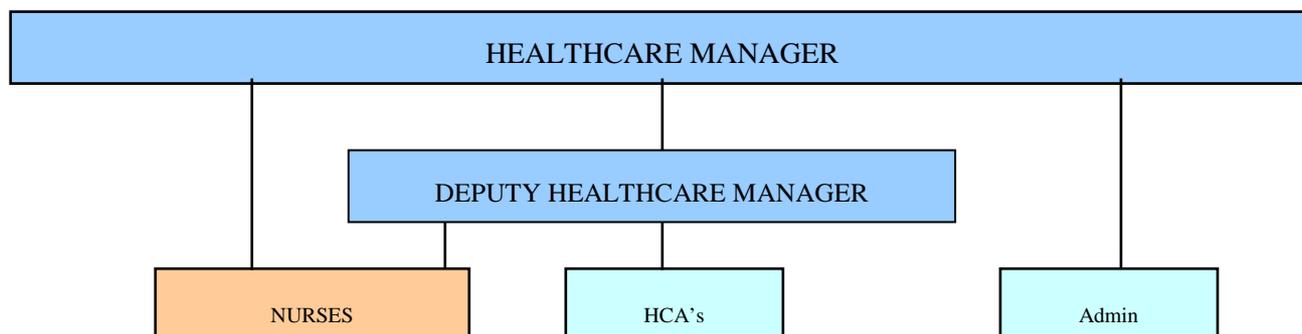
Registration with a GP is often an issue for prisoners, and when they leave custody at the end of sentence or after a period on remand, transfer back to the NHS can pose problems. This is particularly true in the case of a prisoner having no home address when he is released. Such problems can be exacerbated by lack of coordination between different services which sometimes results in the summary of the prison health care notes not having a forwarding address.

5.2.2 Prison General Practice

The doctor providing primary care services within the prison health care system should be general practitioners or have experience of general practice. Serco provides GP as part of prison health care. The use of general practice by patients is made difficult by the turnover of the prison population. Male prisoners are likely to consult the GP at least once during their stay at HMP Leicester.

5.2.3 Primary Care Nursing

Figure 4: Health Services delivered by Serco at HMP Leicester



In addition to responsibilities around health screening on arrival at HMP Leicester, the primary care nursing facility will deal with most minor illness. Following consultation with a health care worker or a doctor, the patients are given advice, reassurance, treatments or are referred to a specialist.

Table 18 shows that at HMP Leicester the nursing team consists of a team of 9 general nurses, 5.6 mental health trained nurses and 2.4 health care assistants. In addition there is an administrative member of staff, a manager and deputy manager.

Table 18: Staffing Profile at HMP Leicester July 2008

Staff role	Number of Staff Whole Time Equivalents
Healthcare Manager	1
Healthcare Deputy Manager	1
Psychiatric Nurses	5.6
General Nurses	9
Healthcare Assistants	2.4
Administration	2

5.2.4 Services for physical health problems

Members of the nursing staff have different specialities, and may run clinics to help prisoners with particular problems or deliver health education activities to prison staff about certain conditions. The following merit consideration:

5.2.4.1 Epilepsy

Most prisoners with epilepsy will have already been diagnosed prior to imprisonment. At HMP Leicester 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 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. Table 19 shows the waiting times for the nurse-led clinic for epilepsy in June 2008. It suggests that, whilst few in total, three prisoners had waited more than 4 weeks to be seen.

Table 19: Nurse led epilepsy clinic waiting lists at HMP Leicester June 2008

Weeks waiting	Number of Patients	Proportion %
Epilepsy		
0	1	25
4	1	25
5	1	25
6	1	25
Total	4	

5.2.4.2 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. HMP Leicester provides an asthma clinic, which has been set up to provide specialist care to inmates. Its purpose is to advise, treat and support inmates with asthma. The nurses assess an inmate's respiratory function and establish a baseline for those prisoners not on medication and monitor the progress of those on regular medication. They also train prisoners in the most effective use of the prescribed medicines. In June 2008, there were 11 patients waiting to be seen, 5 of whom had waited 3 weeks or more.

Table 20: Nurse led asthma clinic waiting list at HMP Leicester June 2008

Weeks waiting	Number of patients waiting	Proportion %	95% CI	
			Lower	Upper
Asthma				
0	1	9.1	1.6	37.7
1	1	9.1	1.6	37.7
2	4	36.4	15.2	64.6
3	1	9.1	1.6	37.7
4	1	9.1	1.6	37.7
5	1	9.1	1.6	37.7
6	1	9.1	1.6	37.7
7	0	0	0	0
8	1	9.1	1.6	37.7
Total	11			

5.2.4.3 Diabetes

With regard to diabetic care, the role of Serco nursing staff is to educate prisoners about important aspects of diabetic self-management. Nurses assess the level of understanding of prisoners with diabetes with respect to the importance of adhering to their diabetic diet, monitoring their own blood sugar and when necessary adjusting their dose of insulin. Nursing staff have a role in making diabetic prisoners aware of the symptoms of hypoglycaemia and how to avoid them. Control of diabetes can be improved if a patient follows a regular routine of daily activity and mealtimes. Thus because there is a strict dietary regime in HMP Leicester, with no alcohol and compliance with treatment, diabetic control can be achieved in the majority of patients.

Members of the nursing staff also have a role in the education of prison officers and other prisoners in recognising the signs of hypoglycaemia, so that they can act to prevent diabetic coma. This is particularly important because prison staff may misinterpret the actions of a diabetic prisoner.

HMP Leicester now has a computerised register of diabetic patients. However, the turnover in the prison population means that it is unlikely that a diabetic prisoner will have the necessary regular reviews, such as retinal screening and checks for ischaemic heart disease and cardiovascular risk factors. Although an appointment with the podiatrist is made routinely for all diabetic prisoners.

5.2.4.4 Blood Borne Viruses

The primary care staff also clinics concerned with blood borne viruses and their 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. On reception to HMP Leicester all prisoners are assessed as to whether they have a heightened risk of blood borne infections and all are offered a course of immunisation against hepatitis B and hepatitis C infections. These are courses of three injections over a period of months. However, as the rate of turnover of prisoners is high, immunisation courses are not always completed before a prisoner is released from custody or transferred.

5.2.4.5 Waiting Times for other nurse-led clinics

On 26th June 2008 there was a short review of waiting times at the healthcare clinics at HMP Leicester. Table 19 shows the numbers waiting for an appointment with nurse led clinics, such as the Over 60s and blood pressure were small, with a longest waiting time of 2 weeks. However, waiting times for the Meningitis C vaccination clinics, whilst few in total, involved waits of up to 10 weeks.

Table 21: Nurse led clinic waiting lists at HMP Leicester June 2008

Weeks waiting	Number of Patients	Proportion %
Over 60s nurse clinic		
0	0	0
1	1	14
2	6	86
Total	7	
Meningitis C Vaccinations		
0	1	33
8	1	33
10	1	33
Total	3	
Blood Pressure		
2	3	100
Total	3	

Table 22 shows nurse-led services where the numbers of patients waiting are higher and where there are longer waiting times. As numbers waiting for consultations with these clinics are higher the proportions have been tested for 95% confidence intervals, however as the numbers are still small the intervals remain relatively wide. It is clear that there are long waits in these popular clinics. 32% of patients on the waiting list for smoking cessation advice, whilst almost 40% of the waiting list for Hepatitis B vaccination had waited at least five weeks, with the longest wait being 12 weeks.

Table 22: Nurse led clinic waiting lists at HMP Leicester June 2008

Weeks waiting	Number of patients waiting	Proportion %	95% CI	
			Lower	Upper
Smoking Cessation				
0	4	16	6.4	34.7
1	2	8	2.2	25
2	4	16	6.4	34.7
3	6	24	11.5	43.4
4	1	4	0.7	19.5
5	5	20	8.9	39.1
6	1	4	0.7	19.5

7	0	0	0	0
8	2	8	2.2	25
Total	25	100		
Hepatitis B Vaccinations				
0	4	22.2	9	45.2
1	0	0	0	0
2	1	5.6	1	25.8
3	3	16.7	5.8	39.2
4	3	16.7	5.8	39.2
5	2	11.1	3.1	32.8
6	1	5.6	1	25.8
7	1	5.6	1	25.8
8	1	5.6	1	25.8
9	1	5.6	1	25.8
10	0	0	0	0
11	0	0	0	0
12	1	5.6	1	25.8
Total	18			
Phlebotomy				
0	8	30.8	16.5	50
1	2	7.7	2.1	24.1
2	7	26.9	13.7	46.1
3	7	26.9	13.7	46.1
4	1	3.8	0.7	18.9
5	1	3.8	0.7	18.9
Total	26			

5.3 Leicestershire Partnership Trust

Most mental health problems, such as neuroses, are dealt with through informal care and primary care. 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.

Less serious mental health problems (neurotic disorders) are dealt with by the primary care team: health care workers and prison doctors. Treatment for severe and enduring mental health problems is usually delivered by the prison in-reach team, which comprises 2 Community Psychiatric Nurses 5 days per week.

5.4 PCT Directly Commissioned Services

5.4.1 Optometry

An optician visits HMP Leicester to run a clinic on a monthly basis. Sentenced prisoners are not charged for the eye test, prescription or NHS glasses. Those prisoners on remand may be charged for the optical service but will be able to have NHS glasses free of charge too. Table 23 shows that 4 out of 19 patients had waited for longer than a month to be seen by the optometrist.

Table 23: Waiting times for the optometry service at HMP Leicester (June 2008)

Weeks waiting	Number of patients waiting	Proportion %	95% CI	
			Lower	Upper
Optometry				
0	3	15.8	5.5	37.6
1	4	21.1	8.5	43.3
2	4	21.1	8.5	43.3
3	3	15.8	5.5	37.6
4	1	5.3	0.9	24.6
5	4	21.1	8.5	43.3
Total	19			

5.4.2 Genito-urinary medicine

The management of most sexually transmitted diseases in HMP Leicester is carried out by a GP specialist in genito-urinary medicine (GUM). In June 2008 there were 2 people waiting to be seen by the GUM service, one of who had waited for 3 weeks. From June 2008, prisoners will be offered Chlamydia screening.

Table 24: Waiting times for the GUM service at HMP Leicester June 2008

Weeks waiting	Number of Patients	Proportion %
Genito-urinary Medicine		
0	1	50
3	1	50
Total	2	

5.4.3 Dentistry

HMP Leicester provides a dental clinic on a weekly basis. In the past it has been difficult to get an appointment with the dentist especially given the level of need however there has recently been no waiting list for the service. The reported reasons that prisoners give for visiting a dentist are different to those reported by the population generally, as fewer will attend for a regular dental check-up and more will attend because of toothache or other trouble with their teeth. There is therefore a concentration on the treatment of decayed teeth rather than a programme in which prisoners are screened for dental health needs on arrival at the prison.

5.4.4 Physiotherapy

Musculo-skeletal problems are common amongst prisoners. HMP Leicester has a weekly physiotherapy clinic for the treatment of patients with conditions, such as chronic back pain. If a prisoner suffered with an acute musculo-skeletal problem, they will be seen by the GP to see if pain control was required. A patient who required further intervention, for example bed rest, would be treated in secondary care. In June 2008 there were 6 patients waiting to be seen by the physiotherapist.

Table 25: Waiting times for the physiotherapy service at HMP Leicester June 2008

Weeks waiting	Number of Patients	Proportion %
Physiotherapist		
0	3	50
1	1	17
2	2	33
Total	6	

5.4.5 Podiatry

A podiatrist is commissioned to visit the prison on a monthly basis. Members of the healthcare staff report that they routinely refer any diabetic patients to this service. Table 26 shows that in June 2008 there were 5 prisoners waiting to be seen by the podiatrist, one of whom had waited for 5 weeks.

Table 26: Waiting times for the podiatry service at HMP Leicester June 2008

Weeks waiting	Number of Patients	Proportion %
Podiatrist		
0	0	0
1	0	0
2	3	60
3	1	20
4	0	0

	5	1	20
Total		5	

5.4.6 Cognitive Behavioural Therapy (CBT)

There is a weekly Cognitive Behavioural Therapy (CBT) clinic held at HMP Leicester. This clinic offers a type of psychotherapy based upon a connection between how people think, feel and act. Changing the way people think can change a person's behaviour and emotional reactions.

NICE guidance suggests that the efficacy of CBT is supported by randomised controlled trials (RCTs). For many diagnostic groups the RCTs indicated that approximately 50% of individuals with depression experience clinically important improvement. This is similar to the outcomes that have been measured in people who have been prescribed anti-depressant drugs.

5.5 Health Promotion

As the prison regime at HMP Leicester governs all aspects of a prisoner's life (accommodation, diet, exercise, occupation) it has control over many of the factors which affect the health of the prison population. The prevention of disease and health promotion should be the responsibility of clinicians and other professionals working at the prison, and a health promotion ethos should govern the prison systems.

This is important because, according to Marshall et al (2000) the environment in prisons is unique and in some ways - because of lack of privacy, stress, lack of normal social contact and support - potentially harmful to health. Thus the health of prisoners should be considered in the ordinary everyday activities of the prison.

A healthy policy would mean that senior management team automatically consider the health implications whenever they review existing policy and practice or intended policy changes and their implementation. The aim of this would be to ensure that wider prison policies would assist prisoners and staff in making healthy choices and limits areas of potential harm. Examples of such policies could be anti-bullying, education, and involving staff and prisoners in health promotion campaigns.

5.6 Self Care

HMP Leicester offers no access to informal care such as 'over the counter' treatments. As with the population in general, health problems are common, but consultations with health professionals can be unnecessary or relatively infrequent.

For the prisoners at HMP Leicester several factors restrict self-care. Firstly, they are likely to have little disposable income for over the counter medication. Secondly, prisoners do not have social networks, such as their families, who would provide help and support with healthcare problems. Thirdly, there is evidence to suggest that prisoners in general may not be knowledgeable about health or self-care, or may hold views which cause them to be fatalistic about their health.

Finally, prisoners tend to become institutionalised often turning to primary care for less important medical conditions than in an equivalent community setting. This can reduce the time available for the detection of important health problems and according to Marshall et al (2000), may lead to health professionals not using all of their essential skills.

The health care service offers a range of patient information such as leaflets, books, and DVDs and information on how to access and make use of health services.

5.7 Pharmacy

The pharmacy service is currently provided by Leicestershire Partnership Trust. This includes an on site pharmacy technician from Monday to Friday. It also includes regular visits by a pharmacist

5.8 Reducing the harm caused by drugs

5.8.1 Counselling, Assessment, Referral, Advice and Throughcare service (CARAT)

The aim of CARATs is to provide specialist advice and support the drug treatment service for prisoners in order to reduce the harm caused by drugs. CARAT workers act in a key role by providing advice, information and support to prisoners. In addition they provide care co-ordination in order to ensure the continuity of care between what is provided in HMP Leicester and what is provided in the community.

5.8.2 Integrated Drug Treatment system (IDTS)

IDTS is a new approach to drug treatment in the prison service which involves the Counselling, Assessment, Referral, Advice and Throughcare service (CARAT) prison healthcare and staff working together more closely. From 1st April 2008 funding has been allocated for the PCT, HMP Leicester and CARAT to develop IDTS.

The integrated service is seen as a step towards a prisoner giving up drugs, and may involve them being prescribed medication such as Methadone or Subutex. IDTS is expected to reduce the risk of suicide in prison, reduce the risk of overdose on release from prison, reduce the risk of re-offending and reduce violent conduct by prisoners. There are five key elements to the IDTS approach:

- Improve clinical management with greater use of stabilisation and maintenance prescriptions
- Intensive CARAT support for the first 28 days that a prisoner is in custody
- Greater integration of drug treatment, particularly clinical and CARATs services
- Better targeting of interventions to match individual need, including IDTS specific group work packages and one-to-one sessions
- Strengthened links to Community Services

5.9 Did not attend (DNA) appointments

HMP Leicester has a prison officer dedicated to accompany a patient to a clinic. Therefore, there are no cancelled NHS appointments at the prison. It is, however, possible for a patient to refuse to attend a particular appointment. In June 2008 there were 3 DNA appointments recorded on the healthcare computer system; 2 with the physiotherapist and one with the GP.

6. Prisoner opinions about quality of life at HMP Leicester

In April 2008 the bi-annual survey, 'Measuring the Quality of Prison Life' (MQPL), was carried out at HMP Leicester. This questionnaire investigates prisoners' perceptions of their quality of life. 110 prisoners from 286 were selected to participate in the survey, some of whom were located on the healthcare unit. The survey is important to the needs assessment because the quality of life at the prison has a bearing on the health of prisoners. A comparison with two previous surveys showed that in prisoners' rating of 'overall quality of life and their level of agreement that Leicester was 'a decent prison', there was a decrease from October 2004 to April 2006 followed by a statistically significant increase from April 2006 to April 2008.

With regard to whether HMP Leicester was a 'decent prison' 29.9% of prisoners agreed that it was, whereas 44.9% disagreed. The mean score between one and ten for 'overall quality of life' was 4.55. When the aspects of life at HMP Leicester were investigated the scores were close to average, with none of the then indicating particularly negative perceptions.

The summary suggests that a few scores (out of 5), for example, Relationships with Staff 2 (2.91), Inclusion (2.88), Wellbeing (2.92) and Rehabilitation (2.92), fell just marginally below the neutral. Scores for Fairness (2.99), Order (3.06), and Decency (3.05) fell closest to the neutral point of three. Other scores ranged from marginally positive to the most positive scores, for Offending Behavioural (OB) Programmes (3.55), Feeling Safe (3.46), Drug Culture (3.42) and Supporting Safety (3.40). At 2.97 the score for Healthcare was considered to be neutral. The score for Healthcare had significantly increased in the time between 2006 and 2008.

When asked to write down the three most positive and three most negative aspects of life at Leicester, prisoners wrote negative comments about 'regime', in particular the time which a prisoner spends in cell. There were positive comments about addressing alcohol or other drug problems with a few negative comments referring to detoxification and a few citing the provision of 'courses'.

7. Recommendations

Target Area	Recommended Action
Clinical Governance	Healthcare team and appropriate HMP Leicester staff are recommended to continue to monitor and evaluate the governance procedures for the healthcare delivered at HMP Leicester.
Communicable Disease	Healthcare team should continue to support prison staff by briefing them about blood borne viruses and infection control issues.
Self-care	<p>HMP Leicester should investigate ways in which prisoners may support themselves in the treatment of minor illnesses.</p> <p>Prisoners should continue to be offered information about health during induction and this should reflect the complex nature of healthcare in the prison population.</p> <p>Health promotion about the effects of risk taking behaviour on mental and physical health and well being, including well man screening, stop smoking.</p> <p>Develop strategies to reduce suicide and for mental health promotion</p>
Dentistry	<p>There should be regular reviews of the dental service at HMP Leicester to ensure that it is being resourced at a level which reflects the very high levels of dental need.</p> <hr/> <p>Oral health promotion information should be available to all prisoners on induction.</p> <p>HMP Leicester, Leicester City PCT and the dental practice should investigate ways of making better use of the skills of dental hygienists and therapists in the delivery of preventive dental care.</p> <p>Where possible care should begin on stabilising dental disease amongst prisoners, with guidelines for triaging dental patients into routine and emergency categories.</p> <hr/>
Primary Care	<p>Nurse led services should use the intelligence generated by new data systems to develop clinics so that patients are not waiting for long periods for clinic treatments.</p> <p>Develop a well man clinic sharing information with other relevant services</p>
Pharmacy	There should be regular monitoring and review of the pharmacy services, to ensure that the service is responding to changing polices and to develop the role of pharmacy personnel in health promotion and the treatment of minor illnesses.

Mental Health	<p>HMP Leicester should ensure continuity of care for those with mental illness between the prison and the community.</p> <p>There should be a focus on the continued development of services related to mental health and substance misuse.</p> <p>Develop further the treatment available for prisoners suffering with depression and neuroses, including 'talking therapies'.</p>
Preparation for release	<p>Arrangement of follow up to ensure continuity of care, this should include where a prisoner is going to live, GP registration and passing on health records.</p> <p>Transfer of records to appropriate health care teams, such as community mental health care team. Preparation of appropriate records for a prisoner to be transferred.</p> <p>Follow up GP registration and liaise with community health care teams. Follow up with other prison if a prisoner is transferred.</p> <p>Housing needs assessment developed and an action plan formulated with the intention of the prisoner having suitable secure post-release accommodation</p> <p>Ensure that prisoners whose accommodation needs change during custody have the opportunity to obtain advice about their circumstances.</p> <p>Prisoner released to former housing arrangements if acceptable and possible. Links made to social housing schemes or programmes such as Supporting People.</p>
Substance Misuse	<p>Continued identification of patients at reception screening of those requiring referral to drug treatment services.</p> <p>Development of the Integrated Drug Treatment System</p>
Workforce development	<p>Regular review of skill mix of the healthcare team to ensure training needs are met and ensure that the team continues to be able to meet Service Developments.</p>