



# **Hepatitis C Prevalence and Incidence among Scottish Prisoners and Staff Views of its Management**

## **Final Report**

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## CHAPTER 1. INTRODUCTION

Hepatitis C virus (HCV) infection is currently a major public health issue worldwide (Shepard et al, 2005). The World Health Organization estimates that between 130 and 170 million of the world's population is infected with the HCV virus (WHO, 2011). About one-third of those chronically infected develop cirrhosis within 20-30 years, some of whom progress to hepatocellular carcinoma or decompensated cirrhosis, requiring liver transplantation (Seeff, 2002). Hepatitis C, after alcohol, is the most important contributor to liver disease and the fastest growing cause of liver transplantation in developed countries. Primary prevention through needle and syringe programmes and opiate substitution treatment (OST) may reduce transmission during exposure (Turner et al, 2011) but has had limited impact on the overall prevalence of chronic disease (Sweeting et al, 2009), and may need to be supported by increasing scale-up of HCV treatment among people who inject (Martin et al, 2011).

In Scotland, approximately 1% or 50,000 people are estimated to be infected with the HCV virus and most (85–90%) of these cases have acquired their infection through drug injecting practices (Roy et al, 2006). An estimated 39,300 individuals are living with chronic hepatitis C in Scotland and consequently are at risk of developing cirrhosis and end stage liver disease (Scottish Executive, 2006).

Following an extensive consultation in 2005, the Scottish Government acknowledged the need for tackling the hepatitis C epidemic and published its Hepatitis C Action Plan for Scotland Phase I: September 2006–August 2008 (Scottish Executive, 2006).

The overall aims of Phase I were:

- to prevent the spread of hepatitis C, particularly among injecting drug users (IDUs);
- to diagnose hepatitis C infected persons, particularly those who would most benefit from treatment; and
- to ensure that those infected receive optimal treatment, care and support.

The Hepatitis C (Phase I) Action Plan involved increasing awareness about HCV among professionals, and generating evidence to inform proposals for the development of hepatitis C services during Phase II.

Phase II of the Action Plan was published in May 2008 (The Scottish Government, 2008) and was designed to implement the proposals put forward in Phase I in terms of improving all services applicable to the prevention of, and diagnosis, care and treatment of persons with HCV, including those within prison.

### **Hepatitis C in prisons**

Prisons have become an important focus of HCV prevention efforts not only in Scotland but the rest of the UK, largely due to their containing a high volume of current and previous injecting drug users (IDUs). Both the UK and Scottish governments have highlighted a need to increase prevention strategies and the volume of testing and treatment for HCV among prison populations in their respective Hepatitis C Action Plans (Scottish Executive, 2006, Scottish Government, 2008, Department of Health, 2004).

Worldwide, varying prevalence rates of hepatitis C infection within prisons have been reported. A meta-analysis of studies conducted with serum samples reported that prevalence rates ranged from 9% – 46% in studies which examined prevalence on entry to prison, and from 2% – 58% in studies which assessed prevalence during imprisonment (Vescio et al, 2008). However, owing to the heterogeneity of the studies included in the analysis, the authors caution against being able to make any direct comparisons between the studies' results. The meta-analysis did conclude however that in the 30 studies pooled in the analysis, prisoners who were current or former injecting drug users were 24 times more likely than non- injecting prisoners to be HCV positive (Vescio et al, 2008).

The most recent prevalence studies conducted in prisons in the UK and Ireland took place in the 1990s (Allwright et al, 2000, Gore et al 1999, Weild et al, 2000). All three studies were cross-sectional in design, all were conducted in several prisons and all used a questionnaire

to assess risk factors and voluntary oral fluid specimens to allow anonymous testing for the HCV virus.

Wield and colleagues (Wield et al, 2000) conducted a cross-sectional survey of eight prisons in England and Wales where a questionnaire was administered to prisoners who volunteered to participate. Oral fluid specimens were also voluntarily provided to allow testing for the HCV virus as well as other blood-borne viruses. Amongst all prisoners, the prevalence of the HCV virus was 7% but amongst those prisoners who self-reported ever having injected drugs, the prevalence rate was considerably higher at 31%.

Allwright and colleagues (Allwright et al, 2000) conducted a similar study in nine of the fifteen prisons in the Republic of Ireland. Amongst those prisoners who agreed to take part an overall prevalence rate of 37% was found. However, amongst the population of injecting drug users, 81% were found to be HCV positive.

In Scotland a prevalence study was undertaken in five adult prisons in the mid 1990's. It found a hepatitis C prevalence rate among those with a history of injecting drug use of 49% and 3% among those who reported never injecting (Gore et al, 1999).

Injecting drug use within the prison setting has been recognised as high risk behaviour contributing to the transmission rates of blood borne viruses among incarcerated populations. Although the frequency of injecting events in prison is reported to be low in comparison with injecting in the community, most injecting in this setting is carried out with shared unsterile equipment (Taylor et al, 1995). Variables such as length of time since first injected drugs, previous imprisonment, length of sentence and being female have all been shown to be independent risk factors for hepatitis C infection among prisoners (Macalino et al, 2004a).

A meta-analysis by Vescio and colleagues (Vescio et al, 2008) identified six studies that reported estimates of incidence ranging from between 0.4 and 18.3 per 100 person years (Butler et al, 2004; Christensen et al, 2000; Crofts et al, 1995; Macalino et al, 2004b;



O'Sullivan et al, 2003; Vlahov et al, 1993). However, within the sub-population of prisoners who had a history of injecting drug use, incidence rates were found to be considerably higher: ranging from between 5.5-38.2 per 100 person years (Christensen et al, 2000; Crofts et al, 1995; Macalino et al, 2004b). Only the study by Macalino et al (2004b) could attribute incident infections to in-prison transmission. Two recent Australian studies of continuously incarcerated injecting drug using prisoners found incidence rates of 34.2 and 22.6 per 100 person years, respectively (Dolan et al, 2010; Teutsch et al, 2010). Additionally, a systematic review and meta analysis of USA prison incidence studies found a low pooled HCV incidence rate of 0.75 per 100 person years among continuously incarcerated prisoners but did not differentiate between drug injectors and non injectors (Gough et al, 2010).

The only in-prison hepatitis C incidence study conducted in Scotland was carried out during 1999/2000 in HMP Shotts. During the study period 5 seroconversions were recorded. The overall incidence reported was 3.3/100 years of incarceration risk. The incidence of hepatitis C among prisoners varied between 1 per 100 person years for those who had never injected drugs, to 27 per 100 person years for those that reported sharing needle/syringes during the study period. For those that reported ever injecting drugs, the incidence rate observed was 12 per 100 person years of incarceration (Champion et al, 2004).

As well as investigating the relationship between the incidence of HCV in prisons and injecting drug use, transmission of HCV via other risk behaviours such as tattooing, 'bloody fights' and sexual behaviour has been explored (Dolan et al, 2010; Hellard et al, 2004; Miller et al, 2009; Teutsch et al, 2010).

Evidence from studies on the relationship between tattooing and HCV transmission in prisoner populations appears to be mixed with some studies reporting statistically significant correlations (Hellard et al, 2004; Hellard et al, 2007; Teutsch et al, 2010), and others not (Dolan et al, 2010; Miller et al, 2009). However, a systematic review and meta-analysis of tattooing and the risk of HCV transmission in studies that included (but were by no means confined to) those in a prison setting concluded that individuals with a history of

tattooing were 2.74 (2.38-3.15: CI 95%) times more likely to have HCV than those without a history of tattooing (Jafari et al, 2010).

Two case reports have shown an association between hepatitis C seroconversion and bloody fights (Bourlière et al, 2000; Nagami et al, 2011), although only one (Bourlière et al, 2000) could confirm this route of transmission.

### **Drug misuse in Scottish prisons**

Drug misuse and its associated risks is a major challenge for the Scottish Prison Service (SPS). The majority of people coming into prison have a drug problem, with two out of three testing positive for illegal drugs on admission, and their crime is often associated with funding their addiction (NHS National Services Scotland, 2011).

Although methadone maintenance therapy and other strategies to reduce drug use have become increasingly available for Scottish prisoners over recent years, (NHS National Services Scotland, 2011), the Scottish Prisoner Survey 2011 indicated that, overall, 8% of prisoners reported ever having injected whilst in custody. In both 2008 and 2009 a minority of prisoners (3%) reported injecting drugs in prison in the month prior to the survey; this proportion, however, had reduced to 1% in the 2011 Prisoner Survey (Scottish Prison Service, 2008; 2009, 2011a), although the majority of injections were performed with unsterile injecting equipment (Scottish Prison Service, 2011a).

No current evidence of the prevalence and incidence of HCV among Scottish prisoners is available, as it has been over ten years since the previous incidence and nearly twenty years since previous prevalence studies were carried out in Scottish prisons. Accordingly, Action 23 of the Hepatitis C Action Plan for Scotland (Phase II) (Scottish Government, 2008) called for a survey of Hepatitis C prevalence and incidence among prisoners in Scotland to be undertaken. The survey was commissioned by the Scottish Prison Service in 2009 with funding provided by the Scottish Government for the Hepatitis C Action Plan for Scotland: Phase II.

In addition to the prisoner survey, SPS also wished the study to include interviews with SPS staff. These interviews were to ascertain staff's views on how HCV is managed within prison, including testing, treatment and prevention, and if further harm reduction measures are necessary, including the introduction of needle exchange in Scottish prisons.

Recognising the risk to those who continue to inject whilst incarcerated, both Action Plan Phase I and Action Plan Phase II (Actions 7 and 17, respectively) recommended piloting a needle exchange service as part of a range of harm reduction measures within prisons to reduce the transmission of HCV infection.

Needle exchanges have been established in prisons in 10 countries, mainly in Europe but also in Central Asia and the Middle East (Jurgens et al, 2010). In Scotland, however, SPS has had difficulty in implementing a pilot needle exchange through opposition from prison unions. Where opposition has been encountered in other countries, this has centred on concerns over prison officer safety and the belief that providing sterile needle and syringes would encourage further drug use and episodes of drug overdose (Stevens et al, 2010). However, a review of 11 prison needle exchange evaluations found no evidence of an increase in drug use or drug injecting, nor any evidence that needles had been used as weapons (Stöver and Nelles, 2003).

In Scotland, the opposing arguments have been voiced by the prison unions, but the views of individual staff members within prisons have not been explored. Thus, investigating the views of those individuals who will be responsible for implementing a needle exchange or who have concerns about its introduction would allow SPS to have a greater understanding of underlying concerns and to address them more effectively. Such an investigation would also include an exploration of the appropriateness of introducing in-prison needle exchange in Scotland, given the small proportion of prisoners who continue to inject whilst incarcerated and the increasing availability of substitution and other therapies to reduce drug injecting in prison.

Data from both the prisoners' HCV prevalence and incidence study and interviews with staff will provide Scottish Prison Service with a better understanding of the proportion of Scotland's prison population that are infected with the hepatitis C virus, the rate of transmission of the virus within the prison setting, and staff views on the management of HCV. In turn, this will allow SPS to develop and provide the services funded under the Scottish Hepatitis C Action Plan aimed at protecting prisoners from infection and providing treatment for those infected.

## **Study Aims and Objectives**

### ***Aim***

To generate reliable data to inform the SPS and the NHS to develop effective needs led interventions for hepatitis C (HCV) infected prisoners, and to enable an informed assessment of the effectiveness of measures to prevent the spread of blood borne viruses, especially hepatitis C, within the prison setting, as outlined in the Hepatitis C (Phase (II)) Action Plan for Scotland (Scottish Government, 2008).

### ***Objectives***

1. To identify the current proportion of individuals infected by hepatitis C in Scotland's prisons, and the proportion of the prisoner group who are undiagnosed;
2. To identify any change in the prevalence of hepatitis C in the prison setting between the mid to late 1990's and the present, drawing on previous work;
3. To determine the extent of transmission of hepatitis C amongst prisoners in Scotland;
4. To determine that the methods of transmission are understood among the prisoner population;
5. To provide reliable prevalence and incidence data amongst specific prisoner sub-populations including women, young offenders or minority groups;

6. To compare hepatitis C prevalence among prisoners and IDU in community;
7. To provide information on the extent of and scope for hepatitis C diagnosis and treatment within prison;
8. To elicit staff views on how HCV is managed within prisons, including prevention, testing and treatment;
9. To elicit staff views on which of the above strategies are working and what improvements, if any, could be made, including the appropriateness of introducing needle exchange in Scottish prisons;
10. To identify further studies required to investigate hepatitis C risk among prisoners during and after prison release, including molecular and modelling studies of the extent and nature of hepatitis C infection among IDUs in prison and the community.

## **Report Outline**

Chapters 2 - 4 report the methods, findings and discussion related to Objectives 1-7, i.e. the prevalence and incidence of HCV infection among prisoners, associated risk behaviours and extent of testing and treatment for HCV among prisoners. These chapters are referred to collectively as “Survey of Incidence and Prevalence of Hepatitis C Infection among Scottish Prisoners”.

Chapters 5-9 report the methods, findings and discussion related to Objectives 8 and 9, i.e. staff views on HCV management. These chapters are referred to as “Staff Views on Management of Hepatitis in Scottish Prisons”.

Chapter 10 provides concluding comments based on the findings of both the prisoner survey and staff views and discusses further research.

## **CHAPTER 2. METHODOLOGY FOR INCIDENCE AND PREVALENCE OF HEPATITIS C INFECTION AMONG SCOTTISH PRISONERS SURVEY**

### **Study design**

A cross-sectional design was used to assess the incidence and prevalence of hepatitis C infection and associated risk behaviours amongst the Scottish prison population. All fourteen closed prisons in Scotland, including two private prisons, were included in the study. Scotland's two open establishments were excluded as any incident infections detected in either could not be attributed with certainty to within-prison transmission.

Prisoners completed an anonymous questionnaire which obtained information on prisoner category and sentencing details, history of drug injecting, exposure to potential risk factors for transmission of HCV infection, current drug treatment and uptake of prison healthcare services relating to hepatitis B (HBV) and hepatitis C.

The questionnaire was similar to that used in the previous HMP Shotts incidence study (Champion et al, 2004) with added questions about HCV testing within prison and, for those known to be positive, treatment received in or through the prison system. The questionnaire was also modelled on some of the questions asked in the community based Needle Exchange Surveillance Initiative (NESI) (University of the West of Scotland et al, 2010), which is also part of the Scottish Government Hepatitis C Action Plan Phase II (Scottish Government, 2008). This study involves the recruitment of injecting drug users (IDUs) from needle exchanges throughout Scotland to determine prevalence and incidence of HCV and associated risk behaviours using a similar data collection method to the one described here. Thus the data collected in the current prison study can be compared with that in the previous HMP Shotts incidence study and the ongoing NESI community study in fulfilment of Objectives 2 and 6. Some of the questions asked also allow comparison with the data collected in the SPS 13<sup>th</sup> Prisoner Survey (Scottish Prison Service, 2011a).

The questionnaire was piloted on a small group of former drug injectors in the community who had previous experience of imprisonment. The questionnaire took approximately ten

minutes to complete and was completely confidential and anonymous. No identifying demographic details were recorded. Prisoners were asked only for initials, date of birth and postcode of community residence to eliminate any duplicate interviews. To detect prevalence and incidence of HCV, a blood spot sample was taken from all consenting participants.

In the previous Scottish HCV incidence (Champion et al, 2004), and prevalence studies (Gore et al, 1999), oral fluid samples were taken to determine prevalence and incidence of infection respectively. Oral fluid can only detect HCV antibodies, so in the former study a cohort approach was undertaken to estimate incidence. The cohort approach required a period of time between collecting baseline prevalence data from those who had been incarcerated in closed conditions for at least six months and following them up six months later. Those who had tested HCV antibody negative at baseline were then retested to establish if any tested HCV antibody positive, thus establishing that infection had occurred within the prison. The problem with this approach is the potentially high attrition / follow-up loss as many prisoners will leave prison before the follow-up survey as well as loss due to transfer, absence or withdrawal of consent at time of follow-up. For example in the HMP Shotts incidence study more than a quarter (28%) of prisoners were lost to follow-up and 15% did not take part in the follow up stage of the study (Champion et al, 2004).

Since the HMP Shotts study was undertaken, a technique for estimating HCV incidence with dried blood spots (DBS) has been developed. Following HCV infection, it can take several weeks for antibodies against HCV to become detectable in laboratory assays (the “window period”) (ACMD, 2009). However, viral RNA, detected by the polymerase chain reaction (PCR) assay, can be detected in blood from about two weeks after infection and is the only viral marker detectable in early infection. Thus a sample testing HCV antibody negative but HCV RNA/PCR positive would be deemed a recent infection.

Dried blood spot testing thus allows the detection of individuals who (i) have ever been infected with HCV (i.e. antibody positive), and ii) have recently become infected with HCV (i.e. antibody negative and PCR positive).

This method provides an alternative to time-consuming cohort studies. Dried blood spot testing has been used widely and safely in community-based studies of injectors both in the UK and elsewhere (Hickman et al, 2007; Hope et al, 2011; Parker and Cubitt, 1999; Turner et al, 2011) and is being used currently in Scotland in the Needle Exchange Surveillance Initiative (NESI), Action 22 of the Scottish Government's Hepatitis C Action Plan for Scotland, Phase II.

### **Study setting, population and sample**

The study setting was all of the fourteen closed prisons in Scotland, including Scotland's single female-only prison and the young offender prison population.

All prisoners who were available in each prison on the survey days were eligible to take part unless they were deemed a threat to the safety of researchers, or too unwell to take part. In addition, those prisoners (n=43) who could not understand English sufficiently well to comprehend the consent procedure and the questionnaire were not included in the study as there was no funding available for translation services.

### **Study procedure**

#### ***Access to prisons and to potential study participants***

Prior to each prison survey, at least one meeting was held in each prison between the Principal Investigator, the study's Research Fellow, a representative from the Scottish Prison Service's Headquarters, and senior managers from the prison. The purpose of these meetings was to explain the purpose and the details of the study and to arrange a suitable date and time for the surveys to take place. In addition, one or more key contacts from prison staff were identified at the initial meeting. The key contact from then on functioned as the main promoter and organiser of the study within the prison, as well as being (in most cases) the person available to assist with the practicalities of conducting the surveys on the scheduled survey days. The majority of further arrangements before the survey days were communicated by telephone and email. At the initial meeting, the research team was also shown the layout of the prison so that they could plan the most efficient practical aspects of conducting the survey with the minimum disruption to staff and prisoners.



Following the initial meetings, to promote the study and enhance the potential to successfully recruit participants on the survey days, the following study information was provided to the prison managers and/or the key contacts:

- Posters to promote the purpose of the study and advertise the days(s) on which the survey(s) would take place
- Information leaflets for staff (both as electronic files and as paper copies)
- Information leaflets for each individual prisoner (paper copies)

The key contacts in each of the prisons agreed to make arrangements to distribute all of the information to prison staff and prisoners in advance of the survey days. Most often, the staff leaflets were distributed approximately three weeks before the survey was scheduled to take place, and to prisoners approximately two weeks in advance. However, in prisons where the turnover of prisoners was very high, the timing of the distribution of prisoner leaflets was left to the discretion of the key contact and therefore, in some prisons, prisoner leaflets were distributed a few nights before the survey.

### ***Recruitment of participants***

Similar to the method used in the SPS Prisoner Surveys, prisoners were locked in their cells during the hours of the survey. The only exceptions were essential workers, such as kitchen and laundry workers, who were surveyed either before or after their shift. It was agreed with SPS managers, however, that locked-up prisoners would be paid for the hours of work they had missed.

In the majority of prisons, and on the majority of survey days, four teams of survey assistants simultaneously surveyed up to 400 prisoners across any one prison. Each team had an experienced team leader who was responsible for ensuring the successful running of the survey for each respective team. Depending on the size of each prison this resulted in either surveying an entire prison in one half day, as was the case with the six smaller

prisons, or between two or three half days for the larger ones. HMP Barlinnie was surveyed over five half days.

The procedure for conducting the research was identical for each team of survey assistants. Individual prisoners in each occupied cell were invited by a survey assistant to take part in the study. This was done by offering another copy of the study information sheet and a verbal explanation of the purpose of the study. It was emphasised that the study was voluntary and anonymous and that a blood spot sample was being requested. All potential participants were also informed that, because the blood spot was anonymous, they would not receive the result of the test.

Those prisoners who agreed to take part were given a questionnaire and a consent form to self-complete. The questionnaire was designed to be self-completed but all prisoners were also given a choice of a face-to-face interview with the survey assistant. This offer was made to avoid prisoners having to admit they were unable to read or write.

Prisoners were then advised that a survey assistant would return in approximately 30 minutes to invite the participant to give a blood spot sample and to hand in their completed questionnaire and consent form.

When prisoners refused to take part in the study this information was recorded on a pro-forma designed for precisely that purpose. All of this was done out-with the hearing of prison officers (who unlocked the cells), except where prisoners were in segregation units.

After all of the questionnaires had been distributed, the team leader in each team then returned to each of the cells with a prison officer and invited each prisoner to have their blood spot sample taken at areas that were set up - often at tables outside of the cells – specifically for that purpose. In the majority of prisons, prisoners were escorted in groups of four to have their blood spot sample taken. In a small number of prisons, blood spot samples were taken in larger groups in communal areas that were deemed appropriate by

the prison staff and the research team leaders. On most occasions, prison staff were present in the areas in which blood was being taken.

### **Procedure for collecting blood spot samples**

Collecting dried blood spot samples involves capillary blood from the finger being spotted onto filter paper and then allowed to dry, thus becoming a dried blood spot. Single use disposable sterile lancets were used which automatically and irreversibly retract into the device, thereby minimising the risk of any needlestick injury.

Survey assistants were given full training in taking blood spot samples. They were also provided with safety equipment including non-latex gloves, safety goggles and sharps bins for the disposal of the lancets.

All samples were taken on surfaces covered with waterproof or paper covers, which were disposed of at the end of blood sampling sessions. For each individual sample, survey assistants wore a new pair of non-latex gloves, laid out a clean paper towel on which was placed a sterile swab, lancet, sticking plaster and filter paper card on which to collect the blood spot. After the sample had been taken, each prisoner was given a sticking plaster to cover the spot from which blood had been taken. All other equipment was disposed of and the card stored in a plastic pocket before another sample was taken. At the end of each blood sample session all table surfaces were cleaned with disinfectant.

At the point where blood spot samples were collected, participants' questionnaires were also checked for accuracy (wherever possible) by the team leader or by a survey assistant. In addition, a unique identifying code was placed on the questionnaire and on the blood spot sample to link the two forms of data.

Participants who did not wish to give a blood sample were offered the choice of providing a saliva sample. This was collected using an Orasure oral fluid collection device (<http://www.orasure.com/products-insurance/products-insurance-specimen.as>). These samples

were included in the prevalence calculation but could not be included in the incidence calculation as viral RNA cannot be detected in oral fluid.

## **Data analysis**

The survey was cross-sectional though the serological data provided an indicator of recent HCV transmission (see HCV testing method below). Some prisoners were interviewed in more than one prison; duplicate data were removed for analysis of overall HCV prevalence and incident infection; duplicate interviews between prisons were retained for calculating prevalence and incidence in each prison on survey days. Most of the analysis is descriptive – with additional statistical tests for specific questions and hypotheses.

### *1. Measure overall HCV prevalence in the prison survey and HCV prevalence by prisoner characteristics (injecting history, age, gender, area of residence).*

- a. Are differences in HCV prevalence by prison explained by prisoner characteristics?
- b. Are there any differences in HCV prevalence among people who injected recruited in the prison survey compared to a community survey (NESI).

HCV prevalence is defined in terms of a positive HCV antibody test. We describe HCV prevalence by self-reported injecting status, geographical area, age-group, gender, and prison. Community surveys of IDUs in Scotland (NESI) show that HCV prevalence is higher in some geographical areas (especially Glasgow), increases with age-group (and duration of injecting) and generally is higher in women injectors compared to men (University of the West of Scotland, 2010).

We hypothesised, therefore, that any differences in HCV prevalence by prison would be due to “case-mix” i.e. the characteristic of the prison population in terms of proportion injecting, gender distribution, age-group, and area of residence. This hypothesis was tested using logistic regression, adjusting for the above covariates, and testing whether the effects of prison on HCV prevalence have been reduced after adjustment using Likelihood Ratio Test (LRT).

We also hypothesised that HCV prevalence would be similar among injectors recruited in the community or prison. We compared HCV prevalence adjusted for geographical area, age and gender between the prison survey and NESI using logistic regression (excluding non-injectors and people resident outwith Scotland from the prison survey). Risk of HCV for NESI participants with a prison history was also compared with prison respondents.

*2. Measure occurrence of risk behaviour during imprisonment (reported injecting and other behaviours: fighting, needle stabbing, tattoos, piercing, anal intercourse).*

- a. How common is injecting during imprisonment, what differences are there by prison?

We describe the number and proportion of prisoners with an injecting history and the proportion that injected (and frequency of injections) inside prison. We describe other potential risk factors for blood borne virus (BBV) transmission. We tested whether frequency of risk behaviour differed by prison using logistic regression. We also tested whether there was any evidence for an association between HCV prevalence and non-injecting risk behaviours (after adjustment for injecting); and whether there was any association between opiate substitution treatment (OST) and reported injecting during imprisonment.

*3. Estimation of HCV incidence*

Recent sero-conversions are identified by tests where HCV virus (by PCR) is detected but HCV antibody is not yet detectable (HCV antibody negative). Estimated incidence was calculated as follows:  $((365/T)n)/((N-n) + (365/T)n)$  where  $I$  = incidence,  $T$  = estimated mean duration of the anti-HCV-negative & HCV-RNA-positive window period (51 to 75 days)  $n$  = number of incident infections (anti-HCV-negative HCV-RNA-positive) and  $N$  = number of susceptibles (anti-HCV-negatives, both HCV-RNA-negative and positive). The exact window period or the true distribution of the window period is not yet known, but evidence suggests that it is likely between 51 and 75 days (Hope et al, 2011; Page-Shafer et al, 2008).

#### *4. HCV diagnosis and hepatitis B virus vaccination*

The proportion of people diagnosed with HCV was estimated by the number of people who reported that they had been tested for HCV and that they had been told they had, or had cleared, HCV divided by the number of people with detectable HCV antibodies (based on anonymous DBS testing). HBV vaccination was based on self-report.

We tested whether HCV diagnosis varied by gender, age, area of residence and prison; and tested whether HBV vaccination varied by prison (adjusted for age, gender, area of residence and injecting status).

#### *5. Missing Data*

There are 3 forms of missing data that may introduce bias:- (a) non participation with the survey; (b) insufficient samples to conduct PCR tests; (c) misclassification of injecting risk. We examined whether participation rates are positively associated with injecting risk i.e. that prisons with higher participation rates identify proportionally more injectors and a higher HCV prevalence. There were insufficient incident cases to impute missing PCR tests. Therefore, we describe the characteristics of the missing data in terms of injecting status, age, sex, and prison in order to provide evidence on whether HCV incidence is likely to be under or over estimated. There was insufficient information also to reclassify injecting risk.

### **Hepatitis C testing procedure**

All of the dried blood spot samples and saliva samples were sent to the West of Scotland Specialist Virology Centre to be tested for HCV antibodies.

Dried blood spots were eluted and tested for HCV antibody using a modified protocol for the Ortho HCV 3.0 SAvE ELISA (product number 940982, Ortho Diagnostics, Amersham) as described in Judd et al, 2003. The sensitivity and specificity are reported to be 99.6% and 100% respectively. It should be noted that this paper shows the sensitivity and specificity for HCV antibody testing in selected positive and negative patients. The data show an excellent sensitivity and specificity for patients with chronic HCV infection i.e. HCV PCR positive patients attending specialist clinics. From our experience we know that there is a

lower sensitivity and specificity associated with resolved HCV infection when HCV RNA is undetectable (McCarron et al, 1999). This is supported by work carried out for HCV avidity testing (Klimashevskaya et al, 1999; Kanno and Kazuyama, 2002). In these patients HCV PCR is negative. We believe that the reduction in sensitivity of the antibody assay is due to low levels of antibody which may be undetectable in the DBS assay. Low level is present in early acute infection and in resolved infection when antibody levels decline in the absence of viral stimulation. In the former situation HCV RNA is detectable. If low antibody has fallen below the lowest level of detection of the antibody assay and the antibody is falsely negative, provided the PCR is positive, this will still be indicative of acute infection.

All HCV antibody negative samples were tested for HCV PCR by an 'in-house' assay evaluated as Action 12 of the Scottish Hepatitis C Action Plan. The PCR assay showed sensitivity and specificity of 98.3% and 97.7% respectively (Bennett et al; <http://www.hepatitisscotland.org.uk/index.php?cid=107#dbs;>). HCV RNA testing in DBS detects to a detection limit of 250 IU/ml. From our experience the reduction in specificity is caused by cross contamination from the filter paper fibres and cutting equipment required for the assay. In this situation the detection value is weakly reactive. If only strong detection values are analysed the sensitivity and specificity is 100% and 100%; the HCV PCR positives prisoners in our study all had repeatable, strong detection values which confirmed acute HCV infection.

Saliva samples were collected by the Orasure<sup>TM</sup> oral fluid collection device (supplied by Concateno UK). The samples were extracted from the collection device according to the manufacturer's instructions and tested for HCV antibody using the modified Ortho test described above. The cut-off was taken as an OD of 0.2.

### **Ethical approval and ethical considerations**

Ethical approval to conduct the study was granted by the University of the West of Scotland Research Ethics Committee. Ethical approval was endorsed, with permission to access prisoners, from the Scottish Prison Service.

The key ethical considerations in this study were that the study participants were fully informed about the study, including understanding that their participation was voluntary and that the study was anonymous. To this end, no names were recorded on the questionnaires or on the dried blood spot samples.

In addition, the requirements of the Data Protection Act (1998) were fulfilled. Questionnaires were kept in locked filing cabinets and the electronic data were kept on password protected computers.



## CHAPTER 3. RESULTS

### 1. Participation Rates, Sample Characteristics and Blood Borne Virus Risk Behaviours

#### Participation in the Survey

A total of 5,187 prisoners took part in the survey, representing 79% of prisoners available on survey days. Table 1 shows the number of respondents and the participation rates obtained at each prison.

**Table 1: Participation rates**

<b>Prison</b>	<b>No. of participants/available participants</b>	<b>% participation of those available</b>
Aberdeen	142/154	92%
Addiewell	500/640	78%
Barlinnie	990/1181	84%
Cornton Vale	238/324	73%
Dumfries	141/194	73%
Edinburgh	556/710	78%
Glenochil	419/580	72%
Greenock	169/194	87%
Inverness	114/136	84%
Kilmarnock	435/538	81%
Perth	357/517	69%
Peterhead	158/205	77%
Polmont	603/697	87%
Shotts	367/498	74%
<b>Total</b>	<b>5187/6568</b>	<b>79%</b>

After reviewing the returned questionnaires, 8 were removed due to incomplete data. A further 103 were completed by participants who were surveyed in more than one prison, thus the total number of **individual** participants who took part and for which there was robust information was **5076**. Most of the analysis is based on these 5076 prisoners. The exception is where HCV prevalence results have been analysed for each prison. In this case,

the 103 duplicates have been included so that an accurate account can be provided of HCV antibody prevalence in each individual prison on survey days.

## Sample characteristics

Ninety-five per cent (4808/5076) of the participants were male and five per cent (268/5076) were female. Mean age was 32.4 years (range 16.3 – 83.7 years), with two thirds of prisoners (3390/5076) falling within the 20-39 year age group. The largest proportion of respondents (36%, 1819/5076,) lived in the Greater Glasgow and Clyde Health Board area when in the community. This is a substantial proportion of the total prison population (and greater than the proportion (24%, 823,000/3,491,000) of the Scottish adult population that lives in the Health Board area.

## Blood borne virus (BBV) risk behaviours

### *Drug use and drug injecting among prisoners*

The majority of participants reported having ever used drugs illegally (83%; 4201/5076) and 32% (1625/5076) of all respondents reported having ever injected drugs (IDUs). The injecting status of 18 prisoners (0.4%) was unknown (Table 2).

**Table 2. Drug use and drug injecting among prisoners (n=5076)**

<b>Illicit drug use status</b>	<b>n</b>	<b>%</b>
Ever used	4201	82.8
Ever Injected	1625	32.0
Unknown	18	0.4

Eight per cent (404/5076) of all prisoners had ever injected in prison and 2.5% (127/5076) admitted to having injected drugs during their current period of incarceration (Table 3).

Among those who had ever injected, 25% (404/1625) reported having ever injected drugs in prison and 8% (127/1625) indicated that they had injected during their current term of imprisonment (Table 3).

**Table 3. Injecting in prison**

	Number (%) of all respondents (n=5076) Yes	Number (%) of IDUs (n=1625) Yes
<b>Injecting in prison</b>		
Ever injected in prison	404 (8.0%)	404 (24.9%)
Injected during current imprisonment	127 (2.5%)	127 (7.8%)

Injecting during the current imprisonment, however, was low and infrequent (Table 4). Of the 8% of ever injectors who reported that they injected during imprisonment more than half of these did so on no more than five occasions. Frequency of reported injecting also was low: over two thirds (69%) reported injecting less than monthly and only 26% reported injecting more than weekly or daily (data not shown).

**Table 4. Reported injecting during current imprisonment**

Inject during current imprisonment	n	%
Never	1498	92.1%
Yes, once	38	2.3%
Yes, 2-5 times	34	2.1%
Yes, 6 - 10 times	15	1.0%
Yes, more than 10	40	2.5%
Any Injecting	127	7.8%
<b>Total</b>	<b>1625</b>	<b>100.0%</b>

Of those that had injected during their current sentence, 58% (74/127) reported injecting with needles and syringes previously used by someone else (Table 5).

**Table 5. Injecting with used needles/syringes during current sentence**

<b>Injected with used N/S</b>	<b>n</b>	<b>%</b>
Never	52	40.9
<1 month ago	11	8.6
1-3 months ago	12	9.4
4-6 months ago	15	11.8
>6 months ago	36	28.3
No response	1	0.8
<b>Total</b>	<b>127</b>	<b>100.0</b>

We examined reported injecting during current sentence by sex, age and prison (Table 6). The last column tests whether there is any evidence of a difference by the characteristic. The table shows that proportionally more of men injectors injected during prison compared to women (9% vs. 2%) but that there was no difference by age-groups. There was a difference also in the proportion of injectors who reported current injecting by prison, ranging from none to 31% of injectors. In most prisons (10/14), however, less than 10% of injectors reported that they injected during the current prison term.

**Table 6. Reported injecting during imprisonment among those who had ever injected: by sex, age-group and prison**

<b>Covariate</b>	<b>Inject during current imprisonment</b>	<b>Chi2</b>
<b>Gender</b>		Pr = 0.003
Female	2%	
Male	9%	
<b>Age</b>		Pr = 0.266
<20	5%	
20-<30	7%	
30-<40	8%	
40+	9%	
<b>Prison<sup>1</sup></b>		<0.001
Greenock	11%	
Glenochil	11%	
Polmont	5%	
Shotts	18%	
Inverness	0%	
Aberdeen	31%	
Peterhead	0%	
Kilmarnock	9%	
Perth	9%	
Addiewell	6%	
Barlinnie	2%	
Dumfries	7%	
Cornton Vale	2%	
Edinburgh	7%	

<sup>1</sup> Proportion of injectors that report injecting during current imprisonment (excluding prisoners without a reported injecting history)

### **Other BBV risk behaviours**

Prisoners were asked about exposure to other potential HCV risks in prison, such as fighting, being stabbed with a needle, tattooing, body piercing and anal sex. Table 7 below shows how common these risks are in general.

Thus, during their current period of imprisonment 23% of prisoners reported “fighting in prison where blood was shed”; less than 2% of prisoners reported being stabbed with a needle; less than 3% reported body piercing; 8% reported having had a tattoo and just under 2.5% reported anal sex.

**Table 7. BBV risk exposure during current imprisonment**

<b>Risk</b>	<b>number report yes<sup>+</sup></b>	<b>% report</b>	<b>Total Person- years</b>	<b>Rate (ppy)</b>
Injected in current imprisonment	119	7.6	2234*	0.05
Fighting	1148	23.3	8439#	0.14
Stabbed with needle	88	1.8		0.01
Body piercing	126	2.6		0.01
Tattooing	403	8.2		0.05
Anal sex	120	2.4		0.01

<sup>+</sup>excludes missing data; \* person years exposure for ever injectors only; #all prisoners

Table 7 also shows that the risk and rate of different exposures, including injecting, is low during current imprisonment. For example, the risk of injecting in prison for those who have ever injected is 0.05 or 5 per 100 person years (or 5%). Thus, as length of time in prison accumulates (which also may occur through multiple prison sentences) and assuming a constant rate then the risk of injecting is likely to increase, (e.g. the risk of injecting during six months is 2.5% but over a five year exposure to prison may be over 20%). From these data alone it is uncertain whether the risk of injecting has reduced over time. To compare current incidence of injecting with historical trends or overall prevalence of injecting in prison depends on accurate information on the previous length of time and number of imprisonments people have been exposed to (which is not available). Nevertheless incidence of current injecting appears to have fallen since the HIV outbreak in HMP Glenochil in 1993 when it was reported that 14% of prisoners had injected there (Taylor et al, 1995). The recent SPS Prisoner Survey also has noted a small decline in those reporting injecting in prison in the previous month from 3% to 1% between 2007 and 2011 (SPS, 2011a).

It also is not certain how important the other risk factors may be for transmitting infection. Being stabbed with a needle, tattooing, and piercing pose clear risks to all prisoners (not just those that inject) in relation to indirect blood to blood contact from someone who may have been infected with HCV. However, none of the incident cases below (section 3) reported any of these risks.

Those who had been tattooed or body pierced were asked if the equipment had been used previously on anyone else. More than half claimed that the equipment had not been used (58% of those tattooed and 58% of those body pierced). Among those who reported anal sex, only 7% (9/125) always used a condom – although more than half (58%, 72/125) did not respond to the question.

Whilst we cannot show directly whether risk of injecting has reduced over time, we can show that injectors are more likely to have multiple imprisonments (Table 8).

**Table 8. Ever injected by number of previous imprisonments**

	Ever injected		Unadjusted OR# (95%CI)	Adjusted* OR (95%CI)
	No/never	Yes		
<b>Previous imprisonments</b>				
Never	979 (28.9)	96 (6.0)	1.00	1.00
Once	542 (16.0)	95 (6.0)	1.79 (1.32, 2.42)	1.87 (1.36, 2.57)
2-5 times	984 (29.1)	357 (22.4)	3.70 (2.90, 4.71)	4.01 (3.10, 5.18)
6-10 times	429 (12.7)	303 (19.0)	7.20 (5.58, 9.30)	7.85 (5.98, 10.31)
> 10 times	452 (13.4)	746 (46.7)	16.83 (13.24, 21.40)	17.00 (13.17, 21.94)

#OR = odds ratio; \* adjusted for age (categorical) and gender

Thus, the odds of being an injector are 17 times higher than being a non-injector for those who have been in prison on more than 10 occasions (i.e. for each 1 non-injector there are likely to be 17 people who inject). Nearly half of people with an injecting history have been in prison more than ten times previously compared to 13% of people without an injecting history.

In addition, we can examine risks by the mean length of sentence and proportion of long term prisoners (defined as a sentence of 4 or more years) (Table 9).

The table shows the mean length of sentence by risk in the first data column (with mean difference in sentence shown in the second data column), and proportion of long term prisoners in the third data column (and proportional difference in risk of being a prisoner

with a long term sentence in the final data column). Thus, ever injectors tend to have a shorter sentence and are less likely to be long term prisoners than non-injectors (1.8 vs. 2.4 years and 14.2% vs. 18.9% respectively). However, sentences were longer and the proportion of long term prisoners was higher for those with an injecting history who injected during the current imprisonment compared to those who did not inject (5.1 vs 1.6 years and 44% vs. 16.7%). People reporting other risks also had longer sentences and were more likely to be long-term prisoners. For example, prisoners reporting a tattoo compared to those not reporting a tattoo during current imprisonment had been sentenced for on average 5 years vs. 2 years and 48% of those reporting a tattoo were long term prisoners compared to 15% of those not reporting a tattoo. The final row shows duration of imprisonment by HCV prevalence (which is explored further below) which suggests that people with HCV (who are more likely to be injectors) have a shorter sentence.



**Table 9. Mean length of sentence and % of long-term prisoners by risk (ever injector, injecting in current imprisonment, tattooing, fighting, stabbing with needle, body piercing and anal sex).**

<b>Risk</b>	<b>Mean Length of sentence (year)</b>	<b>Linear Regression Coefficient (95%CI)*</b>	<b>Long term prisoner (&gt;=4 yrs: N, %)</b>	<b>Logistic Regression OR (95% CI)^</b>
<b>Ever injected</b>				
No/never	2.4	0.00 (ref)	624 (18.9)	1.00 (ref)
Yes	1.8	-0.60 (-0.82, -0.37)	223 (14.2)	0.71 (0.60, 0.84)
<b>Ever injected in prison</b>				
No/never	1.6	0.00 (ref)	761 (17.0)	1.00 (ref)
Yes	2.7	0.46 (0.07, 0.84)	85 (21.8)	1.36 (1.06, 1.75)
<b>Injected in current imprisonment</b>				
No/never	1.6	0.00 (ref)	794 (16.7)	1.00 (ref)
Yes	5.1	2.90 (2.22, 3.57)	51 (43.6)	3.85 (2.65, 5.59)
<b>Fighting</b>				
No/never	1.7	0.00 (ref)	477 (12.7)	1.00 (ref)
Yes	3.9	2.13 (1.90, 2.37)	371 (32.5)	3.31 (2.83, 3.87)
<b>Stabbed with needle</b>				
Never	2.2	0.00 (ref)	817 (17.0)	1.00 (ref)
Yes	4.2	1.99 (1.21, 2.76)	31 (35.2)	2.65 (1.70, 4.14)
<b>Body piercing</b>				
Never	2.2	0.00 (ref)	802 (16.8)	1.00 (ref)
Yes	4.6	2.40 (1.76, 3.05)	46 (36.5)	2.84 (1.96, 4.12)
<b>Tattooing</b>				
Never	2.0	0.00 (ref)	654 (14.6)	1.00 (ref)
Yes	5.0	3.06 (2.69, 3.42)	194 (48.3)	5.47 (4.42, 6.77)
<b>Anal sex</b>				
No/never	2.2	0.00 (ref)	821 (17.2)	1.00 (ref)
Yes	3.2	0.97 (0.30, 1.64)	27 (22.7)	1.41 (0.91, 2.18)
<b>HCV prevalence</b>				
No/never	2.3	0.00 (ref)	694 (18.1)	1.00 (ref)
Yes	1.8	-0.58 (-0.85, -0.31)	120 (13.3)	0.69 (0.56, 0.85)

\* A coefficient of 0 means there is no difference in the length of term between the risk categories.

^ An OR of 1 means there is no difference in the proportions with a long term sentence between the risk categories.

In the next table we explore differences in proportions of those injecting (and other risk behaviours) by prison. The proportion of injectors in the different prisons varies (which we address further in relation to HCV by prison below) from less than 5% to over 50%. More importantly, however, the proportion of injectors who inject during prison also can vary –

most notably in one prison, HMP Aberdeen, where over 16% of prisoners report injecting during current imprisonment (31% of ever injectors as shown in table 6) and nearly 30% of prisoners report having ever injected in prison. In all other prisons the proportion of injectors that inject during imprisonment is less than 5% and less than 3% in eight prisons; and the proportion of prisoners who have ever injected in prison is less than 10% in 12 prisons.

**Table 10. Proportions of prisoners who inject, who have injected in prison, and other risks by prison**

<b>Risk</b>	<b>IDU %</b>	<b>Inject any prison %</b>	<b>Inject current prison<sup>1</sup> %</b>	<b>Fight %</b>	<b>Stab %</b>	<b>Pierce %</b>	<b>Tattoo %</b>	<b>Anal sex %</b>
Greenock	33.1	7.9	4.2	20.2	4.2	3.0	10.1	1.2
Glenochil	36.9	9.9	3.9	27.8	1.0	1.4	7.9	2.9
Polmont	3.5	0.3	0.2	26.7	1.5	3.0	6.0	2.2
Shotts	24.3	9.6	4.4	33.1	3.3	6.0	24.3	2.5
Inverness	23.4	4.5	0	3.6	1.8	1.8	2.7	1.8
Aberdeen	52.8	29.6	16.2	19.7	5.6	3.5	7.0	2.1
Peterhead	10.1	0.6	0	20.9	0.6	1.9	10.8	5.1
Kilmarnock	36.2	9.1	3.0	27.3	2.1	0.9	10.9	2.6
Perth	48.3	13.5	4.5	28.0	2.2	3.1	7.6	2.8
Addiewell	29.4	7.0	1.8	26.6	1.0	1.4	6.8	1.6
Barlinnie	37.2	8.1	0.9	17.0	1.5	2.2	3.4	2.4
Dumfries	32.6	6.4	2.1	23.4	1.4	3.6	7.1	1.4
Cornton Vale	58.0	5.5	1.3	20.6	1.7	5.5	12.2	2.9
Edinburgh	35.6	8.9	2.4	22.3	1.6	3.2	7.4	2.9

<sup>1</sup> Proportion of *all* prisoners that report injecting during current imprisonment

Compared to the baseline prison, HMP Edinburgh, (note that in any comparative analysis one of the values of a variable will be the baseline) the risk of injecting during imprisonment was over six times higher for HMP Aberdeen (adjusted OR 6.4 95%CI 2.9 to 13.7); with only one other prison, HMP Shotts having a slightly higher risk of injecting (adjusted OR 3.1 95%CI 1.4 to 7.1); there was no difference in risk of injecting for any of the prisons (full data not shown).

There was much less variation in the rates of risk behaviours for other risks (fighting, stabbing, tattooing) and no large differences in reported piercing or anal sex within the current imprisonment.

### Opiate substitution treatment

The prisoners who reported that they had ever injected (1625) were asked questions about exposure to opiate substitution treatment (OST) such as methadone. More than half (57%, 929/1625) were currently being prescribed OST (Table 11). Further, more than three quarters of ever injectors had received methadone in prison within the last six months (data not shown). Unfortunately we do not know how many received methadone at any time during the current imprisonment.

**Table 11. Currently prescribed OST**

<b>Currently prescribed</b>	<b>n</b>	<b>%</b>
Yes	929	57.2
No	680	41.9
No response	16	1.1
<b>Total</b>	<b>1625</b>	<b>100</b>

Amongst those who had **ever injected** there is no evidence that those who injected in current imprisonment are more or less likely to be on OST or to have received OST in last six months (Table 12). For example, 8% (98/1166) of prisoners with an injecting history who were currently on OST or had received it in the previous six months of imprisonment reported injecting during their current sentence; compared with 7% (24/368) of those who did not report receiving OST in the last six months of the current sentence.

**Table 12. Methadone use among ever injectors: impact on current prison injecting**

Ever injected in current imprisonment	Methadone use: n (%)		OR (95% CI)
	No	Yes	
No	344 (93)	1068 (92)	Ref*
Yes	24 (7)	98 (8)	1.32 (0.83, 2.09)
<b>Total</b>	<b>368 (100)</b>	<b>1166 (100)</b>	

\*Ref = reference category

Amongst the smaller sample of injectors who reported ever having injected in prison (n=389), however, there is weak evidence that those who are receiving OST are less likely to inject during current imprisonment (Table 13). Most of the prisoners with a history of drug injecting in prison were on OST (335/389, 86%); of these, 29% (98/335) reported injecting in the current sentence, compared with 44% (24/54) of prisoners who were not on methadone.

**Table 13. Methadone use and injecting during current imprisonment among prisoners who reported ever having injected in prison**

Ever injected in current imprisonment	Methadone use: n (%)	
	No	Yes
No	30 (56)	237 (71)
Yes	24 (44)	98 (29)
<b>Total</b>	<b>54 (100)</b>	<b>335 (100)</b>
OR	Ref	0.52 (0.29, 0.93)

## 2. Hepatitis C Prevalence

### Hepatitis C antibody testing

A total of 5014 (97%, 5014/5187) biological samples were obtained for HCV antibody testing; of these 4917 (98%) were blood spot samples and 97 (2%) saliva samples (Table 14). These samples were used to calculate HCV antibody prevalence per prison.

When duplicate samples were removed, 4908 samples had been obtained from individual prisoners; 4811 (98%) blood spot and 97 (2%) saliva samples (Table 14). These samples were used to calculate the overall rate of HCV antibody prevalence in Scottish prisons. The refusal rate was 3% both before and after duplicate removal.

**Table 14. Samples available for HCV antibody testing**

Type of samples	Blood spots n (%)	Saliva samples n (%)	Total n
Samples for individual prison prevalence	4917 (98%)	97 (2%)	<b>5014</b>
Samples for overall prevalence	4811 (98%)	97 (2%)	<b>4908</b>

### Hepatitis C antibody prevalence

Four samples were insufficient for testing, thus overall prevalence was calculated on **4904** samples. Overall prevalence of HCV antibodies was 19% (933/4904). The majority of infections (90%, 835/933) were among people who reported an injecting history. Among IDUs, HCV antibody prevalence was 53% and 3% among non-IDUs (Table 15).

**Table 15. Overall HCV antibody prevalence in Scottish prisons**

HCV antibody result	Injecting status			
	Total sample (n=4904)	IDU (n=1573)	Non-IDU (3314)	Unknown status (n=17)
HCV AB+	933 (19.0%)	835 (53.1%)	96 (2.9%)	2 (11.8%)
HCV AB-	3971 (81.0%)	738 (46.9%)	3218 (97.1%)	15 (88.2%)

There were differences in HCV prevalence by prison (Table 16), from less than 10% to nearly 40%. We show further below that this variation is largely driven by differences in the characteristics of the prisoners (rather than a “within” prison factor) in terms of the number and proportion of injectors and which geographical community the prisoners come from.

**Table 16. HCV prevalence by prison by reported injecting status**

Prison	ALL	IDU			Other - non injector/unknown*		
	HCV+ve	HCV+ve	n	tot	HCV+ve	n	tot
1 Greenock	24%	67%	37	55	3%	3	110
2 Glenochil	22%	55%	84	152	3%	7	256
3 Polmont	1%	14%	3	21	0%	1	570
4 Shotts	15%	52%	45	87	3%	7	266
5 Inverness	7%	28%	7	25	1%	1	86
6 Aberdeen	33%	59%	43	73	5%	3	65
7 Peterhead	4%	31%	5	16	1%	1	134
8 Kilmarnock	20%	49%	72	147	4%	11	262
9 Perth	26%	51%	85	167	3%	6	178
10 Addiewell	16%	46%	67	147	3%	12	344
11 Barlinnie	29%	68%	240	351	6%	37	593
12 Dumfries	16%	48%	21	44	1%	1	94
13 Cornton							
Vale	39%	64%	84	132	3%	3	93
14 Edinburgh	13%	34%	64	187	2%	7	349

\* includes 18 with unknown injecting status, 3 of which were HCV pos.

In Table 17 below differences are examined both in HCV prevalence among injectors (first data column) and the proportion of prisoners who report injecting (last data column) by sex,

age-group and area of residence. HCV prevalence is higher among women prisoners who inject than men prisoners who inject, and varies by age-group and geographically. Clearly, prisoners are predominantly men (95%), but an injecting history is more common among women prisoners than men prisoners (59% vs. 30% respectively).

**Table 17. Proportion of prisoners who reported injecting (and HCV prevalence among injectors) by sex, age-group and geographical area of residence**

Characteristic	HCV+ve in prisoners who report injecting	Number who report injecting	Total prisoners	% of prisoners who report injecting
<b>Sex</b>				
Women	65%	159	268	59%
Men	52%	1466	4808	30%
<b>Age group</b>				
<20	14%	22	463	5%
20-29	40%	520	2008	26%
30-39	57%	711	1382	51%
40+	68%	346	1160	30%
<b>Geographical Area</b>				
1. Greater Glasgow & Clyde	64%	506	1,819	28%
2. Lothian & Borders	24%	183	545	34%
3. Lanarkshire	47%	130	529	25%
4. Ayrshire & Arran	56%	142	406	35%
5. Forth Valley	64%	85	261	33%
6. Fife	48%	109	268	41%
7. Tayside	55%	171	369	46%
8. Grampian	62%	159	340	47%
9. Highlands & Islands	27%	50	204	25%
10. Dumfries & Galloway	56%	55	105	52%
11. Non-Scotland	34%	35	230	15%

Similar to community recruited studies (University of West of Scotland et al, 2010), HCV prevalence among people who inject increases with age (from 14% among those under 20 to nearly 70% among those aged over 40). Over two thirds of the prison population were aged 20-39; and among those aged 30-39 over half were people with an injecting history. Thus, age is associated both with injecting and HCV prevalence among injectors.

Table 17 above also shows how HCV prevalence among injectors and the proportion of prisoners who report injecting varies by geographical area. For example, approximately 36% of the prison population is from Greater Glasgow and Clyde Health Board area, and of these 28% are injectors and 64% of the injectors are HCV+ve; whereas approximately 34% of the prison population from Lothian and Borders Health Board area report injecting of whom 24% are HCV+ve.

To investigate HCV prevalence by prison we need, therefore, to adjust for injecting status, gender, age-group and geographical area, as these factors will influence the probability that a prisoner is HCV positive. Table 18a below shows HCV by prison with and without adjustment for these confounders. The first column of odds ratios (OR) data shows the unadjusted risk of HCV prevalence by prison (with HMP Edinburgh as the baseline). These unadjusted data suggest that there are differences in HCV prevalence by prison, as shown by the large number of small p-values (<0.05) for the comparisons of HCV. After adjustment the difference in HCV prevalence by prison is diluted, so much so that in only 1 prison (HMP Barlinnie) is there any evidence for a difference in the risk of HCV compared to HMP Edinburgh.

**Table 18a. HCV prevalence by prison: non-adjusted and adjusted\* analyses**

Prison	ALL HCV+ve	OR	95%CI			p-value	Adjusted OR*	95% CI			p-value
Greenock	25%	2.2	1.4	3.4		<b>0.001</b>	1.4	0.7	2.9		0.41
Glenochil	22%	1.8	1.3	2.6		<b>0.001</b>	1.1	0.7	1.9		0.65
Polmont	1%	0.05	0.02	0.1		<b>&lt;0.001</b>	0.6	0.2	1.8		0.34
Shotts	14%	1.1	0.8	1.7		0.58	1.0	0.6	1.9		0.88
Inverness	7%	0.5	0.2	1.0		0.06	0.4	0.2	1.3		0.13
Aberdeen	34%	3.3	2.2	5.2		<b>&lt;0.001</b>	1.3	0.6	2.6		0.47
Peterhead	4%	0.3	0.1	0.7		<b>0.003</b>	0.4	0.1	1.2		0.11
Kilmarnock	20%	1.7	1.2	2.4		<b>0.005</b>	1.0	0.6	1.8		0.89
Perth	26%	2.3	1.6	3.3		<b>&lt;0.001</b>	1.0	0.6	1.8		0.90
Addiewell	16%	1.3	0.9	1.8		0.16	1.3	0.7	2.2		0.38
Barlinnie	29%	2.8	2.1	3.7		<b>&lt;0.001</b>	1.9	1.2	3.0		<b>0.009</b>
Dumfries	16%	1.3	0.7	2.1		0.39	0.7	0.3	1.7		0.50
Cornton Vale	39%	4.2	2.9	6.1		<b>&lt;0.001</b>	0.8	0.2	2.6		0.65
Edinburgh <sup>+</sup>	13%	1.0					1.0				

\* adjusted for: injecting status, gender, age-group, geographical area, and number of previous imprisonments (categorised), full length of current sentence. + baseline comparison



We do not consider this difference to be due to a greater risk of HCV among injectors in HMP Barlinnie, but may be due to some misclassification of injecting. For example, Table 16 shows that HMP Barlinnie has over 1/3 (37/100) of all HCV positive cases among people who report that they have no injecting history; and the prevalence of HCV among “non-injectors” in HMP Barlinnie is substantially higher than other prisons (6% vs. less than 3% overall). Therefore, we repeated the analysis for people who inject only (Table 18b) which shows that after adjustment for age, gender, geographical area, and number of imprisonments there is no evidence for a difference in HCV prevalence by prison (Likelihood Ratio Test p value 0.093).

**Table 18b. HCV prevalence among people who report injecting by prison: non-adjusted and adjusted\* analyses (n=1581#)**

Prison	ALL HCV+ve	OR	95%CI			p-value	Adjusted OR*	95% CI			p-value
Greenock	67%	3.9	2.1	7.4		<0.001	1.4	0.6	3.4		0.42
Glenochil	54%	2.3	1.5	3.5		<0.001	1.1	0.6	1.9		0.78
Polmont	14%	0.3	0.09	1.1		0.07	0.7	0.2	3.0		0.61
Shotts	51%	2.0	1.2	3.4		0.009	0.9	0.5	1.8		0.79
Inverness	29%	0.8	0.3	2.0		0.61	0.5	0.2	1.5		0.21
Aberdeen	59%	2.7	1.6	4.8		<0.001	1.1	0.5	2.3		0.87
Peterhead	31%	0.9	0.3	2.6		0.80	0.4	0.1	1.4		0.15
Kilmarnock	49%	1.9	1.2	2.9		0.007	0.8	0.4	1.5		0.45
Perth	51%	2.0	1.3	3.0		0.002	0.9	0.5	1.6		0.72
Addiewell	47%	1.7	1.1	2.6		0.027	0.9	0.5	1.7		0.84
Barlinnie	68%	4.1	2.8	6.0		<0.001	1.6	1.0	2.8		0.07
Dumfries	48%	1.7	0.9	3.4		0.10	0.7	0.3	1.7		0.41
Cornton Vale	64%	3.4	2.1	5.4		<0.001	1.0	0.3	3.9		1.00
Edinburgh <sup>+</sup>	34%	1.0					1.0				

\* adjusted for: gender, age-group, geographical area, and number of previous imprisonments (categorised), full length of current sentence. + baseline comparison. # Of the 1658 who have idu status, 1581 have been included in the above table: 54 were missing HCV prevalence status. None were missing gender or area. 26 were missing age category. 2 were missing information on prior imprisonment.

We also considered HCV prevalence by other (non-injecting) potential risks for blood borne virus transmission. These behaviours refer to any exposure in prison (rather than current imprisonment) in relation to HCV prevalence (no incident cases reported any of these behaviours during the current imprisonment – see section 3 below). Table 19 shows HCV

prevalence by risk and also the OR show the unadjusted association between the risk and HCV prevalence and, in the final columns, after adjustment for injecting history. There was no evidence of an association between history of fighting, body piercing and tattooing and HCV infection; with weak evidence of an association with HCV infection for people who report being stabbed by a needle or anal sex which was removed after adjustment for injecting. This does not mean, however, that these behaviours are risk free, as the study is under-powered to detect small changes in risk.

**Table 19. HCV prevalence by non-injecting risk – unadjusted and adjusted (for injecting history) associations**

<b>Risk</b>	<b>number report</b>	<b>% report</b>	<b>% HCV</b>	<b>Unadjusted OR</b>	<b>95%CI</b>	<b>Adj OR</b>	<b>95% CI</b>
<b>Fighting</b>							
No/never	3888	76.6	18.9	1.00	-	1.00	-
Yes	1188	23.4	19.6	1.05	0.89-1.24	0.77	0.63-0.94
<b>Stabbed with needle</b>							
Never	4983	98.2	18.8	1.00	-	1.00	-
Yes	93	1.8	29.4	1.79	1.14-2.82	1.16	0.66-2.02
<b>Body piercing</b>							
Never	4939	97.3	18.9	1.00	-	1.00	-
Yes	137	2.7	23.9	1.35	0.90-2.02	0.80	0.49-1.28
<b>Tattooing</b>							
Never	4660	91.8	18.9	1.00	-	1.00	-
Yes	416	8.2	20.4	1.10	0.85-1.41	0.74	0.55-1.00
<b>Anal sex</b>							
No/never	4951	97.5	18.8	1.00	-	1.00	-
Yes	125	2.5	27.7	1.66	1.10-2.49	1.48	0.88-2.51

### **Comparison of Hepatitis C prevalence with previous Scottish studies**

The overall HCV prevalence among IDUs in prison is consistent with previous studies of prisoners (e.g. in the WASH study conducted in 1994-1996 (Gore et al, 1999), 49% (95%CI 45–54%) prisoners who reported injection were HCV positive and 3% (95%CI 2–4%) of those prisoners who did not report injecting). Further, the findings are consistent with 57% HCV prevalence rate found in Scottish community samples of injectors (NESI study) (University of the West of Scotland et al, 2012) and most HCV is likely to be acquired in the community.

For example, the overall prevalence of HCV among people who inject (who reside in Scotland) recruited from the prison survey was 53% and the prevalence among people who inject recruited from the community was 54% (Table 20). There were some differences by gender. Amongst men HCV prevalence was similar between the prison and community at 52% vs. 54% respectively (adjusted OR 0.98 95% CI 0.85 - 1.13). Amongst women HCV prevalence was higher for those recruited in prison compared to women recruited in the community (65% vs. 54% respectively and adjusted OR 0.51 95% CI 0.35- 0.74).

**Table 20. Comparison of HCV prevalence in the community (NESI) and prison**

HCV prevalence	Prison Survey	NESI	OR	95% CI	p-value
All <sup>^</sup>	53%	54%	0.91	0.79, 1.04	0.15
Men <sup>#</sup>	52%	54%	0.98	0.85, 1.13	0.79
Women <sup>#</sup>	65%	54%	0.51	0.35, 0.74	0.001

<sup>^</sup> OR adjusted for age, gender and area; <sup>#</sup> OR adjusted for age and area

However, women with a prison history have a higher HCV prevalence than those without a prison history i.e. HCV prevalence in women with a prison history in NESI was 69% vs. 43% among women without a prison history. Therefore, HCV prevalence was similar for women who inject in the community (and reported a prison history) and those who were recruited in prison 69% vs. 65% (Adj OR 0.97 95%CI 0.63-1.50).

Women reported less injecting than men during prison (see Table 6 above). Prison history, especially among women, therefore is likely to be a marker of injecting risk in the community that needs to be explored in further studies. Table 21 below compares prison and community samples by gender, age, geographical area and methadone exposure and shows that the two samples are comparable.

**Table 21. Comparison of community (NESI) and prison recruited samples of HCV prevalence among people who inject**

	Prison		NESI			
Risk	HCV +ve / total	% HCV +ve	HCV +ve / total	% HCV +ve	OR (95% CI) for NESI compared to prison adjusted for covariate	p-value (from LR test)
Gender						
Male	748/1435	52	1182/2180	54	1.01 (0.89, 1.15)	0.84
Female	101/155	65	455/846	54		
Age category						
<20	4/30	13	9/33	27	0.97 (0.86, 1.10)	0.68
20-<30	207/512	40	344/837	41		
30-<40	403/697	58	833/1489	56		
40+	225/330	68	454/674	67		
Area						
Greater Glasgow & Clyde	320/506	63	923/1414	65	0.97 (0.85, 1.11)	0.67
Borders and Lothian	42/179	23	119/399	30		
Lanarkshire	61/131	47	117/295	40		
Ayrshire & Arran	80/141	57	106/174	61		
Forth Valley	57/90	63	38/70	54		
Fife	53/110	48	83/138	60		
Tayside	91/167	54	88/221	40		
Grampian	100/161	62	134/232	58		
Highlands & Islands	14/51	27	5/36	14		
Dumfries & Galloway	31/54	57	28/55	51		
Methadone use						
Never	57/163	35	79/292	27	0.99 (0.87, 1.12)	0.85
In the last 6m	660/1172	56	1379/2418	57		
In the past but not the last 6m	110/194	57	183/324	56		

### 3. Hepatitis C Incidence

Following HCV infection, it can take several weeks for antibodies against HCV to become detectable in laboratory assays, therefore antibody tests alone are unable to determine very early infections. Viral RNA, detected by the polymerase chain reaction (PCR) assay, can be detected earlier from about two weeks after infection and is the only viral marker detectable in early infection. **Detection is not possible with saliva samples, thus only dried blood spots can be tested for RNA.**

Based on previous studies (Hope et al, 2011, Page-Shafer et al, 2008), we are assuming a window period of 51-75 days for the current study. Thus, the estimate of in-prison recent infections is based only on those prisoners who have been incarcerated for a sufficient period, i.e. prisoners with at least 70 days in prison, so that any recent infection could be attributed to the prison.

A total of 3887 HCV antibody negative blood spots samples were available for PCR testing. Just under a fifth (19%, 722/3887) were insufficient for testing. Of the remaining 3165 samples, 2454 were obtained from prisoners who had been incarcerated for at least 70 days.

A total of four recent infections (HCV antibody –ve & HCV PCR+ve) were identified. Table 22 shows the characteristics reported by the four subjects (each identified at a different prison). In addition to these four PCR+ve samples, one prisoner who had been interviewed in two prisons tested HCV Ab-ve in the first and HCV Ab+ve in the second, however it is likely the infection occurred outwith prison as the prisoner had been held in open conditions in one of the prisons. This sample has not been included in the following analysis.

Three of the four recently infected prisoners reported injecting drug use; and one of the four (Prisoner 1) was probably infected prior to imprisonment (as the prisoner had only been in prison for nine days): **leaving 3 prisoners who were likely to have been infected during their imprisonment.** Only one reported ever injecting in prison. None of the cases

reported injecting during their current sentence or any other potential exposure (e.g. fighting, tattooing, piercing, being stabbed, or anal sex). Previous studies also have reported some misclassification of injecting risk (Champion et al, 2004). So it is likely that if the infections occurred during the imprisonment then the 3 infections were acquired through unsafe injecting in prison. All four specimens were strongly reactive on PCR with high titres indicating that they are very unlikely to be false positive tests.

**Table 22. Characteristics of recent sero-conversions**

Characteristic	Prisoner 1	Prisoner 2	Prisoner 3	Prisoner 4
Age	30	47	44	29
Gender	Male	Male	Male	Male
Prison	A	B	C	D
Category (type) of prisoner	sentenced	sentenced	sentenced	sentenced
Been at other prison before coming here during current imprisonment	no	no	no	yes
Length of term served (days)	9	116	122	1684
Length of term served (categorised)	< 1 month	3-6 months	3-6 months	4-5yr
Outside prison for any reason during current imprisonment	no	no	yes	yes
Injecting drug user	idu	idu	idu	non-idu
Ever injected in prison	no	yes	no	n/a
Injected during current imprisonment	no	no	no	n/a
Currently prescribed methadone	yes	no	no	n/a
Fighting with blood shed	never	never	never	never
Stabbed with a needle	never	never	never	never
Had a piercing	never	never	never	never
Had a tattoo	never	never	risk occurred outwith time in prison	never
Anal sex with a man	No	No	No	No

The estimated incidence rate, based on assuming a detection period of 51 to 75 days, is shown in Table 23. The denominator is the number of prisoners who are HCV antibody negative (i.e. susceptible to infection) who have been in prison for a sufficient period so that any recent infection could be attributed to the prison (which in the table below are prisoners with at least 70 days in prison). The numerator is the number of recent infections (i.e. HCV antibody-ve and HCV PCR+ve). We have calculated four incidence rates in the rows for: i) all susceptible prisoners; ii) prisoners who reported ever injecting; iii) prisoners who reported ever injecting during imprisonment; and finally iv) prisoners who reported injecting during the current imprisonment. The two sets of columns show the incidence based on the reported risk by the subjects (e.g. none of the cases reported injecting during the current imprisonment and only one of the three prisoners reported ever injecting during imprisonment) and the incidence if we assume all 3 infections were acquired through injecting during imprisonment (without any adjustment for misclassification in the denominator). The lower and upper incidence estimates are based on assuming a window period of 75 or 51 days.

**Table 23. Estimated Incidence of HCV**

<b>* Been in prison at least 70 days</b>	<b># incident cases</b>	<b># controls (denominator)</b>	<b>Incidence*</b>		<b>Incidence if assume all cases IDU*</b>	
			<b>75 dys</b>	<b>51dys</b>	<b>75 dys</b>	<b>51dys</b>
antibody -ve prisoners	3	2454	0.60%	0.90%	-	-
antibody -ve prisoner who are idu	2	493	1.90%	2.80%	2.90%	4.20%
antibody -ve prisoners who have ever injected in prison	1	94	5.00%	7.10%	13.80%	19.10%
antibody-ve prisoners who inject during current imprisonment	0	50	0.00%	0.00%	23.70%	31.40%

\*Incidence =  $((365/T)n)/((N-n) + (365/T)n)$  where I = incidence, T = estimated mean duration of the anti-HCV-negative & HCV-RNA-positive window period (51 to 75 days) n = number of incident infections (anti-HCV-negative HCV-RNA-positive) and N = number of susceptibles (anti-HCV-negatives, both HCV-RNA-negative and positive)

Thus, overall among all prisoners the incidence was less than 1% (or 1 per 100 person years). Among prisoners with an injecting history the incidence was less than 3%; and if we

assume that *all* cases acquired the infection through injecting then incidence was still low at 2.9% to 4.2%. These estimates are well below the estimated HCV incidence in the community, reported as 12% (University of West of Scotland et al, 2010). The incidence among prisoners who report injecting in prison *ever* and “during current imprisonment” *may* be higher at 13.8% to 19.1% and 23.7% to 31.4% respectively – but only if we assume that:- i) all cases were acquired through injecting in prison; ii) there is little or no under-estimation of the number of people who inject in prison; and iii) no misclassification of sero-incident cases. The low level of HCV risk in prison is primarily because injecting frequency is low and comparatively rare. For instance, among those who reported injecting during current imprisonment 69% injected less than monthly and 25% weekly or daily, which is substantially less than injectors in the community where almost two thirds report injecting at least daily (University of West of Scotland et al, 2012). It is likely, therefore, that compared to the community each specific injecting event in prison poses a greater risk of HCV infection (but the overall risk is lower because injecting frequency is lower than the community).

It is conceivable also that there may be some over-estimation of the incidence – especially given the large number of tests undertaken (>2000 HCV antibody negative). The HCV PCR tests are all strongly reactive indicating recent or chronic infection; but it is possible that some HCV antibody tests were false negatives and that the positive PCR may not be a marker of recent infection but a result of a missed antibody-positive test. The sensitivity of HCV antibody tests for chronic infection is likely to be higher than for cleared infections (McCarron et al, 1999; Kanno and Kazuyama, 2002; Klimashevskaya et al, 2007) (and the latter would not generate a positive PCR or false sero-conversion). But even if the sensitivity of the HCV antibody test was 99.9% (Judd et al, 2003) for non-cleared infections then we might expect ~1 HCV positive to be wrongly categorised as HCV negative – and the true incidence to be <0.06% among all prisoners and less than 3% among prisoners with an injecting history. Therefore, the low number of recent HCV infections, even if biased by loss of sensitivity in antibody testing, is still consistent with a very low incidence of HCV infection among all prisoners.



As there were so few incident cases it is not possible to formally test and adjust for potential misclassification of injecting risk both for sero-incident and sero-negative prisoners (over and above assuming that the cases did inject during the current imprisonment as shown above in Table 23).

### **Insufficient samples**

There were 722 (19%) tests with insufficient sample to conduct a PCR test (in order to identify any recent infections). Table 24 shows that approximately one third came from one prison, HMP Polmont. The univariable and multivariable OR compare the probability of an insufficient sample – with an OR of  $< 1$  suggesting less or fewer insufficient samples (or more sufficient samples) than the baseline and an OR of  $> 1$  suggesting more insufficient (or less sufficient) samples than baseline. The table shows that there are more sufficient samples among people with an injecting history than non-injectors and older age groups, with little difference by gender or geographical area. Insufficient samples are more likely to be from prisoners with a lower risk of HCV and so the missing PCR tests are unlikely to have added considerable bias or led to an under-estimation of HCV prevalence or incidence.

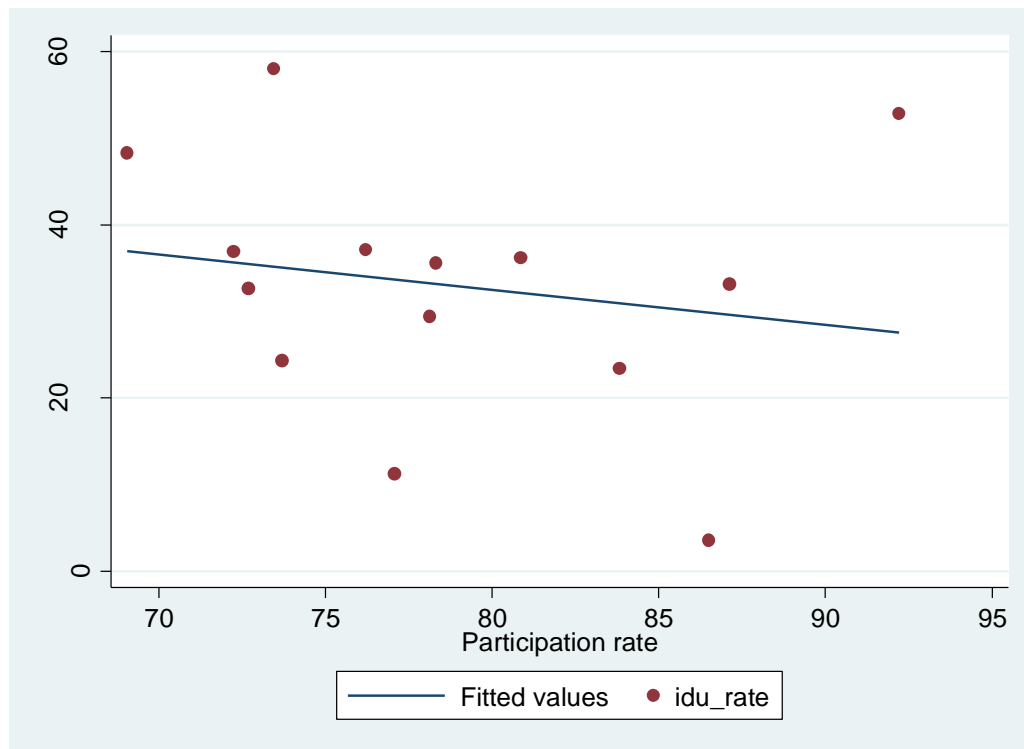
**Table 24. Number of tests with insufficient sample for PCR test by: IDU, sex, age-group, area of residence and prison**

Covariate	Insufficient PCR sample		Univariable OR (95% CI)	Multivariable OR (95% CI)*
	no	yes		
IDU				
No	2811 (64)	691 (94)	1.00 (ref)	1.00 (ref)
Yes	1616 (36)	42 (6)	0.11 (0.08, 0.15)	0.15 (0.11, 0.20)
Gender				
Men	4179 (94%)	731 (99%)	1.00 (ref)	1.00 (ref)
Women	262 (6%)	7 (1%)	0.15 (0.07, 0.32)	0.63 (0.14, 2.94)
Age				
<20	298 (7%)	177 (24%)	3.40 (2.72, 4.25)	1.18 (0.86, 1.62)
20-<30	1747 (40%)	305 (42%)	1.00 (ref)	1.00 (ref)
30-<40	1291 (29%)	125 (17%)	0.55 (0.44, 0.69)	0.92 (0.72, 1.17)
40+	1051 (24%)	122 (17%)	0.66 (0.53, 0.83)	0.83 (0.65, 1.06)
Area of residence				
1.Greater Glasgow & Clyde			1.00 (ref)	1.00 (ref)
	1579 (36%)	283 (38%)		
2.Lothian & Borders	482 (11%)	74 (10%)	0.86 (0.65, 1.13)	1.06 (0.75, 1.50)
3.Lanarkshire	442 (10%)	92 (12%)	1.16 (0.90, 1.50)	1.03 (0.75, 1.41)
4.Ayrshire & Arran	367 (8%)	47 (6%)	0.71 (0.51, 0.99)	1.11 (0.75, 1.65)
5.Forth Valley	223 (5%)	43 (6%)	1.08 (0.76, 1.53)	1.00 (0.68, 1.48)
6.Fife	237 (5%)	36 (5%)	0.85 (0.58, 1.23)	0.92 (0.61, 1.39)
7.Tayside	346 (8%)	26 (4%)	0.42 (0.28, 0.64)	0.66 (0.40, 1.08)
8.Grampian	297 (7%)	51 (7%)	0.96 (0.69, 1.32)	1.11 (0.74, 1.69)
9.Highlands & Islands	172 (4%)	39 (5%)	1.27 (0.87, 1.83)	0.96 (0.59, 1.55)
10.Dumfries & Galloway	104 (2%)	6 (1%)	0.32 (0.14, 0.74)	0.52 (0.21, 1.30)
11.Non-scotland	192 (4%)	41 (6%)	1.19 (0.83, 1.71)	1.12 (0.75, 1.68)
Prison				
Greenock	141 (3%)	27 (4%)	1.67 (1.02, 2.74)	1.73 (0.98, 3.05)
Glenochil	337 (8%)	81 (11%)	2.10 (1.46, 3.03)	2.25 (1.48, 3.43)
Polmont	361 (8%)	241 (32%)	5.83 (4.24, 8.02)	3.44 (2.22, 5.32)
Shotts	298 (7%)	68 (9%)	1.99 (1.36, 2.92)	1.76 (1.15, 2.71)
Inverness	84 (2%)	28 (4%)	2.91 (1.75, 4.84)	2.67 (1.41, 5.05)
Aberdeen	122 (3%)	20 (3%)	1.43 (0.83, 2.47)	1.74 (0.90, 3.38)
Peterhead	147 (3%)	11 (1%)	0.65 (0.33, 1.28)	0.52 (0.26, 1.03)
Kilmarnock	416 (9%)	16 (2%)	0.34 (0.19, 0.59)	0.31 (0.16, 0.59)
Perth	337 (8%)	20 (3%)	0.52 (0.31, 0.88)	0.76 (0.41, 1.40)
Addiewell	435 (10%)	65 (9%)	1.31 (0.89, 1.91)	1.16 (0.74, 1.82)
Barlinnie	902 (20%)	88 (12%)	0.85 (0.60, 1.21)	0.85 (0.56, 1.29)
Dumfries	130 (3%)	11 (1%)	0.74 (0.38, 1.45)	0.86 (0.41, 1.79)
Cornton Vale	233 (5%)	5 (1%)	0.19 (0.07, 0.47)	0.39 (0.06, 2.36)
Edinburgh <sup>+</sup>	498 (11%)	57 (8%)	1.00 (ref)	1.00 (ref)

\* adjusts for all other variables in the table.

## Missing data

There is insufficient outcome information to impute missing data (as highlighted in the methods section). In general the response rate from all prisons was high (as shown in table 1). One concern was that prisons with a higher response rate may recruit more people with an injecting history. The figure below suggests that this is not the case.



## 4. Healthcare Services

Participants were asked a series of questions about health care services they had received both in and outside of prison. They were also asked their opinions about possible new services, including needle exchange in prisons.

### Hepatitis C testing

Less than half of all participants (44%, 2207/5076) reported having been tested for Hepatitis C. Over three quarters (78%) of IDUs had ever been tested compared with 27% of non-IDUs (Table 25).

**Table 25. Ever tested for Hepatitis C**

Tested for HCV	Injecting status			Total
	IDU	Non-IDU	Unknown	
Yes	1273 (78.3%)	930 (27.0%)	4 (22.2%)	2207 (43.5%)
No	340 (20.9%)	2422 (70.6%)	13 (72.2%)	2775 (54.7%)
DK/NR	12 (0.8%)	81 (2.4%)	1 (5.6%)	94 (1.8%)
<b>Total</b>	<b>1625 (100%)</b>	<b>3433 (100%)</b>	<b>18 (100%)</b>	<b>5076 (100%)</b>

Two thirds (66%, 1460/2207) of those who had been tested for Hepatitis C had last been tested in prison. IDUs and non-IDUs were both more likely to have had their more recent test in prison (61% and 74% of those ever tested respectively) (Table 26).

**Table 26. Where last tested for Hepatitis C**

Location of last HCV test	Injecting status			Total
	IDU	Non-IDU	Unknown	
<b>In prison</b>	773 (60.7%)	686 (73.8%)	1 (25.0%)	1460 (66.2%)
<b>Outside prison</b>	466 (36.6%)	215 (23.1%)	2 (50.0%)	683 (30.9%)
<b>DK/NR</b>	34 (2.7%)	29 (3.1%)	1 (50.0%)	64 (2.9%)
<b>Total</b>	<b>1273 (100%)</b>	<b>930 (100%)</b>	<b>4 (100%)</b>	<b>2207 (100%)</b>

## Hepatitis C diagnosis and treatment

Of those who had been tested for HCV, just under one fifth (19%, 425/2207) reported that they had tested positive, 95% of whom were IDUs. A further nine per cent (n = 196) reported that they had been HCV positive but had now cleared the virus and 8% either did not know the result of their last test or were waiting for the result (Table 27).

**Table 27. Self-reported result of most recent HCV test**

Result last HCV test	Injecting status			Total
	IDU	Non-IDU	Unknown	
<b>Positive</b>	405 (31.8%)	20 (2.2%)	-	425 (19.3%)
<b>Negative</b>	606 (47.6%)	779 (83.8%)	2 (50%)	1387 (62.8%)
<b>Don't know</b>	69 (5.4%)	78 (8.4%)	1 (25%)	148 (6.7%)
<b>Cleared HCV</b>	167 (13.1%)	28 (3%)	1 (25%)	196 (8.9%)
<b>Awaiting result</b>	14 (1.1%)	14 (1.5%)	-	28 (1.3%)
<b>No response</b>	12 (0.9%)	11 (1.2%)	-	23 (1%)
<b>Total</b>	<b>1273 (100%)</b>	<b>930 (100%)</b>	<b>4 (100%)</b>	<b>2207 (100%)</b>

One fifth of those who self-reported as HCV positive (21%, 90/425) were currently receiving treatment for their HCV infection (Table 28). Most of those being treated (79%, 71/90) were receiving their treatment in prison.

**Table 28. Currently receiving treatment for HCV infection**

Currently in treatment	n	%
Yes, in prison health centre/hospital	71	16.7
Yes, at hospital outside of prison	19	4.5
No, not receiving any treatment	317	74.6
No response	18	4.2
<b>Total</b>	<b>425</b>	<b>100.0</b>

## **Undiagnosed Hepatitis C infection**

Overall of 933 people who tested HCV antibody positive during the anonymous surveillance survey, 760 (81%) report being tested for HCV; and 521 (56%) report being previously diagnosed as HCV antibody positive. Thus, just under half (44%, 412/933) were not aware of their HCV antibody positive status. Of these, 41% (167/412) had never been tested and 44% (181/412) wrongly believed they were hepatitis C antibody negative. The remainder either did not know their result or were waiting for a result. We did not ask those who were aware of their positive status if they had been diagnosed with chronic HCV infection.

In Table 29 below we consider if there are any differences in the proportion diagnosed by sex, age, area of residence and prison. The last column shows the univariable chi-square test of difference. We did not find any evidence of a difference in diagnosis by prison, geographical area or sex; but prisoners aged under 30 were slightly less likely to be diagnosed than older prisoners (47% vs. 59%).

**Table 29. Proportion of people with HCV antibodies that had been diagnosed by sex, age, area of residence, and prison**

Covariate	HCV diagnosed		Total HCV antibody detected	Chi2 Test of difference (univariable)
	yes	%		
<b>Gender</b>				Pr = 0.519
Women	55	53%	104	
Men	466	56%	829	
<b>Age</b>				Pr = 0.002
<30	107	47%	227	
30+	407	59%	694	
<b>Area of residence</b>				Pr = 0.150
1. Greater Glasgow and Clyde	201	55%	365	
2. Lothian & Borders	29	59%	49	
3. Lanarkshire	43	65%	66	
4. Ayrshire & Arran	44	53%	83	
5. Forth Valley	25	42%	60	
6. Fife	27	50%	54	
7. Tayside	52	54%	96	
8. Grampian	62	61%	101	
9. Highlands & Islands	7	47%	15	
10. Dumfries & Galloway	22	73%	30	
11. Non-Scotland	9	64%	14	
<b>Prison</b>				Pr = 0.477
Greenock	15	38%	39	
Glenochil	52	57%	91	
Polmont	1	33%	3	
Shotts	25	48%	52	
Inverness	4	57%	7	
Aberdeen	25	56%	45	
Peterhead	3	50%	6	
Kilmarnock	46	60%	77	
Perth	54	60%	90	
Addiewell	46	59%	78	
Barlinnie	145	54%	267	
Dumfries	17	77%	22	
Cornton Vale	49	57%	86	
Edinburgh	39	56%	70	

## Hepatitis B vaccination

More than half (56%, 2853/5076) of prisoners reported being vaccinated against hepatitis; IDUs were much more likely to have been vaccinated than non-IDUs (76% and 47% respectively) (Table 30).

**Table 30. Ever vaccinated against Hepatitis B**

<b>Hep B Vaccinated</b>	<b>Injecting Status</b>			<b>Total</b>
	<b>IDU</b>	<b>Non-IDU</b>	<b>Unknown</b>	
Yes	1240 (76.3%)	1604 (46.7%)	9 (50.0%)	2853 (56.2%)
No	249 (15.3%)	1105 (32.2%)	6 (33.3%)	1360 (26.8%)
Don't know	132 (8.1%)	687 (20.0%)	2 (11.1%)	821 (16.2%)
No response	4 (0.3%)	37 (1.1%)	1 (5.6%)	42 (0.8%)
<b>Total</b>	<b>1625 (100%)</b>	<b>3433 (100%)</b>	<b>18 (100%)</b>	<b>5076 (100%)</b>

The majority of reported HBV vaccination occurred in prison i.e. 79% in prison and 12% in prison and community; and 9% solely in the community. In general HBV vaccination was high among both men and women prisoners who inject and with little difference by age-group. Based on these self-reported HBV vaccination rates, three prisons (Polmont, Kilmarnock and Dumfries) may have achieved less than 70% vaccination of their prisoners who inject (Table 31).



**Table 31. Reported HBV Vaccination: by sex, age-group, area of residence and prison**

Covariate	IDU	
	no	yes
<b>Sex</b>		
Women	108 (43.5%)	159 (70.4%)
Men	3325 (46.8%)	1466 (76.9%)
<b>Age</b>		
<30	1918 (45.8%)	542 (76.4%)
30+	1479 (48.0%)	1057 (76.4%)
<b>Area of residence</b>		
1. Greater Glasgow & Clyde	1306 (45.3%)	506 (76.5%)
2. Lothian & Borders	361 (56.2%)	183 (80.3%)
3. Lanarkshire	398 (38.2%)	130 (75.4%)
4. Ayrshire & Arran	263 (36.5%)	142 (63.4%)
5. Forth Valley	172 (37.2%)	85 (69.4%)
6. Fife	158 (55.1%)	109 (78.9%)
7. Tayside	197 (73.1%)	171 (83.0%)
8. Grampian	180 (49.4%)	159 (78.0%)
9. Highlands and Islands	153 (49.0%)	50 (80.0%)
10. Dumfries & Galloway	50 (52.0%)	55 (76.4%)
11. Non-Scotland	195 (39.0%)	35 (71.4%)
<b>Prison</b>		
Greenock	111 (62.2%)	55 (70.9%)
Glenochil	262 (58.4%)	153 (81.0%)
Polmont	574 (39.0%)	21 (57.1%)
Shotts	277 (58.8%)	89 (82.0%)
Inverness	85 (41.2%)	26 (84.6%)
Aberdeen	67 (43.3%)	75 (81.3%)
Peterhead	142 (52.8%)	16 (75.0%)
Kilmarnock	275 (44.0%)	156 (64.7%)
Perth	184 (70.1%)	172 (84.3%)
Addiewell	353 (41.6%)	147 (78.9%)
Barlinnie	621 (37.5%)	367 (74.1%)
Dumfries	95 (38.9%)	46 (65.2%)
Cornton Vale	100 (45.0%)	138 (72.5%)
Edinburgh	356 (51.4%)	197 (82.2%)

Cells contain the number and percentage who reported being vaccinated against Hepatitis B.  
N.B. Duplicates were removed for all except the prison analyses.

## Harm reduction packs

IDUs were asked if harm reduction packs were available to them in prison. Very few (7%, 112/1625) knew that these were available and, of those who did, less than a fifth (22/112) has asked for one (Table 32).

**Table 32. Harm Reduction packs for IDUs**

<b>Harm reduction packs</b>	<b>Available n (%)</b>	<b>Ever asked for n (%)</b>
Yes	112 (6.9%)	22 (19.6%)
No	843 (51.9%)	90 (80.4%)
Don't know	619 (38.1%)	-
No response	51 (3.1%)	-
<b>Total</b>	<b>1625 (100%)</b>	<b>112 (100%)</b>

## Proposed new health care services

### *Provision of sterile needles/syringes in prison*

Prisoners were asked if they thought that IDU prisoners should be given access to sterile needles and syringes. Just under half of prisoners (48%, 2435/5076) thought that they should, under a third (29%, 1486/5076) did not agree with this and almost one quarter (23%, 1155/5076) either did not know or did not respond to the question. IDUs were much more likely than non-IDUs to think that sterile needles/syringes should be made available (Table 33).

**Table 33. Providing sterile needles/syringes to prisoners**

<b>Should be available</b>	<b>Injecting status</b>			<b>Total</b>
	<b>IDU</b>	<b>Non-IDU</b>	<b>Unknown</b>	
Yes	1183 (72.8%)	1246 (36.3%)	6 (33.3%)	2435 (48.0%)
No	255 (15.7%)	1228 (35.8%)	3 (16.7%)	1486 (29.3%)
Don't know	171 (10.5%)	904 (26.3%)	8 (44.4%)	1083 (21.3%)
No response	16 (1.0%)	55 (1.6%)	1 (5.6%)	72 (1.4%)
<b>Total</b>	<b>1625 (100%)</b>	<b>3433 (100%)</b>	<b>18 (100%)</b>	<b>5076 (100%)</b>

IDUs were also asked if they would ask health staff for sterile needles and syringes if they were available. Half of the IDU respondents (50%, 806/1625) would not ask for them, just over a third (34%, 559/1625) would ask and the remainder either did not know what they would do or did not respond (Table 34).

**Table 34. Willingness to ask health staff for sterile needles and syringes**

<b>Would ask</b>	<b>n</b>	<b>%</b>
Yes	559	34.4
No	806	49.6
Don't know	216	13.3
No response	44	2.7
<b>Total</b>	<b>1625</b>	<b>100.0</b>

#### ***Provision of other services***

Prisoners were also asked if they thought that tattooing and body piercing services should be made available to them. More prisoners (56%, 2840/5076) were in favour of a tattooing service than a body piercing service (41%, 2070/5076).

Almost 80% (2218/2840) of those who thought a tattoo service should be provided for prisoners said that they would use such a service. This compared with 57% (1179/2072) of prisoners who thought a body piercing service should be available.

## CHAPTER 4. DISCUSSION OF PRISONER SURVEY RESULTS

This chapter provides an overview of the key issues that arose from the survey of prisoners.

The survey is the first nation-wide study of HCV prevalence and incidence among Scottish prisoners. All fourteen closed establishments, including female and young offenders' establishments, were surveyed over a nine-month period between June 2010 and March 2011. A high participation rate of 79% of prisoners was achieved, slightly higher than the estimated 75% in the original tender for this study. Almost all (97%) of the participating prisoners provided a body fluid sample for HCV testing.

A total of 5076 individual prisoners took part in the survey (103 were sampled at two prisons), of whom the vast majority (95%) were male and aged between 20-39 years (66%). NHS Greater Glasgow and Clyde area was the usual place of residence for the largest proportion (36%) of prisoners.

### **Risk behaviours for hepatitis C**

#### ***Drug use and drug injecting***

The majority of participants (83%) had ever used drugs illegally, one third had ever injected drugs (IDUs) and 8% had ever injected in prison, a similar finding to that of the recent SPS Prisoner Survey (Scottish Prison Service, 2011a) in which 7% reported a history of in-prison injecting. The extent of injecting during the current sentence was low, with 2.5% admitting to this, corresponding with 1% of prisoners who admitted to injecting in the previous month in the SPS Prisoner Survey (Scottish Prison Service, 2011a) and to reports of 4% of ex-prisoners having injected whilst in prison (University of the West of Scotland et al, 2012).

Females were much less likely to have injected during their current sentence than men (2% v 9%) although there was a higher proportion of female injectors (59%) than men IDUs (30%) in prison.

The proportion of all prisoners injecting during the current sentence ranged from zero to 16% (and the proportion of people with an injecting history reporting injecting during current imprisonment ranged from 0 to 31%). This was consistent with the recent SPS Prisoner Survey where 1% to 17% of prisoners reported injecting in the previous month (Scottish Prison Service, 2011a).

Of those who reported injecting in prison, frequency of injecting was also low. Over two thirds injected less than monthly, a much lower frequency than that reported among community recruited IDUs; in that study almost two thirds of IDUs reported injecting at least daily in the last six months (University of West of Scotland et al, 2012).

Whilst the extent and frequency of injecting was low, more than half of those who injected in their current sentence reported doing so with previously used injecting equipment. This was considerably higher than the 15% of community IDUs in Scotland who had shared injecting equipment in the six months prior to interview (University of West of Scotland et al, 2012). Thus, prisoners are at increased risk of potential infection each time they inject compared with injectors in the community.

### ***Other HCV Infection Risk Behaviours***

Whilst infection with hepatitis C is most commonly acquired through injection with contaminated injecting equipment, other sources such as tattoos, body piercing and bloody fights have been cited as possible transmission routes (Bourlière et al, 2000; Hellard et al, 2004; Hellard et al, 2007; Nagami et al, 2011; Teutsch et al, 2010). During their current sentence, just over a fifth of prisoners reported being involved in a fight in which blood was shed, 8% had had a tattoo, over 2% had been body pierced, just under 2% had been stabbed with a needle and 2.5% reported anal sex. Of those who had been tattooed or body pierced, at least 40% of both of these actions had been undertaken with unsterile equipment, thus potentially exposing participants to infection. This finding confirms those of a recent report of tattooing in Scottish prisons (Milne, 2009). In that study interview data from prisoners showed that home-made tattoo guns were often used and that, while some attempts were made by prisoners to clean and sterilise parts of these, some components

were often re-used. Prisoners also reported that they could not be sure that the tattoo guns had not been used on someone else prior to use on themselves (Milne, 2009). However, in our study there was no evidence of an association between history of fighting, body piercing and tattooing and HCV infection; (with weak evidence of an association with HCV infection for people who report being stabbed by a needle or anal sex which was removed after adjustment for injecting). This does not mean, however, that these are not important potential sources of transmission, as the study is under-powered to detect small changes in risk.

A worrying finding from the current survey was that only 7% of those who claimed to have had anal sex reported always using a condom; more than half (58%) did not answer the question. Condoms are freely available in Scottish prisons and prisoners can access them, usually in toilet facilities, without having to request them from prison staff. The lack of use, however, indicates that this harm reduction measure is not working in its current form.

Whilst the risk and rate of different exposures, including injecting, during current imprisonment was low, risk accumulated with length of imprisonment. Thus those prisoners with longer sentences should be given special attention when promoting harm reduction messages for all risk behaviours.

### **Hepatitis C prevalence**

Overall prevalence was 19%. Those with a history of injecting were much more likely to have been infected (53%) than non-injectors (3%).

These results are similar to those found in the WASH study conducted in a sample of five Scottish prisons in the mid 1990's and which found a prevalence of 49% among IDUs and 3% among non-injectors (Gore et al, 1999). A more recent Scotland wide community study of needle exchange attendees found an almost identical HCV prevalence of 55% (University of West of Scotland et al, 2012).

HCV prevalence ranged from 1% to 34% across prisons. However, HCV prevalence varied among prisoners according to age, gender, geographic area of residence and critically injecting status. When these factors were adjusted for, the differences between prisons diminished and only one prison, HMP Barlinnie, showed a slightly higher HCV prevalence although we believe that this may be due to misclassification of injecting status. Thus differences between prisons are likely to be a result of the proportion of people who inject and their area of residence in each prison rather than a feature of the prisons themselves.

Female prisoner IDUs were more likely to test HCV antibody positive than male IDU prisoners (65% and 52% respectively). Moreover, while antibody prevalence was similar among male prisoner and male IDUs in the community study, women prisoners were more likely to have been infected than female community recruited IDUs overall. Women IDUs in the community with a prison history, however, had a similar prevalence to female prisoners. Prison history, especially among women, therefore is likely to be a marker of injecting risk in the community. Why this is the case cannot be explained with the current data, and deserves further attention.

### **Hepatitis C incidence**

Four recent infections were found. One of the prisoners had been in prison less than one month so it is probable that this infection had been acquired in the community, leaving 3 prisoners who were likely to have been infected in prison. Two of the three recently infected prisoners reported a history of drug injecting but none admitted to injecting during their current sentence. No other risk behaviours were reported. Data on risk behaviours was gathered through self-report, which should have minimised socially desirable responding (McElrath, 1994). Nevertheless, risk behaviour data should be interpreted cautiously as prisoners may be reluctant to report drug injecting even in an anonymous survey. To allow for this, our incident estimates included assumptions that all 3 infections were acquired through injecting in the current sentence.

Overall among all prisoners the incidence was less than 1% (or 1 per 100 person years). Among prisoners with an injecting history the incidence was less than 3%; and even when

we assumed that *all* cases were ever injectors then incidence was still low at 4.2%. These estimates are well below HCV incidence in the community, as reported by NESI at 12 per 100 person years (University of West of Scotland, 2010) and below the HCV incidence in HMP Shotts in 1999 which found an overall incidence of 3.3 per 100 person years of incarceration risk and 11.9 per 100 person years of incarceration risk among ever injectors (Champion et al, 2004).

The incidence among prisoners who reported ever injecting in prison was higher at 5-7%, but still considerably lower than the 19% found in the HMP Shotts incidence study among in-prison injectors. However, if we assume that all cases were acquired through injecting in prison and we assumed no under estimation of the number of people who inject in prison then incidence was much higher at between 24% and 31%. Among those who reported injecting during current imprisonment 69% reported injecting less than monthly and 25% weekly or daily, which is substantially less than injectors in the community (University of the West of Scotland et al, 2010), although sharing rates were much higher in prison. Clearly if frequency of injecting was to increase, then there is potential for HCV incidence to be much higher than we observed.

Equally, it should be noted that there may be some over-estimation of the incidence, especially given the large number of tests undertaken (> 900 HCV antibody positive and > 2000 HCV antibody negative). The HCV PCR tests are all strongly reactive indicating recent or chronic infection; but it is possible that some HCV antibody tests were false negatives and that the positive PCR may not be a marker of recent infection but a result of a missed antibody-positive test. The sensitivity of HCV antibody tests for chronic infection is likely to be higher than for cleared infections (McCarron et al, 1999; Kanno and Kazuyama, 2002; Klimashevskaya et al, 2007), (and the latter would not generate a positive PCR or false sero-conversion). But even if the sensitivity of the HCV antibody test was 99.9% for non-cleared infections then we might expect ~1 HCV positive to be wrongly categorised as HCV negative – and the true incidence to be <0.06% among all prisoners and less than 3% among prisoners with an injecting history. Therefore, the low number of recent HCV infections



even if biased by loss of sensitivity in antibody testing is still consistent with a very low incidence of HCV infection among all prisoners.

Furthermore, two of the cases had been outside the prison during their current sentence. So it cannot totally be discounted that infection occurred outside the prison.

The incidence amongst all prisoners (<1%) is in the lower range of that reported in other studies: 0.4 – 14.97 per 100 person years (Macalino et al, 2004b; Butler et al, 2004; Miller et al, 2009; Gough et al, 2010). Incidence among those with an injecting history (<3%) compares favourably with incidence rates found amongst this group elsewhere: 5.5 – 34.2 per 100 person years (Macalino et al, 2004b; Butler et al, 2004; Dolan et al, 2010; Teutsch et al, 2010).

Care should be taken when comparing HCV incidence across studies due to their heterogeneity through, for example, different sampling and data collection methodologies, HCV testing procedures, and inclusion criteria (Macalino et al, 2004a) and different IDU prevalence levels (Vescio et al, 2008). Nevertheless, these existing studies serve as a useful benchmark for comparative purposes.

As said above, the low incidence in Scottish prisons may in part be explained by low occurrence of in-prison injecting. Other studies have found much higher levels of incidence in prisons with higher levels of in-prison injecting. For example, Dolan et al (2010) and Teutsch et al (2010) reported high hepatitis C incidence levels of 34.2 and 31.6 per 100 person years amongst IDUs who were injecting during their current prison sentence (34% and 27%, respectively).

A number of factors may help to explain the low rate of in-prison injecting in prison including an 'anti-injecting culture', and the availability of drug treatment including substitute prescribing in prison. An 'anti-injecting culture' within Scottish prisons was identified by Wilson et al (2007) from a qualitative study of staff and prisoners. In-prison injecting was described as a covert activity in which only a small number of Scottish

prisoners engaged. Indeed, this notion of an 'anti-injecting' culture was identified in the staff interviews conducted as part of the current study, and will be discussed further in Chapter 8. Additionally, the restrictive regime of prisons and smaller injecting networks has been found to curtail patterns of injecting (Macalino et al, 2004a). Prison based methadone maintenance treatment (MMT) has also been shown to be effective in reducing drug injecting as well as needle and syringe sharing (Larney, 2010; Stallwitz & Stöver, 2007). Focus groups conducted by Luyt (2007) with prisoners from HMP Barlinnie noted a perceived reduction in drug use and injecting since the introduction of MMT to HMP Barlinnie.

MMT and other opiate substitution therapy (OST) have been available in all Scottish prisons since 2003. As well as OST, SPS has implemented a number of other policies and practices aimed at reducing drug use and injecting and the harms associated with these (Scottish Prison Service, 2010). These include addiction and counselling services, BBV testing, vaccination and treatment. It may be that these have contributed to the low proportion of in-prison injectors and infrequency of injecting that have been reported here. We asked prisoners only about some of these services and these are discussed below.

### **Opiate substitution therapy**

More than half (57%) of IDUs in the current study were receiving methadone at the time of the survey, representing 18% of prisoners overall, similar to the proportion (23%) reporting methadone prescription in the most recent SPS Prisoner Survey (Scottish Prison Service, 2011a). In that survey, 80% of prisoners who reported receiving methadone were being prescribed a maintenance dose (Scottish Prison Service, 2011a). According to other data generated by SPS, approximately 1 in every 5 prisoners receives a methadone prescription, and this proportion has been increasing annually. Between 2005 and 2009, the proportion of prisoners being prescribed methadone increased from 16% to 21% of prisoners (NHS National Services Scotland, 2011). Approximately 2% are prescribed suboxone or dihydrocodeine (Scottish Prison Service, Drugs, Addiction and Testing, 2011d).

Given the low level of injecting and widespread exposure to OST it was perhaps unsurprising that we did not detect any overall differences in reported injecting by OST, as the greatest change in behaviour occurred probably over the last five to ten years. For example, in the previous surveys of prisoners (WASH and HMP Shotts) few, if any, prisoners were prescribed maintenance OST. OST appears to have had some impact on extent of injecting in our survey *among those who reported having ever injected in prison* - 86% were being prescribed OST and, of these, under one third reported injecting during the current imprisonment. Of those not receiving OST, the proportion who injected in their current sentence was higher at 44%.

### **Harm Reduction Packs**

Harm Reduction Packs (HRP) have been available across the prison estate since 2008. Each HRP contains: a hard plastic container, citric acid sachet, ampoule of sterile water, sterile cup pack including filter and post injection swab, sterilising tablets, information leaflets on equipment use and safer injecting, and two sheets of foil (Scottish Prison Service, 2008).

The three main aims of the HRP policy are to: i) reduce the health risks, including bacterial infection and BBV transmission, associated with injecting behaviour and to reduce the level of injecting, ii) identify those prisoners who are injecting so they can be prioritised into stabilisation and maintenance treatments such as MMT, and iii) provide appropriate safer injecting training for all staff and a safer injecting awareness campaign for prisoners. IDUs can either self refer, but must show a willingness to engage with addictions services, or be referred from them. The packs are distributed to IDUs with identified injection sites and a positive supervised urinary sample by an Addiction Nurse who will also provide safer injecting and harm reduction advice.

Only 7% (112/1625) of IDU prisoners were aware of HRP and, of those, less than a fifth (22/112) had ever asked for one. It would appear that more awareness raising is required among prisoners about the availability of HRPs. However, the poor uptake amongst those who were aware of them suggests that some other mode of delivery may be required to make prisoners comfortable with accessing them.

One item not included in the HRP is a sterile needle and syringe. The issue of needle exchange in Scottish prisons will be addressed later. As noted earlier, although the proportion of injectors who currently injected in prison and frequency of injecting was low, more than half of current in-prison injections were administered with previously used needles and syringes. Thus each injecting event in prison confers a high risk of HCV transmission. This means that if, for any reason, injecting was to increase within Scottish prisons, incidence rates could rise higher than detected in the current study.

### **Hepatitis B vaccination**

Hepatitis B and hepatitis A vaccinations are available to all prisoners in Scotland (Scottish Prison Service, 2011b). The current study found that hepatitis B vaccination coverage amongst imprisoned IDUs was high at 76% and that approximately 8 in every 10 of all reported HBV vaccinations had occurred in the prison setting. Coverage is similar to that among community IDUs; of the 68% reporting at least one dose of HBV vaccination 41% had received at least one dose in prison (University of the West of Scotland et al, 2010). The high rate of vaccination may be explained by it being offered to prisoner entrants, which is believed to capture more IDUs than 'one-off' vaccination events since IDUs tend to serve short prison sentences (Sutton et al, 2008; Sutton et al 2006). It has been reported that the SPS vaccination initiative, which started in 1999, explains the rise in the uptake of hepatitis B vaccinations from 16% in 1993 to 52% in 2001-2002 amongst community based IDUs in Glasgow who had being injecting for five years or less (Hutchinson et al, 2004).

However, almost one quarter of imprisoned IDUs in our study remained unvaccinated and three prisons had vaccination coverage of less than 70% amongst IDUs. We do not know the reasons for this but there may be a number of explanatory factors including, on an individual level, fear of needles (Buck et al, 2006) and, at the institution level, logistical and operational barriers (Gilbert et al, 2004).

In a study conducted in prisons in England and Wales, Gilbert et al (2004) attributed good hepatitis B vaccination uptake upon entry into prison to the employment of designated

nurses who organised and ran the clinics. Logistical problems, such as locating prisoners once they had been moved from the prison reception and transferring them to clinic rooms, prison healthcare understaffing, high turnover of nurses trained to vaccinate and prisoner reluctance to miss paid work, legal and domestic visits, were identified as issues in those establishments with poorer vaccination uptake.

Vaccinations are also important for non-IDUs as in-prison HBV transmission has been associated with other transmission routes such as tattooing (Viswanathan et al, 2010). However, less than half of non-IDUs in the current study had been vaccinated. Some further awareness raising and education about how HBV can be transmitted may be necessary to increase uptake amongst this group.

It is noteworthy that 16% of all prisoners were unsure if they had been vaccinated against hepatitis B. This uncertainty may in part be explained by confusing hepatitis B vaccinations with other vaccinations. It is important, therefore, that clear messages are given to prisoners about any treatment, including vaccinations, they are given.

### **Hepatitis C testing**

All prisoners in Scotland have access to hepatitis C testing, including pre and post test counselling by a qualified health care professional upon request (Scottish Prison Service, 2011c).

The present study found that less than half of all prisoners reported having ever been tested for HCV. IDUs were more likely to have been tested. More than three quarters of IDUs reported having been tested compared with one quarter of non-IDUs. The proportion of prisoner IDUs tested for HCV corresponds with the proportion of community based IDUs in contact with needle exchanges in Scotland who reported having had a HCV test (74%) (University of West of Scotland et al, 2012).

Although Scotland has achieved a high HCV testing rate amongst IDUs, just under half of prisoner IDUs who were identified as HCV antibody positive in this survey were unaware of

their HCV status, either because they had never been tested or believed they were hepatitis C antibody negative. This lack of awareness corresponds with that amongst IDUs in contact with drug services in Scotland, of whom 45% were unaware of their HCV infection (Health Protection Agency et al, 2011).

Over two thirds of all prisoners who have been tested received their last test whilst incarcerated thus SPS is clearly playing an important role in the provision of HCV tests. Trend data from the SPS Prisoner Surveys indicate a sharp rise in the proportion of prisoners reporting having been tested for HCV in prison (Fraser, 2012). Nevertheless, the proportion of HCV antibody positive IDUs in prison who remained undiagnosed or unaware of their infection at the time of the survey suggests that SPS has an opportunity to target this group further. It is important that this group is identified for treatment, if appropriate, and for the promotion of harm reduction messages.

There are a number of reasons that may explain why some prisoners were unaware of their HCV positive status, despite having been tested. There may be confusion over whether or not they have had a previous HCV test, confusion over the test results, denial or an out-of-date self-reported test result. For those who had been tested and mistakenly believed themselves to be HCV antibody negative, it may be that some have sero-converted since their last test. Prisoners, therefore, should be encouraged to be re-tested at regular intervals if they have been at risk of infection.

It cannot be discounted that a number of prisoners were aware of their HCV positive status but were unwilling to disclose this to the research team. Only 10% of prisoners in the most recent SPS Prisoner Survey self-reported themselves to be hepatitis C antibody positive (Scottish Prison Service, 2011a), less than the 19% self-reporting positive status in our study. This may be a reflection of differences in prisoner characteristics between the two surveys. Each was a snapshot taken at different periods of time. It may also reflect more of a willingness to confide sensitive information to a research team independent of the prison service.

For those who have never been tested it is important to establish the reasons why so that innovative initiatives to further promote the uptake of HCV testing can be devised. Our findings indicated that younger prisoners who tested HCV antibody positive were significantly less likely to have ever been tested. Other barriers that have been reported by other studies include a lack of pro-active approaches to offering tests, lack of continuity of care on discharge and transfer, prisoners fears and lack of knowledge, low motivation for testing and concerns about confidentiality and stigma (Khaw et al, 2007). Some prisoners may never be willing to be tested: 15% of prisoners in Scottish prisons would refuse a HCV test if offered one (Scottish Prison Service, 2011a).

Some of the possible barriers noted above may be overcome by, for example, approaches that ensure patient confidentiality is not inadvertently compromised (Perret, 2011). Strategies to address BBV education amongst prisoners may also help. A very high HCV testing rate of 95% amongst IDUs incarcerated in a Canadian male prison was attributed to heightened HCV awareness as well as concern regarding their health and potential exposure to BBVs (Bonnycastle & Villebrun, 2011). SPS noted an increase in prisoners reporting being tested for hepatitis C in prison from 32% in 2009 to 48% in 2011 and attributed this to a major hepatitis C awareness campaign conducted in each Scottish prison in 2009/10 (Scottish Prison Service, 2011a). Despite this, 42% of Scottish prisoners claimed not to have received any information about hepatitis C (Scottish Prison Service, 2011a). SPS therefore require to increase or to improve strategies for educating prisoners of the risks of acquiring BBVs and the importance of being tested.

### **Hepatitis C treatment**

Those chronically infected with HCV are at increased risk of serious liver disease and liver cancer. Treatment with combination antiviral therapy is effective, with 58% of patients initiated on treatment in Scotland between 2000 and 2007 achieving a sustained viral response, ranging from 39% to 70% depending on genotype (Scottish Government, 2011).

Our study found that one fifth (90/425) of self-reported HCV positive prisoners said that they were receiving HCV treatment at the time of our study, of whom 79% (71/90) were

receiving their treatment in prison. This compares with figures from Health Protection Scotland (HPS) which indicate that 143 prisoners (14% of all patients in Scotland who were started treatment in this time period) were initiated on treatment in the year April 2010-March 2011 (personal communication, HPS).

Of the 450 patients initiated on antiviral therapy in Scotland in 2006, 30 (7%) were prisoners, of whom 12 (40%) were treated in prison (The Scottish Government, 2008). Whilst our self-report information reported above cannot be directly compared with these official figures, it nevertheless indicates a rise since 2006 in the numbers of prisoners receiving treatment and a large increase in the proportion receiving therapy in prison.

Our findings also indicate that a similar proportion of prisoners (21%, 90/425) are being treated to those in the general population - by 2009 the proportion of chronically infected individuals in Scotland (16,500) who had ever received antiviral therapy had risen to an estimated 21% - 24%. (Scottish Government, 2011).

A limited number of international studies have examined HCV treatment within the prison setting (Allen et al, 2003; Boonwaat et al, 2010; Farley et al, 2005; Strock et al, 2009). These studies have concluded that HCV can be successfully treated in prison with levels of adherence of between 62% and 100% reported. Strock et al (2009) did note that logistical barriers, such as short sentence lengths, access to specialists and delays with transferring prisoners to hospital for liver biopsy can render medical care difficult within the prison setting.

It is recognised that, in general, an integrated care pathway including social care, specialist services such as mental health and peer support are essential for successful completion of HCV treatment (Scottish Government, 2011). In Chapter 6 staff views of HCV treatment for prisoners are more fully discussed. In general, their perceptions seem to suggest that the environment can sometimes be more supportive than that available in the community. This supports Allen et al's (2003) view that prisons are a safer environment than the community setting, particularly for treating HCV infected prisoners who have psychiatric conditions.



A number of potential challenges have been identified in delivering in-prison HCV treatment including short sentences and early release from prison (Boonwaat et al, 2010). Consequently, post-release health care programs are needed to ensure continuity of care for such prisoners (Strock et al, 2009; Boonwaat et al, 2010). The Scottish Government's Hepatitis C Action Plan (Scottish Government, 2008) proposal to set up a National Memorandum of Understanding between the NHS and SPS and local service level agreements between SPS and NHS Health Boards ensures continuity of care for prisoners released whilst undergoing treatment for HCV infection.

There is a dearth of research examining prisoners' experiences of in-prison HCV treatment. Small et al's (2009) Canadian study has highlighted from interviews with 12 previously incarcerated HIV positive IDUs, a number of difficulties such as short term interruptions to treatment upon entry, transfer and release from prison, a lack of medication for side effects which was exacerbated by lack of HIV specialist healthcare knowledge and difficulties with accessing specialist care. The service level agreements and memorandums of understanding referred to above should ensure that these difficulties are not experienced by Scottish prisoners. Nevertheless, the views of prisoners may be important in either helping to improve the delivery of treatment or providing assurance that no improvements are necessary.

### **Prisoners' views on provision of new health care services**

Just under half of prisoners thought that IDU prisoners should be given access to sterile needles and syringes; one third disagreed with this. IDUs were more in favour of this provision, with almost three quarters supporting it in comparison with just over a third of non-IDUs. Arguments in favour from both IDUs and non-IDUs indicated that prisoners are aware of the risks of injecting with used needles and syringes; two thirds stated that the availability of sterile needles and syringes would prevent the spread of BBVs. Arguments against revolved around the issue of safety and, particularly but not exclusively among non-IDUs, a belief that prison should not be encouraging or condoning injecting drug use.

Whilst three quarters of IDUs wished for sterile needles and syringes to be provided, only one third said that they would ask health staff for them.

This issue will be returned to in the final chapter and will incorporate staff views of in-prison needle exchange which are discussed in Chapter 8.

The possible provision of a tattoo service was more popular among prisoners than one for body piercing. More than half of prisoners thought the former should be provided whilst two fifths requested the latter. This may be a reflection of the finding that more prisoners had had an in-prison tattoo compared with body piercing.

## **Conclusion**

This nation-wide study has shown that incidence of hepatitis C is very low in Scottish prisoners, including prisoners with a history of injecting, and much lower than that found among community recruited Scottish IDUs and to that found in HMP Shotts in 1999. Amongst IDU prisoners the incidence found here is one of the lowest in the literature. HCV prevalence is similar to IDU community samples and similar to that found in a sample of prisons in the mid-1990s.

This low rate of HCV incidence should not, however, lead to complacency. A contributing factor is the comparatively small proportion of injectors who continue to inject in prison and the infrequency of the injecting that does take place. In turn, the low prevalence of injecting may be attributable to the range of policies instigated by SPS to tackle drug use and injecting in prison and prevent the transmission of blood borne viruses – in particular the increased availability of OST. It is imperative that SPS continues to provide these programmes and increase or improve them where necessary (e.g. by focussing on prisons which report higher than average rates of injecting); our findings indicate that, if injecting was to increase, incidence rates would rise accordingly.

The issue of which policies require improvement and any new programmes that should be considered will be discussed in the Chapter 10, following the next five chapters which

present the views of SPS staff on the prevention, testing and treatment of hepatitis C among prisoners.

## **CHAPTER 5. STAFF VIEWS ON THE MANAGEMENT OF HEPATITIS C IN SCOTTISH PRISONS – BACKGROUND, STUDY AIM AND METHODOLOGY**

This chapter begins by briefly reiterating the background to this part of the study, and highlights the paucity of research on prison staff's views on HCV and HCV management in prisons. The chapter then restates the aim and objectives of this part of the study, and describes the methods that were employed to conduct it. Subsequently, Chapters 6-8 present the main findings of the staff interviews, and Chapter 9 presents the discussion.

### **Background**

Chapter 1 of this report has already discussed the importance of prisons in providing prevention strategies to reduce the transmission of HCV amongst individuals, and most importantly amongst the group who are at most at risk: injecting drug users.

As has been discussed briefly in Chapter 4, SPS has implemented a range of harm reduction policies and practices within the Scottish prison system. The main tenets of harm reduction for injecting drug users are: opiate detoxification, opiate substitution therapy (mainly methadone maintenance), the provision of harm reduction packs and issuing prisoners with information and advice in regard to safer injecting practices. Addiction counselling is available to prisoners via addiction services within each prison and via programmes such as the Substance Related Offending Behaviour Programme (SROBP). Phoenix Futures are currently contracted by SPS to provide Enhanced Addiction Casework Services to prisoners who are serving more than 31 days sentence; the two private prisons have alternative arrangements in place.

In relation to the prevention of BBVs, including HCV, SPS offers all prisoners access to BBV testing and counselling, Hepatitis A and B immunisations and also treatment for HCV.

A report by the World Health Organization (2007) states that "It is increasingly being recognized that good prison health is good public health" (WHO, 2007: vii), and not least because of the high degree of movement of prisoners between communities and prisons.

As well as advocating the role of prisons in tackling health inequalities including harm reduction measures to reduce the risks associated with drug misuse and with the transmission of HCV, the WHO (2007) also advocates a whole prison approach to health promotion including prevention. This means that not only the health staff employed in prisons, but all staff employed in prisons, are considered as important in a comprehensive strategy to improve the health of prisoners, as well as staff, in prison settings. However, little is currently known about the knowledge and views of prison staff in regard to HCV prevention and management within the prison setting.

The only study that was found in the published literature that examined the knowledge and perceptions of prison officers with regard to HCV (as well as other blood borne viruses) was conducted in the Republic of Ireland (Dillon and Allwright, 2005). Two-hundred and seventy two prison officers completed a structured questionnaire on knowledge and risk of contracting HCV. The majority of officers reported having insufficient knowledge regarding HCV in order to take the necessary precautions at work. Perhaps surprisingly, the survey also found that training on BBVs had little impact on officers' knowledge or perceptions of BBVs. However, it should be noted that the cross-sectional design of this study is one of its limitations, and one which would make conclusions about the possible future impact of training on HCV difficult to ascertain as it is not possible to establish causality in a cross-sectional study.

Research that has examined the knowledge, awareness and attitudes of prison staff toward methadone maintenance is more common than that examining knowledge and attitudes to HCV. Five recent studies that have been conducted were in Australia (Gjersing et al, 2007), the USA (McMillan and Lapham, 2005; Rich et al, 2005), the Republic of Ireland (Carlin, 2005) and Iran (Zamani et al, 2010).

Gjersing et al (2007) conducted a survey to assess and compare the attitudes and beliefs of correctional staff towards MMT with those of community service providers. A total of 202 staff were surveyed. It was found that correctional health staff had more abstinence-orientated views, were more likely to disapprove of drug use, and were less knowledgeable

about the risks and benefits of methadone than the community staff. The authors concluded that additional training was required for staff working in correctional settings.

Rich et al (2005) conducted a survey of medical directors in correctional establishments in all 50 states of the USA in order to assess their practices and attitudes towards MMT. Of the 40 respondents who participated in the survey, less than half reported the provision of methadone, and where it was used, it was mainly given to pregnant women and/or for short-term detoxification purposes. A recommendation from this study is that there is a need to de-stigmatize the use of methadone in correctional settings.

A second study conducted in the USA was one which sought to develop an instrument to measure knowledge of MMT, attitudes towards drug addiction, and readiness to adopt an MMT programme (McMillan and Lapham, 2005). The study's authors reported that written comments on the questionnaire indicated that prison staff had strong and polarised views about drug treatment in the correctional setting, and concluded that better education about OST as a treatment for drug misusers is required.

Zamani et al (2010) undertook a qualitative study to explore the views of prisoners (n=30) and prison staff (n=15) about the provision of MMT in an Iranian prison where MMT had been newly introduced. The main findings of the study were that the rate of drug injecting was almost universally perceived to have substantially reduced and that the health benefits of MMT were noted. As well as reporting perceptions of the positive impacts of methadone on prisoners and their families, however, difficulties with the service such as staff shortages, methadone diversion, and stigma being attached to treatment were also cited.

A second qualitative study of prisoners' and prison staffs' perceptions of MMT in a male prison in Ireland was conducted by Carlin (2005). Semi-structured interviews and focus groups were undertaken with prison staff (n=16) and prisoners (n=23). Both prisoners and staff were found to be generally positive about the MMT programme though both groups could identify advantages and disadvantages. For example, according to Carlin (2005) negative views were expressed by both groups about the manner in which methadone was dispensed, and also over the notion that methadone was viewed as being equally as

addictive as heroin. A diversity of views were expressed with regard to understanding of the purpose of MMT ranging from ensuring the continuity of harm reduction between community and prison, to controlling prisoners and maintaining order in the prison.

The scant research that has been conducted on staff views of needle exchange programmes (NEPs) in prisons has resulted from evaluations of the feasibility and acceptability of programmes in prisons where NEPs have been introduced. Such evaluations have found that although staff had many concerns about the potential negative consequences of introducing in-prison NEPs, such negative consequences were not found to materialise. These concerns included that needles may be used as weapons, and that the availability of sterile needles may encourage drug users to inject; neither of which were found to be the case (Jacob and Stöver, 2000; Nelles et al, 1999).

Evidently there is a dearth of information regarding prison officers' views on the management and prevention of HCV in prisons, and on harm reduction strategies including in-prison needle exchange. This part of the study sought to address this gap.

### **Study aims and objectives**

The aim of the qualitative part of the study was to examine staff views on the management of HCV and prevention strategies in Scottish prisons, whether they are working and what improvements, if any, could be made.

The key objectives of this part of the study were to explore staff views on:

- how HCV is currently managed within prisons, including prevention, testing and treatment strategies
- the role that harm reduction measures play in reducing drug injecting related harm
- the possible impact of harm reduction strategies on prison dynamics
- the possible impact of harm reduction strategies on drug use in prison
- the possible impact of harm reduction strategies on prisoners' motivation to seek help to reduce their drug use

- the efficacy of current harm reduction measures to reduce injecting risk behaviours for hepatitis C transmission
- appropriateness of needle exchange in Scottish prisons

## **Methodology and methods**

### ***Design***

Qualitative research methods were used to conduct interviews with staff. Semi-structured in-depth interviews and focus groups both were utilised to elicit their views on the management of hepatitis C within the prison setting. Qualitative research has a key role in providing insights, explanations and theories of social behaviour and attitudes and can thus aid the formation and/or implementation of policy (Ritchie and Spencer, 2002). Additionally, while often done for pragmatic reasons, the combining of in-depth interviews and focus group methods can be valuable in generating complementary views on a topic (Lambert and Loiselle, 2008).

### ***Access to participants***

Access to potential participants in the study was negotiated in a similar way to that of the first phase of the study. In each of the participating prisons, a meeting took place between representatives from SPS headquarters, the Principal Investigator, the study's Research Fellow and one or more managerial staff from the individual establishments. The aims of the study and the practicalities of conducting the study within each establishment were discussed and negotiated at these meetings. Additionally, a key contact who would facilitate and co-ordinate the interviews and focus groups within the prisons was identified, and potential suitable dates for conducting the research were negotiated. Any further negotiations over suitable interview dates and specific time-tables for example were conducted between the key contact(s) and the study's Research Fellow either by telephone or by email (or both). The key contact was also responsible for distributing paper and electronic copies of the recruitment poster and study information sheets to potential participants in advance of the interviews and/or focus groups being conducted.



### ***Population, sample size and sample selection***

The population under study was staff employed by the Scottish Prison Service who would have a perspective on issues related to the management of HCV in prisons. The sample was drawn from five specific prisons which were selected purposively to provide a diversity of experience and opinion across a range of prison environments.

In order to gather a range of perspectives on HCV management within the prisons, three specific staff groups were included within each prison: residential officers, healthcare and addiction staff, and managerial staff. However, in order to accurately reflect the proportionate size of these staff groupings according to the overall size of the staff pool within each prison, for example, reflecting the fact that residential officers are a much more numerous staff group than either healthcare staff or prison managers, the sample of staff invited to take part in the study was stratified by staff group and then selected to reflect their proportionate size in relation to the overall staff numbers in each prison. A higher proportion of residential officers were included in the sample from each of the prisons, as compared to healthcare and addiction staff and prison managers. The overall number of staff invited to participate in the study was also calculated proportionately according to size of prison so that higher numbers of participants were recruited from bigger prisons, and smaller numbers were recruited from the smaller prisons.

At the outset of the staff views part of the study, it was anticipated that approximately 90 staff in total would be interviewed, but that the interviews would be discontinued if data saturation was found to be reached before the 90 interviews had been completed.

### ***Sampling method and recruitment procedure***

Owing to the difficulties of recruiting participants in the prison setting, staff were recruited by means of volunteer sampling. However, the goal of qualitative research is not to produce a representative sample but to reflect diversity (Barbour, 2008).

Volunteers were recruited by responding to posters and leaflets that were circulated by key contacts within the prisons asking for participants to take part in either individual interviews

or in focus groups. The posters and leaflets were located in areas of the prison where the target staff groups would be most likely to see them. In addition, electronic leaflets promoting the study were either placed on the prison intranet site and/or were circulated individually to the target staff groups.

The posters specified that residential officers, health and addiction staff or managerial staff were being sought to take part in the study, and also specified the exact dates and times when focus groups and/or individual interviews would take place. The posters also contained the name of the key contact within the prison in order that individuals who wished to participate could alert the key contact.

### ***Data collection and analysis***

Data were collected via individual interviews and focus groups that were conducted over a three month period from April to June in 2011. All interviews and focus groups took place in private areas within each of the prisons. In total, 13 focus groups and 29 individual interviews took place over this period.

The interviews and focus groups were conducted by experienced qualitative researchers using a semi-structured interview schedule. The individual interviews lasted for up to an hour, and the duration of the focus groups ranged from one hour to 90 minutes.

Prior to the commencement of the interviews and focus groups, participants were given time to read the participant information sheet, to ask any questions about the research, and completed a brief biographical questionnaire as well as a consent form.

All interviews and focus groups were audio-recorded with the permission of participants, and all were transcribed in full in order to facilitate the process of data analysis. Full transcriptions are utilised to maximise the validity of the data generated (Nikander, 2008).

The data were managed using Microsoft Word 2007 and a thematic analysis was undertaken in order to determine the major themes that were contained within the

transcripts. A constant comparative method was used in order to aid the identification of the themes across both the focus groups and the individual interviews.

### **Ethical considerations**

A key concern of ethics in research is that participants are required to give informed consent to participate in research (Fathalla and Fathalla, 2004). To this end, participants in this study were given the opportunity to ask any questions before the interviews were commenced and were asked to complete a consent form which, amongst other things, confirmed that they understood the purpose of the research, that their participation was voluntary, that they had the right to withdraw from the interview at any point and without giving any reason, and that they agreed to have the interview audio-recorded.

In order to protect the anonymity of participants the pro-forma that was used to collect biographical data of participants did not record the names of any participant. Any names that were used during the course of the interviews were deleted from the interview/focus group transcripts: consequently, no names have been used in reporting any of the findings that are presented here.

Ethical approval for the study was granted both by the West of Scotland Research Ethics Committee and the Research Ethics Committee of the University of the West of Scotland and endorsed by the Scottish Prison Service.

In accordance with the Data Protection Act (1998), all raw data were kept in locked filing cabinets and all electronic data were stored on a password protected computer.

### **Participants**

A total of 110 participants took part in either focus groups or individual interviews across the five prisons. Sixty five participants (59%) were males and 45 (41%) were females.

Exactly half of the sample were in the 45-54 years age band (n=55), and almost a third were in the 35-44 years age band (n=35; 32% of the sample). Only 15 (14%) of the participants

were 34 years of age or under, and 4 (4%) were 55 years or over. Of the 108 participants who indicated how long they had worked in the prison service, 72 (67%) had done so for more than ten years. Thirty eight participants (35%) had worked in the prison service for more than 20 years. At the other end of the spectrum, 16 participants (15%) had worked for the prison service for less than five years and the remaining 20 participants (19%) had a service length of between six and ten years.

In terms of staff groupings, nearly half of the sample (n=53; 49%) were residential or prison officers; 30 (27%) were managers; and the remaining 26 (24%) who responded to the question indicated that they were health or addiction staff.

Almost 70% of the sample (n=75) reported that they had never had any training on hepatitis C since working in the prison service. Of the 35 participants (30%) who had received any training almost three-quarters of these had received their training more than one year prior to the interviews taking place.

### **Key for the presentation of participants' quotes in the following chapters**

The next three chapters present the findings in relation to staff views. Participants' quotes are presented using the following codes:

P represents the Prison, eg, P1 is Prison 1 etc.

FG and II represent that the quote is taken either from a focus group or an individual interviews.

Last, the participant number, job role and sex is given as, for example, Officer, Male 5 or Manager, Female 6.

## **CHAPTER 6. STAFF VIEWS ON HEPATITIS C MANAGEMENT AND PREVENTION STRATEGIES**

The principal aim of this study was to explore prison officers', prison health and addiction staff and prison managers' views about management of the hepatitis C virus in the prison setting. In particular, and in accordance with the objectives listed in the previous chapter, four specific areas, relating to the current and future potential management of HCV within prisons, were the focus of the interviews: i) the overall management and prevention of HCV, including early detection of HCV via testing, ii) the treatment of HCV; iii) harm reduction strategies that have been implemented to reduce the prevalence and incidence of HCV; and iv) the potential utility of introducing needle exchange into the Scottish prison setting potentially to further reduce the harms and risks of HCV transmission associated with injecting drug use. Each of these areas will be discussed in turn in Chapters 6-9.

This chapter reports the main themes which were identified from the interviews and focus groups with participants in relation to issues concerning the management and prevention of HCV in prisons. The chapter begins by outlining participants' knowledge and awareness of broad strategies of the management of HCV within the prison setting and then proceeds to highlight and discuss the following: i) participants' knowledge and awareness of HCV testing and treatment in the prisons; and ii) knowledge and practice regarding HCV prevention.

### **Participants' knowledge and awareness of the management of HCV within the prison**

A confidential blood borne virus service, incorporating HCV, is available to all prisoners within the Scottish Prison Service. In principle, this service includes immunisations, HCV testing and counselling, HCV treatment and harm reduction awareness-raising such as awareness sessions regarding HCV (and other BBV) risk behaviour awareness training.

As would be anticipated, the health and addiction staff participants had extensive knowledge of the overall strategies in place to address the management and prevention of HCV within prisons. Many aspects of strategies were highlighted during the interviews.

These included the national harm reduction programme that prisoners participate in on admission to and liberation from prison, the opiate substitution treatment programme, the use of harm reduction packs and sterilising tablets, the role of Phoenix Futures (an external agency which provides services for public sector prisoners with alcohol and drug problems), the provision of condoms, and the distribution of information via leaflets and posters throughout the prisons. In addition, the provision of educational and awareness sessions by Phoenix Futures and addiction staff were also mentioned as places where information about blood borne viruses including HCV is passed on and discussed. Lastly, the role of external agencies and individuals, such as organizations like 'C Level' and the role of NHS consultants were also mentioned as part of a multi-disciplinary approach to the HCV testing and treatment aspects of the strategy. The following quote from one of the health and addiction participants gives an indication of the overall strategy in one of the prisons.

"Obviously it's a multi-disciplinary approach that extends in other directions. We have Phoenix – who do harm reduction as [name] said. We also have the methadone and support as you said. We have the addictions nurses who do one-to-ones with the individuals. We have lots of leaflets and documentation and posters and educational materials, health promotion materials in the health centre and around the jail. We... as soon as the prisoners come through the door we give them a health centre information leaflet which advises them of how to access clinics. We...also we don't do needle exchange kits obviously but we have harm reduction packs which you'll have heard of in other establishments which have everything except needles. We have a [local external] hepatitis C team who come and work very closely with our teams and have provided some of our nurses – two of our nurses – with specialist knowledge who can deliver the clinics on their own so, again, that's prevention, testing, treatment and education. We also provide education sessions for healthcare staff and we're working towards providing education sessions for discipline staff through the [external] consultant... I would imagine they

do a bit of harm reduction in programmes through the... is it SROBP.<sup>1</sup>” (Prison 2, FG Health and Addiction, Female 3).

On the other hand, the knowledge of both managers and officers with regard to the management and prevention of HCV was considerably less comprehensive. The following two quotes from managerial staff in two different prisons, illustrate this point:

“What prison does with somebody from the day they come in to the day they go out in terms of drug reduction is one thing, but when you’re talking about safety in terms of Hep C at the moment, as far as that’s concerned, I’m not entirely sure what the prison does.” (Prison 1, FG Managers, Male 5).

“I don’t know enough about it to be honest, how many they could manage or how effective... I’ve certainly not had any, sort of, in depth knowledge of it to be able to... apart from what my own experience, if I’ve seen people on it, and speaking to the addiction nurses... inform me about it to be honest, that’s the only reason I’ve got an awareness of what the effects, and it affects different people different ways, but that’s really it. I don’t know a great deal.” (Prison 4, FG Managers, Male 5).

However, another of the managers highlighted that while non health and addiction staff may not be aware of every aspect of any strategy regarding HCV management and prevention, it is likely that they are aware of aspects of it but without perhaps knowing that it is strategy per se. This particular participant suggested that such aspects include issues such as how to deal with blood spillages: a topic which may also be covered in training on, for example, first-aid.

One officer spoke specifically about her lack of knowledge regarding needle-stick injury policy and procedures, and her lack of time to read all of the necessary policy and

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<sup>1</sup> Substance-related offending behaviour programme

procedural information while at the same time acknowledging the importance of knowing such information:

“But there must be a policy in place, but I just haven’t read it properly. That’s the honest truth, but there will be. The nurses would obviously know a needle-stick injury policy, and what advice to take on it, but I haven’t actually read it. Probably I should... There are so many policies, and things we should read and know about, but you can’t read them all. It’s impossible. We’ve got no time in the day to do these things. That’s a pure excuse, though. You should, for your own safety, know these things.” (Prison 3, II Officer, Female 5).

Other participants referred to a similar point, that while they were aware that such prison policy and strategy documents are probably available on the SPS intranet system – Share Point – that there was simply too much information on the system to keep up with it:

“There’s thousands and thousands of written policies and unless it’s, somebody sticks it in front of your nose and says, read that... I’ve got to say, you know, everything’s on our Share Point site, our computer site. You go onto that and there’s thousands of policies. You could spend all day reading policies but you’ve just not got the time to spend all day reading policies.” (Prison 1, FG 1 Officers, Male 2).

While knowledge of overall management and prevention strategies of HCV within the prison was not good out-with health and addiction staff, other participants were able to demonstrate that they had an awareness of particular aspects of management and prevention such as that of the availability of testing and treatment in prisons. The following section presents the main themes which emerged in relation to testing and treatment issues.

### **Knowledge and awareness of HCV testing and treatment in prison**

In order to be tested for HCV within the prisons, prisoners can complete a self-referral form to be submitted to the nursing and/or healthcare staff in the prison. Self-referral forms are



reportedly available to prisoners in all residential areas of the prison. Other than self-referral, referrals for HCV testing can be made through numerous other routes such as via addiction staff, Phoenix Futures and General Practitioners.

### ***Testing***

Awareness of the provision of HCV testing in prisons was almost universal amongst participants. While only the health and addiction participants had any detailed knowledge of the number of prisoners undergoing testing and treatment within the establishments, almost all of the participants were aware that a confidential HCV testing service was available to prisoners via the health centres within the prisons. When asked whether prisoners would know how to access HCV testing within the prison, there was widespread awareness that prisoners are able to self-refer for testing by completing a form that is passed to nursing staff. Both managers and officers considered that the process of self-referral was straightforward:

“It’s certainly easy if they do want to get tested, I mean, the standardised form they’ve got if you want to go and see anybody at the health centre, it’s just a tick box and one of the tick boxes is blood borne virus and they can go and be discussed or they [can] be tested.” (Prison 4, FG Officers, Male 5).

“There’s medical referral forms in every hall that a prisoner can get free access to, fill in the referral form, put it in a secure box that the medical staff will pick up the next day and they can put it down for a range of reasons about why they would want referral.” (Prison 5, II Manager, Male 5).

“It’s on the nurse, it’s on the health centre referral form, there’s a box they can tick and that if they want to get tested for anything, they just tick the box and it will go to the surgery and get dealt with from there.” (Prison 4, FG Managers, Female 6).

As well as having knowledge of the self-referral route to requesting HCV testing, many participants were confident in saying that the prisoners themselves were aware of, and would know how to access HCV testing in prison.

“Oh, I think [prisoners] will access the health centre for everything, so I don’t there’s any danger that any [prisoners] in here wouldn’t know how to access a service.” (Prison 2, FG Managers, Female 3).

“Yes. I mean, I think most prisoners, they would know that if they, I mean, they know the requirement how to access medical attention, so they know they can either report sick to a member of staff, or they can self refer, which is a slip that they, you know, just put their name on, and they drop it in the box and it’s picked up by the medical staff.” (Prison 4, II Manager, Male 3).

### ***Treatment***

While almost all of the participants appeared to be aware of HCV testing being available to prisoners, not all of the managers and officers were aware that treatment is also available, either in general or in prisons.

“Is there any treatment for Hep C?” (Prison 3, II Officer, Female 4).

“I wouldn’t know what treatment they got for it. Right, even if a prisoner was to ask me, I wouldn’t know. I’d need to say to them go and speak to the nurse; I wouldn’t have a clue about it.” (Prison 2, II Officer, Female 1).

Another officer when asked what he knew about HCV treatment strategies, said the following:

“None. The only thing I’ve come across in this prison in recent times... well, recently there last week, because I’ve been up in [the hall], as part of the treatment, some of

them get a fruit subsidy. They get extra fruit for something or... I don't even question it." (Prison 2, II Officer, Male 2).

A small number of non health and addiction participants did, however, know that treatment is available in prisons but only knew because prisoners had told them; not because they had been informed by the prison service.

"Yes. I've got, maybe, a few [prisoners] in [the hall] with it. In fact, I never really realised it's, maybe, just in the last six months, maybe, that there's been [prisoners] getting treated for that. Maybe not even as long as that - maybe four, maybe six months. But, yes, there are a few [prisoners] in my [hall] getting treated for it just now. And it's only because they've told us, like, the [prisoners] have told me, it's not because of the health centre really informing us about this, which, I suppose, is understandable. But, yes, it is." (Prison 2, II Officer, Female 4).

Very few managers and officers had any detailed knowledge about the types of treatment available for HCV and/or the potential impact that treatment can have on recipients. However, of those participants who did have this knowledge of the impact of treatment, they were aware of the effect that receiving treatment could have on individual's energy levels and on mood:

"Well, one guy told me, actually, this morning, or yesterday he told me, and then I saw him again this morning, and he said that he was getting Hep C, I think he said Hep C treatment, a course of it, and he said that he'd spoken to a couple of other guys. It's funny how things happen. He'd spoken to another couple of guys, who said that it's quite draining on them, and it can cause sleepless nights, and things." (Prison 3, II Officer, Female 5).

"We don't get told because obviously it's a health centre discretionary thing. My men tell me. I know the ones that are on interferon. They get care plans because

obviously it's quite a hard treatment and it can make them really crabby, moody and down." (Prison 3, II Officer, Female 7).

### ***Potential utility of knowing about the treatment process***

Of the small number of the managers and officers who had any detailed knowledge or understanding of the treatment process or its potential side-effects, some suggested that having some understanding is useful in allowing officers to be more supportive of prisoners undergoing treatment.

"They get really crabby as well but I know that, and if they really start I, basically, you're not having a good day, just go away and come back in a wee while and just leave them. Most of them are like "I'm sorry". It's just that wee bit extra understanding with them and what they're going through and just try and support and be there for them and encourage them to keep going. Because I've had a few, "oh I want to pack this in". "Don't worry, you've come this far and no point now, come on you'll find it's going to get better, it can only get better"." (Prison 3, II Officer, Female 7).

"You get the sort of official policy, this is what I'll do, but when you actually speak to somebody who's going through it, it affects them all differently, so you get a lot, as [name] was saying, you get a lot more from that individual, how it's affecting him personally, then the next person will be completely different, you know, and you start building up your own knowledge, which I think is a good thing for the prison service in general, that their staff or whoever, have a better working understanding of this, and what the ups and downs of that process will be, and how it will affect these individuals through that process. If you weren't aware of that you might jump to the wrong conclusion, he's at it, he doesn't want to go to his work or, you know, there's a whole lot of other things that come into play, but, the more knowledgeable you become of these things, the better support you're going to give him, hopefully make it easier for him to get through or support him through and see it to the end, which we did I think quite well." (Prison 4, FG Managers, Male 4).

“He might be really off with the staff, and you just think he’s being lazy, or you think he’s just cheeky, so if you knew the reasons why then you would be more tolerant, wouldn’t you, yes.” (Prison 3, II Officer, Female 5).

One manager spoke specifically about being more closely involved in case conference discussions about prisoners receiving HCV treatment, and how he found that this was helpful in knowing how better to manage such prisoners:

“...there’s a case conference or discussion takes place between, I might be involved, or certainly one of my managers would be involved, certainly the gallery staff, and quite possibly somebody from the work, and we’d look at the impact of interferon, the highs and lows, the mood swings that prisoners are likely... and probably put in a kind of package of measures to make sure that... again they’re all different, there are some of them that are on it in the hall and you wouldn’t know from day to day, there are other who have had a real bad time, I mean, we’ve had real downers, so we would, each of the prisoners who are in the hall that I look after, their case has been discussed at a hall level, not the specifics of their case, just the fact that they’re on interferon and here are the likely side effects and the likely signs to look for, and the staff in the galleries that they live on and work on, would manage them through that process until such times as they were told, they are now, you know, stable or whatever, and they’re coming off interferon.” (Prison 4, II Manager, Male 3).

### ***The volume of HCV testing and treatment in prison***

Only the health and addiction staff were able to address questions about the extent of HCV testing and treatment in prisons, and any issues relating to these processes. This is not surprising given the confidentiality attached to the provision of health care to all individuals including those in prison.

With regard to the volume of testing and treatment that was then happening within the prisons included in the study, various experiences were reported by health and addiction staff. This ranged from a waiting list of approximately two weeks in one prison to six

months in another prison where staff shortages were having an impact on the volume of testing and treatment that it was possible to manage.

HCV treatment of prisoners was on-going to a lesser or greater extent in all but one of the prisons, and a number of themes emerged during interviews with regard to the ability to provide treatment. In particular, limited resources for staffing were mentioned in three of the prisons as impacting on the provision of testing and treatment.

“...you need the staff to be doing the testing. And if you had more staff and more correct time for [name] to do more testing, you would have more people tested. At the same time though, you would have more people on treatment, and further staff to deliver the treatment. We don’t. So we don’t have so many people on treatment at the one time, because those people have got to get their injections every week, so it’s got to be programmed into healthcare.” (Prison 2, FG Health and Addiction, Female 1).

“What I feel that could be done is there could be a full time BBV nurse in this... it’s too big. It’s me at the moment, and it’s far, far, far too big. I cannot give people the support that they need; I can’t give people the education they need, because there’s [a lot of] people in there, and they all need that education. Even if it’s your vaccinations, they all need them and there’s me; and I’m a practitioner nurse, first and foremost, you know. Some of the prisons have a full time blood borne virus nurse, and we have a population here... a vast majority of those are drug users, and they’re a high risk category, and we don’t have a full time hepatitis nurse or a BBV nurse here. And I think it really is needed.” (Prison 5, II Health and Addiction, Female 6).

“This year we have... we have a six month waiting list, which is ridiculous, and I’m ashamed of it... ” (Prison 4, FG Health and Addiction, Female 4).

These participants' main concerns with the lack of resources to conduct testing and treatment for HCV related to an awareness that these matters were also impacting on prisoners who were ready either to be tested or treated for HCV, along with an understanding that the window of opportunity could be quite narrow for individuals.

*Extract from Health and Addiction Focus Group – Prison 4:*

- Female 7      You could wait six months down the line and they'll just say, what's the point now? It's like people coming off methadone, people who...
- Female 1      The whole waiting times issue in general.
- Female 2      It's when everything falls into a certain slot and everything is right for that person. If you miss that slot it can take two years.
- Female 5      You're also sometimes missing your short-termers that are in and out, in and out, because they know "there's no point putting me on the list, because I'm not going to get there"; even though they are ready to be... to engage."

Some of the health and addiction staff reported that prisoners were concerned about whether they could access treatment in the prisons in the current climate:

"And I think we feel that, and I think they feel that as well, and that's why we're trying to iron out these problems; because I have people actively coming to me saying, they know they've got it, they would like to start the treatment, but they're worried about the, kind of, lack of support. But, as I say, we're going down the path of trying to sort all that out for them." (Prison 5, Health and Addiction, Female 6).

***Encouraging prisoners to be tested and treated***

Despite their concerns about waiting times and resources many of the health and addiction staff also spoke about ways in which they pro-actively encourage prisoners to be tested.

A number of the participants highlighted the fact that questions about blood borne viruses are asked as part of the admission process for prisoners. The health and addiction staff

spoke about how this can be, and is, used to prompt discussions with prisoners about whether or not they have been tested for HCV, and their awareness of the risks associated with HCV transmission:

“I think what’s good as well is when you say to them about wanting the Hep B vaccinations and often the first thing they’ll say is, “I don’t inject, I don’t need it”, so then that gives us the opportunity to explain that it’s not always the only way to contract it, the hepatitis, so we can give them education then as well. And it’s all on the admission form so I would say that most of the prisoners that come in should be given that information.” (Prison 3, FG Health and Addiction, Female 1).

“If, for instance, they haven’t had the hepatitis A and B jabs, I would really encourage them, say we’ll give them education, health promotion and just explain it all, how it’s better for them to have these jabs and also if they’ve been involved in high risk behaviour they’ll say, “oh, but I’ve never shared any needles”. “No, but what if you’ve shared your filter or your water or just”... so it’s all about promotion and education and then they can say, “well, actually I have”. And then we can say, “look, do you want to be tested”, and then you’ll tell them about Interferon treatment and “obviously if you are positive it’s not just you’re positive that’s it. There’s things that can be done but it’s better you know sooner rather than later”. And they respond to that.” (Prison 3, FG Health and Addiction, Female 4).

Another health staff participant described a systematic approach to targeting prisoners to try to ensure that those who are at risk or who have not yet had testing or hepatitis A or hepatitis B vaccinations are encouraged to do so:

“...when I get my days as the BBV nurse, I put... I go through the prisoner list alphabetically, and I check on the medical records, and if they’ve not had any of their testing or they’re intravenous drug users, or they’ve not had their Hepatitis A and B, I put them a little note saying, this we can give them. I get quite a lot of feedback from



that. We're doing really well, particularly with the A and B vaccinations." (Prison 5, Health and Addiction, Female 6).

Another important aspect of HCV testing and treatment that was spoken about, particularly by health and addiction staff was the need to offer a service which is sensitive to the potential stigma surrounding HCV (and drug use), and also discreet.

"And, again, in terms of the Hep C, the resource, and that, a little bit of stigma attached to that as well, about getting them to come forward and speak to the Hep C nurse; it was sometimes done through the guise of something else, like, come up to the nurse, I've got this and then while they were up they chatted about the possibilities of they were concerned about Hep C and the, kind of, the [beginnings] of the outwardly symptoms of Hep C." (Prison 2, FG Managers, Male 4).

"That is, it's managed very discreetly...I can only speak for the discipline side of things and having dealt with prisoners that's maybe went through the treatment. I think it's dealt with very professionally in relation to the personal side of it – and I think that's how it should be. I don't think we need to know who's got it and how they got it and things like that, I think it's about making them... preparing them and giving them the treatment that they require. And I do, I think it's still the... I don't know how it's dealt with in relation to healthcare side of things, because it's something that we're... we probably don't need to know." (Prison 2, FG Managers, Female 1).

### ***Views on the appropriateness of the provision of HCV testing and treatment within the prison environment***

In the course of the interviews, participants were asked about the appropriateness of providing HCV testing and treatment within the prison setting. None of the interviewees considered prison to be an inappropriate place to conduct HCV testing and treatment, and indeed many participants perceived that the prison environment was potentially better than the community to deliver these health interventions, and for a number of reasons: the time available in prison, the structure and routine of the prison environment itself, as opposed to

the perceived chaos of life for many drug-using prisoners outside of prison, and the additional support available in prison from staff. The following quotes from managers, officers and health and addiction staff illustrate these views:

“Certainly to be able to test, whether they're in prison, I mean we should really, if we can diagnose them in prison and then hopefully get an early intervention with treatment when they're a bit less chaotic than they might be in the community, then that's all to the good. We've got them in a bit more stable environment where they will get their medication every day, where they will be taking their medication every day, so I think that's healthy.” (Prison 5, II Manager, Male 5).

“Well, yes, because they'll probably stick to it more, you know, because they've got a daily routine here. And probably, you've got the health centre, or whoever, who know they are going, but then if they were outside and they were maybe still taking their drugs they would probably miss a lot of their treatment, and so it probably is a good way, because they have the time here to do it then. Certainly it's a safe environment for them here to do it, as well, isn't it.” (Prison 3, II Officer Female 5).

“We've got a guy that's on Hep C treatment at the moment [ ] and I know for a fact that...out in the community [ ] he would have given up by now just because obviously how ill he's been and here he's got staff and the health care staff as well encouraging him, you know, to continue with whatever.” (Prison 4, FG Officers, Female 8).

As well as testing and treatment in prison being perceived as positive for the reasons given above, some of the health and addiction staff also thought that prisons offer a better environment for treatment than the community because of the additional support and the privacy that in-prison services can offer prisoners who may not wish family members to know that they have HCV, owing to the stigma associated with it:

"I think sometimes having seen guys on civvy street starting the Hep C treatment and guys in here, I think they get offered more support, and they're in a more cocooned environment, if you like, to go through that treatment; whereas the guys on the outside are facing everyday life, and so I think they've probably got more chance of success of seeing the treatment through in this environment, therefore, it's ideal to capture them." (Prison 4, FG Health and Addiction, Female 5).

"They're as well getting it here while they're here. In some ways it is a good way because they're here, you're monitoring it, they've got that support, they've got support from the health centre, they've got support from staff, they've got that little bit of space where they can shut themselves away. Because usually they will allocate them a single cell marker so they have that space, whereas on the outside world they might not get that same support and depending on their family background, you don't know where they're going out to and living. So yes in some ways I think yes, it is a good idea to get it when they're here." (Prison 3, II Officer, Female 7).

"Yeah. I think the other thing as well, you have to remember that one of the guys who has just finished his treatment with me, but this is his third sentence that he's had. He had to do a [long-term] sentence to get this Hep treatment because he didn't want it in the community because he had no support. And he didn't want his family to know." (Prison 3, FG Health and Addiction, Female 3).

"There's a bigger stigma, not with their peers because they do talk a bit amongst each other, but they're terrified of the family hearing outside, of course, about finding out about it, and that's what's so... When they're in here it's a perfect opportunity to have it dealt with without actually having it infringing on their own lives outside." (Prison 3, FG Health and Addiction, Female 6).

"And if you're going to treat them and test them, and they're bothered, then you give them a shot at it. So I do think it's a good thing and I think it should be available, it's trying to lose the stigma off it, you know, it's got to be done in such a way,

there's no stigma attached to the prisoner, because, you know, prisoners live on their street cred, and if, you know, people think that they've a virus or Hep C, it, kind of, they don't like that.” (Prison 4, II Manager, Male 1).

Overall, participants were very positive about the role of prisons in providing HCV testing and treatment to prisoners.

### ***Peer support amongst prisoners***

Another theme which was apparent, and particularly in the interviews with health care and addiction staff, was the role of prisoners providing support for one another in relation to HCV. According to some of the participants, this peer support can take the form of just passing on and discussing information about HCV, or can be in the form of encouraging each other to seek either testing or treatment for HCV.

“It appears, because the [prisoners] getting treatment at the minute have got pals, and other [prisoners] in the halls are going to see them and ask them about the treatment, so if they think it’s not as bad as what they’ve heard, they usually appear, and say, they told me about this treatment. Can I get tested?” (Prison 2, FG Health and Addiction, Female 4).

“We offer a lot of support as well to the patients receiving the Interferon treatment. A lot of the time they'll put in referrals and they'll want to see us and we'll go out and we'll speak to them and just offer them support and guidance. But also other prisoners give them a lot of support and guidance as well because people have been through it before themselves but they actually will say it's worth it. I know it's hard just now but after that it's... and that's encouraging.” (Prison 3, FG Health and Addiction, Female 4).

Not only was peer support viewed as something that is already happening, though very much on an informal basis, but it was also advocated by some participants that there ought

to be consideration given to developing and/or formalising such support for prisoners undergoing HCV testing and treatment in the future:

“Peer education and Hep C prevention is obviously coming to the fore, if we’re talking about in the community, so peer education in general... I mean, we have peer educators in the prison for literacy. We have listeners, Samaritan trained prisoners who work with the other prisoners, so there’s a... you know, peer educators as well, people who are prepared to kind of share their own knowledge and experience to the good and the betterment of others. That’s something that could be developed a little bit further as well.” (Prison 4, FG Health and Addiction, Female 1).

### **Knowledge and practice regarding HCV prevention**

When asked about HCV prevention in the prisons, many of the officers and managers spoke about this aspect in relation to preventing staff from contracting HCV. With regard to this topic, four major issues were evident from the data: i) the need to treat all prisoners as if they have HCV in order to protect themselves against contracting HCV; ii) the issue of wearing gloves during cell searches and also body searches of prisoners; iii) the need to deal appropriately and safely with blood spillages; and iv) misconceptions and concerns about transmission and infection with HCV.

### ***Treat all prisoners as if they have HCV***

A common theme and mantra that was repeated by many officers and managers was that the most appropriate way to safeguard against contracting HCV was to treat every prisoner as if they already have HCV (or any other infectious virus).

“You do hear the odd prisoner saying I have to go and get tested for this or I want to go and get tested for that, but as far as I’m concerned, they’ve all got it, because that’s just the way that I was taught. You treat everybody like they’ve got every contagious disease in the world, that way you treat everybody the same with the same safety things that you use.” (Prison 5, II Officer, Male 1).

“The kind of idea is that we treat everybody, operational staff should treat all prisoners as potentially, that they all have Hep C or whatever and any, you know, they've got to be careful of any sharps, any blood contaminated items or whatever and we should be taking precautions with everybody.” (Prison 2, II Manager, Female 5).

“You have to treat them all the same. You do but it's kind of hard to do that in a prison system because if, for instance, in the past when you did find out someone was Hep C or had AIDS and all the rest of it, whatever, or they were going through HIV, you were more conscious of it. You were aware of that person/individual. You know, like if he like cut his hands and put smears here, there or wherever, you're more aware of it.” (Prison 3, FG Officers, Male 8).

The notion of treating everyone the same related largely to the second two issues that arose in the interviews: wearing gloves during cell and body searches, and dealing safely with any blood spillages that occurred, whether minor or major.

### ***Wearing gloves for cell and body searches***

In discussing the need to protect themselves against needle-stick injury, many participants referred to the practice of wearing gloves to conduct cell and body searches. For cell searches, this generally related to wearing gloves that protect against needle-stick injury – anti-puncture or ‘turtle skin’ gloves; while for body searches this tended to refer to wearing surgical gloves which are used to protect against direct contact with any blood.

“You know, per month we have certain searches we have to do, a certain amount that we have to do, and we get on and do it. Although I do wear gloves, because I'm not keen on doing it without gloves, to be honest, especially if I've got any cuts on my hands, so I wear gloves.” (Prison 3, II Officer, Female 5).

“...but, no, I don’t have a problem doing searches. I don’t feel unsafe doing them, as long as I’m wearing the proper protective gloves. I wear them instead.” (Prison 3, II Officer, Female 5).

“So when it comes to like, you know, if somebody has a fight and we have to deal with them, we put gloves on. We treat them all as if you can catch something off them. But that’s the same for, like, fire... you know, like ambulance-men and stuff like that anyway. We just assume that you can catch something off all of them, I suppose.” (Prison 4, II Officer, Male 7).

“You could probably go into other workplaces and find a lot more, sort of, dangerous risk of cross contamination, you know. If you worked in a manual job there’s a lot more chance of having cuts and, you know, things like that. Whereas we are really aware if anybody’s got a cut it’s covered up, it’s covered up with a plaster and then they’ve got their gloves on as well and, you know, things like that I think there is more awareness.” (Prison 4, FG Officers, Female 8).

From the quotes above it can be seen that these officers are aware of the need to wear gloves in instances where people have cuts on their hands, and in instances where ‘bloody fights’ have occurred, suggesting that they are aware of these possible transmission routes of HCV. Indeed the last quote above is noteworthy in that the participant’s perspective is that prisons may in fact be a safer environment than other workplaces because of the higher degree of awareness that there is in the prison environment.

However, despite the fact that participants were aware of the need to wear gloves as a barrier to accidental blood-to-blood contact, a number of issues arose relating to the propensity and/or ability of officers to access and wear the appropriate gloves at appropriate times and places. In particular, this related to dealing with incidents that arise suddenly and spontaneously, but also to issues of access to the turtle-skin gloves and of the perceived impracticalities of using turtle-skin gloves during cell searches.

A few participants suggested that the availability of turtle skin gloves was sometimes not good: either they would not be available in the right size, in the right location, or there were simply too few pairs of gloves available for the number of staff requiring them:

“But the fact is there's been an agreement for the last two years that we would get these turtle-skin gloves, personal, for us, which we'd wear blue ones on top, so that...to maintain them. So that would keep them clean, but still have the protection, because it's underneath your ordinary blue glove. I've never had them. Never been offered them. That's a big issue.” (Prison 3, II Officer, Male 2).

“They don't provide us with the proper equipment, because it's too expensive – we're obviously not worth it – to provide us with gloves...” (Prison 2, II Officer, Female 3).

“You go in [to the cell] and you ask them is there anything that's going to hurt me, anything that cause me harm, they say no, obviously they're not wanting to tell you, we do have puncture proof gloves, but other than that we tend to... Prison Officers are very bad at admitting that they're weak, so it's a pair of rubber gloves and that's it, but you know, there has been needle-sticks, but it doesn't happen very often.” (Prison 5, II Officer, Female 3).

“We do have strong gloves, anti-puncture gloves, but they're really [not] for individual body searching and searching prisoners, there's not really many of them to go round, the size, they're just the one size as well, so we don't really tend to wear them, you're just very careful, and just poke your hands in where you can see what's inside and just watch what you're doing basically.” (Prison 5, II Officer, Male 2).

On the other hand, as well as a perceived lack of availability of anti-puncture gloves, other problems relating to the cumbersome nature of these thicker gloves were remarked upon by participants. Specifically, the notion that the turtle skin gloves made the detection of



needles less likely at all, and hence that they were counter-productive to successful cell searching, was mentioned during the interviews.

As well as the lack of use of turtle-skin gloves at times some participants referred to barriers to wearing ordinary surgical gloves during the routines of prison work. For example, often mentioned was the difficulty in finding time to put gloves on when incidents such as fights between prisoners suddenly erupt.

“I mean, if somebody gets in because there is a fight, you’re right in there, helping them or breaking them up or whatever else, then it’s not your first thought but it should be.” (Prison 3, FG Officers, Male 2).

“Well, it’s difficult obviously if you’re talking about the blood-to-blood contact. Obviously if there’s a fight happening, there is every chance of that. Then it’s difficult. How do you prevent it? I mean, we do have gloves and that, but sometimes there’s just, you’re on the, you know, you’re on the scene. I mean, I haven’t seen anybody going and putting gloves on before they do anything. But that’s certainly obviously an issue.” (Prison 3, II Officer, Female 1).

“So you take that extra precaution for a wee while and then you do another four or five, six searches, and you start saying, I’ll not bother, you know, I’m in a hurry, or we need to get this done quickly or instead of using a pen to search... I mean, the stuff’s there for us to use but sometimes through time constraints or whatever, something happens and you’ve got to deal with it there and then, and sometimes you don’t maybe think about putting your gloves on before you go and search somebody or, you know, whatever, or somebody’s getting assaulted in front of you, you’re restraining them, you’ve not got time to go and put gloves on before you, you know, so there’s times you cannae. It’s afterwards you think, that went all right, and then you start thinking, shit, you know, it’s then afterwards in hindsight so, review what’s happened and say, wish I hadn’t done that, or done that differently.” (Prison 4, FG Managers, Male 4).

As well as the risks associated with bloody fights, some of the staff had awareness of the risks associated with tattooing; there were mixed views with regard to the current extent of tattooing occurring in the prisons, although many believed it be episodic and related to the individuals (artists) imprisoned at the time. Some staff expressed doubt about the extent to which prisoners are aware of the risks, particularly in relation to aspects such as discarding the ink that is used between creating one tattoo and another:

“....they think, I’ve not actually injected with it, ‘I’ll just use it again’.” (Prison 2, FG Officers, Female 1).

“Aye, but I don’t think they would think clearly enough to ditch the ink. I don’t think they would.” (Prison 3, II Officer, Male 2).

Additionally, while many staff commented upon the high profile poster campaign underway in the prisons to highlight the dangers of in-prison tattooing, some also commented that these posters are largely ignored and that consideration can perhaps be given to conducting additional prisoner education in the form of face-to-face educational sessions:

“But you’ve just got to try and let them know not to get tattoos. It maybe should be how we do alcohol awareness. Maybe there should be Hepatitis C awareness classes, you know like in our programs, just to make them aware of what can happen. Not just even in the jail, outside the jail because it happens all the time outside the jail or even a bunch of them in a house together. You don’t know what your best friend’s got. You don’t know what anybody’s got.” (Prison 3, II Officer, Female 7).

### ***Blood spillage incidents***

Another theme which became apparent during interviews was that participants widely understood procedures for managing blood-spillages, both minor and major. In terms of blood spillages, the main types of blood spillage that participants referred to included things like ‘bloody fights’, accidental falls causing blood spills, and also instances of self-harming.

For minor blood spillage incidents, participants frequently spoke about the need to use 'blood spillage kits' including gloves, and for major blood spillage incidents, many participants referred to the availability of bio-hazard teams: teams of both staff and prisoners especially trained to deal with major blood spillage incidents.

"There is quite a lot of fights, and quite a lot of blood. That was quite a lot of blood when the chap fell and burst his head, so we've got guys that are trained in biohazards. They've got a yellow box, with stuff that they put on the blood, so they obviously know all these things, and just make sure that's replenished once it's been done, and it's cleaned up the right way. So we do deal with blood spillages properly. We have to, and we've got guys trained in the right way to do it." (Prison 3, II Officer, Female 5).

"Well you just get gloved up. In [another prison] we always wore gloves for removals, here they don't do it so much, but the [prisoners] were obviously, I think there was a higher percentage of people with Hep C and HIV in the [other prison], so you made sure you were gloved up with them when you were [doing] removals." (Prison 3, II Officer, Female 7).

"Blood spillages, well obviously we would be getting gloves and everything before we handle, before we start dealing with them. Once the incident's over and everybody's dealt with, obviously if there's been, the injured person and treatment in the surgery is necessary, then we've got industrial cleaners who are trained in body fluid spillages, to clean it up properly, and we've kits in the hall for cleaning up those spillages, and there's a rota comes out every month with the duty cleaner who will be the first call for any body fluid spillages." (Prison 5, II Officer, Male 2).

"Well, you've got different degrees of blood spillage. You... we've got prisoners who are trained because we're investing in the BICS<sup>2</sup> process, so they get trained. So

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<sup>2</sup> British Institute of Cleaning Science - <http://www.bics.org.uk/cleaning-standards.aspx>

they're... they, kind of, deal with, kind of, minor... If it's a major then you'd go and... we've got an industrial cleaner who trains the prisoners to, sort of, deal with, probably, your larger, kind of, spills and anything like that. But if it... it tends to be if a prisoner's cut themselves, we've got teams of prisoners who are all trained up to BICS standards." (Prison 2, FG Managers, Male 4).

### ***Concerns and misconceptions about the transmission of HCV and other blood borne viruses***

A range of views were expressed on the level of concern that participants have in terms of contracting HCV in the prisons. Many indicated that they generally put any such concerns to the back of their minds, as highlighted by the quotes:

"I don't think there's a great fear, to be honest, because, well for example I've worked here ten years and I've never felt the need to go for Hep jabs, like, but people tell me that's totally crazy. And see, probably 90% of officers have had the injections, but to be honest I've never felt the need and I worked in the most vulnerable hall, eh? But then when you hear of somebody swallowing blood and that you think, it could happen to anyone, so I probably should be erring on the side of caution here." (Prison 2, II Officer, Female 10).

"When you come here, work at the prison, there are loads of things you just choose to put to the back of your mind, because if you didn't, you'd go nuts. Right. I mean, there's the fear aspect: am I going to get assaulted today? Am I going to be intimidated by somebody? Am I going to have conflict with somebody? Am I going to get stabbed today? Not that that's a... That is a risk, although it's not a frequent occurrence..." (Prison 3, II Officer, Male 2).

"No it doesn't concern me at all. I feel safe in this environment and you're probably just as safe in here as you are outside. You don't know who's got what in this world so is the outside world any different to what it is in here? You take the same precautions inside as you do in the outside world. I think half the time it's just taking a step back and having a look at the environment that you're in. Staff, I think there

would be a percentage of staff that would argue any point that they don't feel safe. If you never felt safe in this life you'd never get out of your bed." (Prison 3, II Manager, Male 3).

The above excerpts illustrate that some of the participants do not feel concerned about contracting HCV in the prison environment. However, other participants indicated that they did have concerns about contracting HCV. For the most part, these fears related to needle-stick injury:

"...because all it takes is one dirty [needle], you know, and that's it, whether there's anything on that needle or not. I mean, psychologically I think, the damage is done." (Prison 2, II Officer, Female 6).

One participant in particular was very fearful that he, and other colleagues, may already have contracted HCV through work in the prison at some time in the past by having had insufficient knowledge to safeguard against it:

"I hope to God that prison officers are not carrying a sort of death sentence here, because we did not know. We didn't even know what's happened. We've not enough information. We've not got enough protection against this hepatitis C. And like I say, would the Scottish Government, or the Scottish Prison Service stand up and say...? They would probably stand up and say, "oh, that was nothing to do with us" that I might have got Hep C." (Prison 3, II Officer, Male 2).

Other participants who indicated that they were not concerned about the transmission of HCV within the prison indicated, however, that they may well change their perception if they knew how many prisoners were infected with HCV, and particularly if the prevalence of HCV was at a high level:

"...as I said, if you knew how many did have it, you know, I think you'd have a different... a different aspect to it you'd decide, right, you'd want to know more

about this because this is what I'm likely to come into contact with. Whereas now, we don't know, we absolutely... you know what I mean? There could be one, there could be a hundred. And if you knew it was a hundred, you'd be thinking, wait a minute here, I want to know a bit more about this, you would. Whereas now, you just think, well, we don't know how many there is." (Prison 2, II Officer, Female 1).

Whilst the health and addiction staff who participated in the study had extensive knowledge about the nature of HCV and its transmission routes, this was not necessarily the case for all participants. Amongst some of the managers and officers, for example, there were misconceptions relating to exactly how HCV could be transmitted, such as via spitting, perspiration, faecal matter, and general poor hand-hygiene:

"So, again, if you go the cells if somebody's been spitting on the wall, again, you just class that as the guy could have HIV, he could have hepatitis B, he could have hepatitis C and you send a squad in there to clean it. So we've got all these interventions in there every single day of the week." (Prison 4, FG Officer, Male 3).

"But I have heard, rightly or wrongly, that sweat from a hepatitis C person into a cut or an abrasion can give it you. I don't know if that's true or not. So really, we should wear gloves all the time. But then money always comes into it. You know, £320 a week for gloves is quite a lot of money, actually, but if we need it, we need it." (Prison 3, II Officer, Male 2).

"I always thought it was wee... you know, like in faeces... the faeces and urine as well. But I don't... I don't know." (Prison 4, II Officer, Male 7).

"... a point to raise here, is the ongoing thing that the jail does every day with regards to combating hepatitis C because I don't know, well everybody here should know it can live outside the body for three months, up to three months. So as part of that the jail has certain services put in place, for example, everybody wonders what I'm doing every morning or [name] does every morning, walking about the

corridor throwing water about, it's actually disinfectant because I know they're spitting just because they're irresponsible. I mean, coming into the gym, spit on the wall right in front of the gymnasium door. They go out to the surgery and they spit they get a tooth taken out they spit." (Prison 4, FG Officer, Male 3).

The quotes above serve to highlight that knowledge amongst some staff is not as good as it could be and indeed it appears that a lack of accurate information on HCV is leading some staff to have concerns and fears that are misplaced. However, no matter how inaccurate these fears are, this does not detract from the fact that for the staff themselves these fears are real, and need to be addressed.

An additional misconception that was sometimes referred to by participants, though not expressed in terms of a particular concern, was that a vaccine was available to prevent HCV when in fact the participants were referring to hepatitis A or hepatitis B. In those cases, participants either thought that they had already been vaccinated against HCV or thought that themselves and/or prisoners could be vaccinated against HCV, or just were not sure which of the hepatitis viruses they could or could not be vaccinated against.

"To my knowledge, personally my knowledge isn't very... isn't really high I just know I have my Hep C jab and that's it." (Prison 4, FG Officers, Female 2).

"Well they do advise us to get injections, I've been done for Hep B, I actually don't know if I can be done, I don't think you can be." (Prison 5, II Officer, Female 3).

"See, the only time I've heard hepatitis C mentioned is when one of the Hollywood stars came out, a profile saying that he had hepatitis C and that was maybe ten year ago. I've always thought it was, always thought that it was Hep B, Hep B, Hep B so that's why it never really affected us. I didn't realise there was an A." (Prison 1, FG Officers, Male 3).

“I know that Hep C injections were available. When I was at college, all the new staff were given the injections, so... and a bit of a presentation from... by our healthcare department. So anybody new coming in the last five years [unclear] were given the presentation and given the injections.” (Prison 4, II Manager, Male 6).

## **Summary**

This chapter has highlighted the strengths and weaknesses in participants’ knowledge regarding the management and prevention of HCV in prisons.

With regard to over-arching strategies to manage HCV, it was found that non health and addiction staff were largely unaware of what these strategies were. In addition, there was a general lack of knowledge regarding HCV treatment and whether it was available in prisons though some staff spoke about the potential value of knowing more about the treatment process and its impact on prisoners. With regard to the provision of HCV testing in prisons, the majority of staff were aware of its availability and were also confident that prisoners would know how to access testing and hence treatment for HCV.

Health and addiction staff spoke in detail about the provision of treatment within the prison, and staff in three prisons also spoke about a lack of resources to conduct further testing as well as the way in which lack of resources was impacting on preventing prisoners who are ready to undertake treatment from having it. Health and addiction staff also spoke about their roles in pro-actively encouraging prisoners to undergo testing and treatment including systematically working through prisoners lists and by attempting to provide as discreet and non-stigmatising a service as possible. Health and addiction staff in particular mentioned the potential utility in pursuing the formation of formal peer support groups for prisoners concerned about and/or under-going the HCV testing and/or treatment processes within prisons.

In terms of the prevention of HCV within the prison, staff were aware of the need to wear gloves for cell and body searches, although some also mentioned the difficulties of anti-



puncture gloves: both in terms of their not always being readily available for use, but also in terms of their being viewed as non-conductive to conducting thorough cell searches.

Participants thought that in-prison tattooing occurs episodically although there was a lack of agreement concerning whether prisoners knew and would act upon the risks associated with in-prison tattooing. Whilst it was generally believed that information regarding the potential dangers of HCV associated with tattooing was widely available, there was also a belief amongst some participants that other forms of education, such as that done in face to face small groups could also be considered for prisoners.

A number of concerns and misconceptions about the transmission routes of the HCV virus were expressed by some participants, which suggested a need for training.

## **CHAPTER 7. STAFF VIEWS ON METHADONE MAINTENANCE THERAPY**

As the previous chapter showed, when participants were asked about other harm reduction measures, such as those provided by addiction services and Enhanced Addiction Casework Services Phoenix Futures, harm reduction packs, and the provision of sterilising tablets, little detail about these strategies was known (other than by health and addiction participants). The methadone maintenance (MMT) programme, however, was extensively known about and was considered a key harm reduction strategy in relation to injecting drug use. It was for these reasons that the MMT programme was the harm reduction measure spoken about at most length and in most detail during the interviews. Whilst it is acknowledged in Chapter 4 that a minority of prisoners receive opiate substitution therapy other than methadone, staff invariably spoke about methadone when discussing substitution therapy and this is reflected in the title and contents of this chapter in which methadone is referred to throughout.

This chapter highlights staff perceptions about the utility of MMT as a harm reduction measure in prisons. Participants expressed a range of views about methadone and while a small minority of participants held strong views against the use of MMT in prisons, the majority were able to see both positive and negative aspects of the programme. The first part of this chapter reports on staff views regarding the impact of the methadone programme on drug use and on drug users themselves, including on their injecting and other drug using behaviours; the following section then presents the main views that were expressed with regard to the provision of methadone within the prison setting, including the perceived need to move from a maintenance programme to a reduction programme; while the final section highlights staff views on the impact of the methadone programme on prison in general.

### **Staff views on the impact of methadone on drug use and drug users**

In general, participants' views regarding the impact of methadone on drug use, including drug injecting, in prison was positive. Indeed, many participants attributed a perceived reduction in injecting drug use within the prisons to the provision of the methadone

programme. Only a minority of participants viewed the impact of the methadone maintenance programme as negligible in relation to drug use and drug injecting.

### ***The impact of methadone on drug injecting***

A striking feature of the interview data was the volume of participants who commented that there was little evidence of current drug injecting in the prisons. While very few participants suggested that there was a complete absence of injecting, the belief that injecting within prison is now a rare occurrence was pervasive, and indeed was one of the major arguments that participants used to suggest that there would be no need for a needle exchange to be introduced within the prison system (as will be highlighted in the following chapter).

When asked what role the methadone programme had potentially played in reducing the volume of drug injecting in prisons, many participants considered that it had played a significant role, if not the key role:

“Whatever needles we did have or have got, I think methadone would have reduced that to a different norm. There would have been one before methadone where there would have been more needles, whatever that figure is, and I think after the introduction of methadone it would have dropped significantly to a much lower figure.” (Prison 1, FG Managers, Male 3).

“I think it’s helped. It’s helped with the problem that we don’t find as many dirty needles, we don’t hear stories of guys... [injecting].” (Prison 4, II Officer, Male 2).

“I think it's decreased it as [methadone has] become more available within the prison and more accessible within the prison. I do think that, I mean it does correlate to a drop down here.” (Prison 5, II Manager, Male 5).

“I would say, yes. It’s got to. Because we used to... again, going back to [prison name] before you were getting tip-offs about sets of works here, there and

everywhere, and then again, that reduced when methadone came in. So very much so. " (Prison 1, FG Managers, Male 2).

"Well, it's achieved that goal [of reducing injecting]. It's achieved that goal, because it has prevented a lot of the heroin use, definitely. Without a doubt. It has been the same in the community as well." (Prison 3, II Officer, Male 2).

This aspect of the methadone programme was therefore viewed positively by staff as a harm reduction method that is contributing to the reduction of injecting in the prisons. Other factors that were thought to be impacting on reducing the extent of injecting in prisons, however, were both an increase in prison security measures and a change in drug taking culture from injecting to non-injecting drug use. These issues will be considered later in this chapter.

### ***Impact of methadone on other drug use***

It was widely perceived that the provision of methadone to drug users has a limited impact on reducing other drug use. None of the participants considered that other drug use would be completely eliminated, although many thought it might be reduced.

"Yes. It definitely does. Not them all, because some of them will probably still be trying to get that and use on top of it or whatever, aye, maybe use it as a top up or whatever. But there is genuine...guys genuinely trying to get off." (Prison 4, II Officer, Male 2).

"Yes. You're probably right. And I'll say there was definitely more drug use, I would have said, before. And now they're all on... half of them are on methadone, they seem to be quite happy. But yes." (Prison 4, II Officer, Male 7).

Rather than eliminating other drug use, it was commonly believed that drug users would 'top up' their methadone with other drugs:

“But they’re probably topping up their methadone with something else, with heroin, or valium, or...” (Prison 2, II Officer, Female 3).

“I think it’s, maybe they jump on the bandwagon, and say, oh, I need this and I need that, but a lot of them are topping it up with other things.” (Prison 3, II Officer, Female 5).

“No. Certainly not in here, anyway, because there are still a few [prisoners] who get drugs, or whatever else, if there’s drugs going about and they’re on methadone and they’ll still take the drugs and whatever else that they can get their hands on.” (Prison 2, II Officer, Female 4).

When asked what drugs that prisoners were taking on top of their methadone prescription, a range of drugs, including prescription medication, were mentioned by participants:

“Oh, yes, but, like you say, it’s moved on from more... I mean, they still take whatever they can get but, you know, nine times out of ten, you talk to a prisoner and it’s prescription medication. You know, they get things like Tramadol and whatever else makes that...” (Prison 3, FG Officers, Male 3).

“Well Gabapentin is also a prescribed painkiller within the prison’s health centre, and there will be certain prisoners who have it and they’re self medicating, and I’m afraid there’s a lot of bullies in prison who’ll bully them...” (Prison 4, FG Managers, Male 1).

“Interferon is a biggy....that stuff. Right. As soon as they find that a prisoner’s on that, then it’s... you know, they’re hounded effectively.” (Prison 3, FG Officers, Male 4).

The misuse of prescription medications was seen by many of the officers in particular as a frustrating part of the behaviours of drug users. The notion that opiate treatments such as

suboxone and subutex were now being abused by prisoners was seen as particularly frustrating as well as an indication of the challenges faced in eliminating drug misuse in prisons:

“But what they’re doing is, they’re crushing the tablet and snorting the Subutex – and they can have it... a big dose of heroin. And I’m like, what chance have you got, you know what I mean. I think... because I thought that they could take that, would solve, it.” (Prison 2, II Officer, Female 1).

“And I just realised that they can take the suboxone, dry it, crush it up and snort it. And according to – this was the medical staff that were telling me – according to the lab who makes this stuff or the company who makes this stuff, you cannae get a hit off it.” (Prison 1, FG1 Officer, Male 3).

One frustration that participants expressed with regard to the abuse of prescription medication was the greater difficulties that this presents the discipline staff in terms of identifying and controlling this type of illegal activity in prisons. For example, many officers thought that concealing tablets, both in cells and in the process of consuming drugs during supervised medication taking, was much easier than concealing methadone and also that it would be much easier to ‘hold back’ tablets (i.e. to pretend to swallow but instead hold in the throat to later regurgitate) than to ‘hold back’ methadone; and this despite the fact that holding back of methadone was also perceived as a problem within prisons.

“It’s harder for them to hold back methadone than it is to hold back a couple of tablets. A couple of tablets is easy to hold back, you know, but like if you’re drinking a liquid [it’s harder].” (Prison 1, FG1 Officers, Male 4).

Although there were those who believed that the provision of methadone to drug users was at least reducing drug use, others were of the opinion that providing methadone has had no impact on other drug use. Indeed, some participants were vociferous about this issue.

These participants were those who were most opposed to methadone in that they failed to see any positive function that the methadone programme could fulfil.

“And it doesn’t stop them from taking drugs because you only have to look at every time they do a search, if that person’s on methadone and they find drugs, well it proves methadone isn’t working, in my mind.” (Prison 5, II Officer, Male 1).

“It would be wrong if I was to say that methadone’s stopping everybody from not taking something because we know that they are substituting, taking others, and that’s been clearly identified through their own drug testing strategy.” (Prison 3, II Manager, Male 3).

“No. No, no – because, again, we’ll phone the health centre and say that this person’s been smoking heroin, or smoking cannabis, or been taking tablets; and they still get their methadone. So even though they can provide a dirty sample, they still get their methadone. So where’s the learning in that, you know?” (Prison 2, II Officer Female 3).

### ***The impact of methadone on motivating drug users to seek help for their drug use***

When asked about whether the availability of the methadone programme motivates drug users to seek help for their drug use, it was commonly perceived that for people who were at least partly motivated to address their drug using behaviour, then receiving MMT could be beneficial:

“Some prisoners, I do believe it does help, with the right frame of mind and they’re wanting to change and all the usual.” (Prison 1, II Officer, Male 1).

“I think it does, but not as much as I’d like it to, because the amount of people that are stable when they leave on methadone, and then they come back in two or three months later on all sorts of kit. And, you know, I think, well it didn’t work.” (Prison 4, II Manager, Male 1).

The Manager quoted above is suggesting that the methadone programme is not as successful as it could be in managing to get people off drugs altogether. The officer, however, is alluding to an important aspect of help seeking to which other participants also often referred, and that is the degree of motivation that the individual has to reduce or abstain from drug use:

“I think very much people will stop when they want to stop. They need that motivation there in the first place. But for those who are maybe a bit in the middle, unsure, it at least stabilises and maintains them and hopefully stops them going down the drug-taking path even further.” (Prison 5, II Manager, Male 5).

“It depends on the person. If they're already motivated, and they want to change it, then yes, they can do it, but if you meet someone whose attitude is they don't really care about what they're doing, it's just something that's getting them through some times. So it's really dependent on the person, I think. And what mood they're in, and what's going on in their life and everything like that.” (Prison 2, Health and Addiction FG, Female 4).

“I think it's all down to the individual, you know, sometimes they're getting put on to it because they do want to come off, and sometimes you can see them getting put on it and you know they're still taking stuff, you know what I mean, it's..” (Prison 5, II Officer, Female 3).

At the opposite end of the spectrum in terms of perceptions of drug users motivations to get support with their drug use, were those who thought methadone had no impact:

“It encourages people to get methadone, aye, but whether that's to actually help their addiction or whatever it is, whether they're facing up to that and want something done about that is a different story, I think.” (Prison 4, Managers FG, Male 3).



Another common perception of some of the officers and managers was that rather than methadone playing a role in encouraging drug users to seek help for their drug use, was that drug users are either 'playing the system' to receive and remain on the methadone programme, or are using it in prison just to get 'a free hit'.

***Drug users 'playing the system'***

A number of managers and officers presented the view that drug users are 'playing the system' both to get initiated onto the methadone programme and to be retained on it. In order to achieve this, drug users were therefore characterised as being able to manipulate both staff and systems to achieve their own ends. The following quote highlights how younger drug using prisoners are thought to learn from those more experienced in prison life:

"But as I say, the biggest problem that we're seeing is people coming in who don't know really anything about drugs, and within three months, six months, they know how to play the system, they know how to get the drugs, and that passes down, it just goes down, and you get people coming in, oh, there's a guy from my bit, and he's playing the game as well, but it seems to be the younger generation again that seems to be your, sort of, 20 to sort of early 30s. The older ones I suppose, as [name] says, they've got longer sentences, some of them take the drugs, take the methadone, but a lot of them are just doing it because they do, but these young boys are, they're building themselves up for when they keep coming into prison." (Prison 4, FG Managers, Male 5).

Other participants spoke more overtly about how drug users 'tell stories' to the necessary staff to access the methadone programme.

"I mean, the [prisoners] just, obviously, are telling a different story at the health centre and the doctor, or whatever else. We only hear, you know, the old sob stories, and whatever else, about their methadone and whatever it is." (Prison 2, II Officer, Female 4).

“I suppose it’s down to what we see and what the outside workers see, you know, because they’ll go and present themselves as one thing, but we live with them on a day to day basis, so we see the reality, but unfortunately, there’s no go between, between, the two of us, if you know what I mean, you know, they’ll go and put in front of the addictions workers what they want them to hear but I often wonder, would they be better coming to see us to see what we think as well, you know, but that just doesn’t happen.” (Prison 5, II Officer, Female 3).

“But, I think, some prisoners are manipulating and talking and saying, I can’t cope, so can I stay on this just for another couple of weeks.” (Prison 3, II Officer, Female 4).

As well as the belief that drug users will manipulate the system to receive methadone, other participants commented that accessing methadone is too easy, in particular because it is perceived that drug users do not have to engage with other support services in order to help them address their wider addiction issues:

“It’s also back to they know how to work the system. They know what buttons to press, they know what phrases to use, you know, and they can engage with addiction services to get their methadone but they don’t have to engage with Phoenix Futures to address their, you know, enhanced addiction services, “it’s fine, I’ll just keep telling the nurse what I need to tell them to get my methadone.” (Prison 4, FG Managers, Male 4).

This perception that it is too easy to access methadone, and to do so without engaging in additional support that might help people to move towards resolving their drug using problems was a common one amongst many non health and addiction participants.

However, as was explained in more than one of the focus groups with health and addiction staff, it is not the case that prisoners can simply receive methadone and do nothing else:

“And they have to work with us if they're on methadone it's like mandatory that they work on their issues as well. It's not a voluntary service for people.” (Prison 2, FG Health and Addiction, Female 5).

“We've got what they call, the integrated case management system of managing prisoners through their sentences. And there are expectations. That's a longer... generally it's slightly longer term prisoners, but generally speaking there is an expectation then of a level of engagement, and not just to be there but to positively engage in the process. And that's monitored and recorded, and you said earlier, that's how people will progress through the system, if that is what happens. But it gives people the opportunity in a less chaotic environment in prison to experience work in the services.” (Prison 4, FG Health and Addiction, Female 1).

Indeed, participants from health and addiction teams in one of the prisons reported that there can also be serious consequences for drug users if they fail to engage with wider addiction support services while receiving methadone:

“And if they don't engage with their key worker, and they'll have an identified key worker, and if they don't engage with them, they'll all be pulled up in front of the doctor and challenged on that, and again, if they continue to not turn up for appointments or to engage, their methadone will be stopped.” (Prison 2, Health and Addiction, P1 Female).

### ***Methadone as a 'free hit'***

Unlike the staff working within healthcare and addictions, many officers and managers seemed unaware of the overall package of support which is available to drug users who engage in methadone treatment, and as mentioned above, many viewed the provision of methadone simply as a free drug to take while in prison rather than as a serious treatment option:

“Free petrol as a governor used to say, an ex retired governor used to say, this is free petrol for them.” (Prison 1, FG2 Officer, P2 Male).

“...Purely to give somebody a free hit. Because that's what it is. It's not really the answer. It is a free hit. Even if you ask people who's on it, they'll say that. It's a free hit. Or, it keeps them straight. It keeps them normal.” (Prison 3, II Officer, Male 2).

“It's sometimes seen as a free drug, it's actually reducing their financial burden of a drug habit. They get on to that it then frees up money for tobacco or whatever else they need and they're not then having to spend money on illegal drugs.” (Prison 4, FG Managers, Male 2).

“I know for a fact there are just some that are just wanting it because they don't have... they don't have the money to go and get a hit, so they're maybe obviously having their methadone, maybe topping up with something else.” (Prison 3, II Officer, Female 6).

Bound with the conceptualisation of methadone being taken as a ‘free hit’ is the implied notion that drug users are taking methadone for the ‘wrong’ reasons. Rather than considering that methadone may be playing a more positive function in the lives of drug users in prison, it is being portrayed by these participants as simply another drug to be taken to make prison life all the easier. The next section considers the staff's perceptions of the role of methadone as a coping mechanism both inside and outside of prison.

### ***Methadone as coping with prison life***

Another common perception amongst officers in particular with regard to the potential function of methadone for drug users, was that it helps to cope with prison life, as well as with life outside:

“I think it's a coping mechanism for when they're in the jail.” (Prison 1, FG1 Officers, Male 4).

“I think some of them, as I said, will take it, use it as a day away. Some of them will use it as a coping thing so that maybe they’re not taking as much drugs and some of them will take it and not take drugs.” (Prison 3, II Officer, Female 4).

“But a lot of the time I think they actually like being drug users because it blurs out that sad world, you know, obviously very much like an escape, you know, that sad existence that some of them have. There’s no employment in the area that they come from. Not only that they get a criminal conviction, to go and try to get a job, nobody wants them, they just take one look at their record and go tsssk, regardless of who.” (Prison 4, II Officer, Female 7).

This notion, however, was often perceived in a negative way whereby the notion of coping, which in some ways has many positive connotations about finding ways to get through in difficult circumstances, was replaced with the idea of using methadone as an excuse to opt out of aspects of life, including aspects of serving their prison sentences:

“... where it gets people onto methadone who just want to lose themselves in time, who didn’t even take drugs outside really. They’ll do it just to take drugs just to get methadone, just to get an easy time, kick back.” (Prison 3, II Officer, Male 2).

“I think it’s a general unwillingness to face the real world. They don’t want to deal with things like you and I. It’s... and I’ve experienced bereavements, and when they come along and have bereavements, they seem to think that it’s unnatural; it’s a bad, evil world.” (Prison 2, FG Officer, Female 2).

“and... it’s just a total unwillingness to face the real world. And they take things and, I don’t know, I can only assume it numbs their brain, so that they don’t have to feel emotion or they don’t have to feel upset, sad, or put any effort into living their lives.” (Prison 2, FG Officer, Female 2).

On the contrary, health and addiction staff tended to view the role of the methadone maintenance programme favourably, and tended very much to highlight the positive functions of the programme. However, some officers and managers also perceived some of the positive impacts that methadone can have on the overall health of drug users, as will be elucidated below. It is to these positive aspects that this section now turns.

### ***The impact of methadone on drug users' health***

Many participants, especially but not exclusively health and addiction staff participants, referred to numerous ways in which the provision of methadone for drug users had impacted positively on their health. In particular, that the provision of methadone over the long term simply helps drug users to live – ‘to survive’ - was mentioned by some. Other participants spoke about the role that the methadone programme has played in improving the general health of drug users, as well as helping to stabilise them in order to allow them to address wider problems.

### ***Survival***

The role of methadone in assisting people simply to survive life as a drug user, and to function in a more meaningful way, was discussed by health and addiction participants in particular. Prior to methadone being available to drug users in prison, participants considered that life for drug users was both more chaotic and involved more risk taking, and had therefore led to a greater number of deaths in the past.

“But we will probably see... and this is where the media sometimes looks on it the wrong way, but we may see people in treatment for long periods of time, but we’re actually seeing them alive, and they are still functioning of sorts.” (Prison 4, FG Health and Addiction, Female 1).

“... I think that's how people manage their lives anyway and I know people that's on methadone for 20 odd years and it's just to survive, to be on methadone. So it's part of their life and I think we have to accept that as well, that it's just so they can survive.” (Prison 3, FG Health and Addiction, Female 3).

Another participant spoke about the importance of supporting people, even those on long term methadone, to get to a stage in their recovery when they may eventually want to make the decision to cease using it:

“I think there's always the difficulty that we have a number of prisoners who have been on a methadone prescription for a long time, and it's quite difficult for some of them to get to that point where they want to get to an early recovery stage and come off methadone. Now we've got one guy who I think's been sitting in the prison for 20 years on the methadone programme and has no interest in coming off yet. We've got other guys who are successful in coming off and, you know, managing to stay clean.” (Prison 3, FG Health and Addiction, Female 3).

### ***Impact of methadone on general health***

A common theme across the interviews was that having drug users on methadone improved their health in general:

“What I've noticed more in the last few years is how some of them are quite healthy looking on methadone compared to what it used to be years ago. We used to have the, kind of, Michael Jackson Thriller when they all came out and that used to be the, kind of, slugging that went on with that because actually they just looked absolutely ghastly. You know, some of my lads you would look at them and they don't look any different from you, obviously, because they're just on their methadone...” (Prison 3, II Officer, Female 6).

“If this place wasn't here to sort them out, tidy them up, fatten them up, basically, a lot of them would be dead and they recognise that themselves. They go out and they get to the end of their tether and they commit specific crimes knowing they're going to get a specific length of sentence and that, get their six months and they'll do three. And in their three months they'll get themselves clean, tidy and back out”. (Prison 1, FG1 Officers, Male 2).

The fact that drug using prisoners' general health has been seen by prison staff to be improving is a positive outcome of the methadone programme in prisons.

### ***Stabilisation***

It was commonly perceived across the three participant groups that methadone provides an important function in stabilising drug users. This refers to the notion that giving drug users methadone prevents them from having to seek out illegal drugs while in prison and from having to get involved in the lifestyle of chaos and violence that is thought to accompany illegal drug use in prison.

"It's definitely got benefits and it does provide a lot of stability as opposed to the chaotic side if someone's not on their methadone." (Prison 4, FG Officer, Female 8).

"... it at least stabilises and maintains them and hopefully stops them going down the drug taking path even further. So it stabilises some and it provides some a bit of support if they are genuinely serious about getting themselves clean and clear." (Prison 5, II Manager, Male 5).

"A lot of the guys it gives them time to actually sort their life out, decide, well, where do they want to go, what direction. It's been very successful, I think, yeah, the change in people's been dramatic." (Prison 3, FG Health and Addiction, Male 5).

To emphasise the important function of stabilising drug users by providing them with methadone, participants often used contrasting examples of newly incarcerated drug users who were not yet receiving any methadone, and the potential disruptive behaviours that they could exhibit:

"You still get that, in your face for the first four, five days of it. That's only when you see that, until they're on their methadone." (Prison 1, FG1 Officer Male 2).



As well as providing methadone in the short term to stabilise and support drug users, other participants referred to the role of methadone in stabilising drug users over longer periods of time, and were even able to talk about instances where being on methadone appeared to have enabled drug users to eventually come off methadone altogether:

“But I think in general it's been good for some [prisoners], especially [those] who are maybe here for a long time as it has helped to stabilise them and I've seen some successful cases where they have, you know, reduced it over a period of time and actually managed to come off it without going back to illegal drug use. So it's been good.” (Prison 2, II Manager, Female 5).

“I don't know if you've seen any prisoners that come in, that are chaotic when they come in, and we, kind of, put them in to stabilise them, they leave, almost incredibly, more healthy than the day they arrived. But if you don't maintain that when they go out, they just go back to their chaotic lifestyle, so I think that our part in it is to maintain their stability all the way through.” (Prison 4, II Manager, Male 6).

Health and addiction participants in particular talked about the role of methadone as part of a long term treatment that includes the important goal of stabilisation but also includes supports and services to address the other complex issues that are associated with long term drug use:

“No, we do... we use it as a treatment plan. So it's not about putting somebody on methadone, and taking them back off it six months later. It's about putting people on it, stabilising them so they're no longer using illicit drugs, and within that maintenance period start address the issues for the abuse, whether it be housing, whether it be education, and then, when they've reached that kind of point, then it's about reducing somebody back off.” (Prison 2, FG Health and Addiction, Female 1).

Other participants also spoke about the importance of having drug users stabilised on methadone at the point of liberation from prison in order to help them remain stable and to function in a potentially drug-free life outside of prison.

“We actually think it does keep people... The people that might use it for, like... it does keep them stable, and allows them to have a kind of half decent home life, and things when they get out. Because a lot of them will tell you that if they weren’t on methadone their partners wouldn’t have them back, and things like that.” (Prison 1, FG Health and Addiction, Female 2).

While participants were broadly supportive of the role of methadone in stabilising prisoners, there was considerably less agreement about the role of long-term methadone maintenance within the prisons. Indeed, many of the officers in particular did not agree that a maintenance programme should be the priority in prisons; on the contrary many participants considered that a reduction programme should be pursued instead. The following section highlights the arguments against, and in favour of, the maintenance programme.

### **Staff perceptions of the methadone maintenance programme**

#### ***Methadone reduction/abstinence versus methadone maintenance***

The view that a methadone reduction programme should be pursued in prisons rather than a maintenance programme was pervasive amongst officers in particular. However, the related perception that there are too many drug users receiving methadone was also highlighted by officers and managers, so much so that the number of prisoners receiving methadone was described by one manager as ‘an epidemic’:

“As soon as they introduced methadone it was given to greater numbers and greater numbers and greater numbers to no end, so here we are certainly, personally, 25 years later, they’re still taking methadone and they’re still taking the same amounts of methadone. And the success rate... I don’t know what it is, but I know it’s not great. So to me it’s just an epidemic.” (Prison 1, FG Managers, Male 1).

“But you see them all on methadone now and it’s just astronomical.” (Prison 3, II Officer, Female 6).

“... I just know there’s the methadone queue gets bigger and bigger every day, you know, for medication. There’s quite a lot of [prisoners] in my block on methadone, like maybe 40, out of 70 or something - that is quite a lot on methadone.” (Prison 2, II Officer, Female 3).

“As I’m saying, when Health Standard 10 came along, it was just open the floodgates to everybody and basically you’ll get as much as you want.” (Prison 3, FG Managers, Male 3).

As mentioned above, the view that too many people are being prescribed methadone in prison was associated with the idea that they are also maintained on methadone scripts for too long. This was reflected in participants’ comments that the prison should not be seen as a place that supports ‘drug habits’ and/or that having people on methadone for ‘too long’ is an admittance that the prison has security and control difficulties:

“Right, they must be using a reduction programme instead of a maintenance programme. Why are we here maintaining drug habits?” (Prison 1, FG2 Officers, Male 5).

“Why do they need drugs after that length of time in a prison that says, we don’t have drugs in the jail? Okay, you can ignore that sometimes these get in, but you shouldn’t acknowledge it to the point where you think, you’ve got a massive habit. At the end, you’ve really got control problems and security problems, so they’re fighting against each other.” (Prison 1, FG Managers, Male 1).

A prevalent view amongst officers in particular then was that a methadone reduction programme, with an end goal of abstinence from drugs, would be preferable to a

maintenance programme. The following quote from one of the officers encapsulates this view succinctly:

“So as a maintenance thing it’s probably got its uses, but some guys are on 120 ml of methadone. Come on; that's nonsense. Surely that can be reduced and reduced and reduced to a point where five, ten ml. Give them a tablet, a wee tablet every day, and take it. Boom. Done.” (Prison 3, II Officer, Male 2).

Even a minority of health and addiction staff perceived that there was too much focus on maintaining people on methadone and not enough on reducing:

“However... however, again, personal view, you know, we do substitute prescribing and then it never seems to move on. We don’t reduce, we maintain a lot of the time.” (Prison 4, FG Health and Addiction, Female 4).

Another perspective of the notion that a reduction rather than maintenance programme should be offered in prisons relates to the idea that providing long term methadone offers no incentive for drug using prisoners to cease their drug addiction:

“They come in here with a habit, the habit’s maintained through the methadone, straight back out the door with a habit. Where, along that chain of events, is the impetus to come off the drugs? If they’re going to keep the methadone over the period of six months they must go to zero, they must come out clean.” (Prison 1, FG2 Officers, Male 5).

A major reason for the reduction/abstinence view was the belief that prior to the introduction of methadone in the prisons drug using prisoners were successfully treated either with short-term detoxification programmes, or, by going ‘cold turkey’ through the effects of withdrawal from drugs:

“When I started you got thrown in a cell, you done a week, ten days of clinging to the walls and shitting yourself and all sorts of things, but when they came out the other side, to me, they were better. Rather than this methadone reduction. I use the word reduction and laugh because you know what I’m talking about. Then it gets reduced and you still get tablets at night time and... they seem to get tablets for everything.” (Prison 5, II Officer, Male 1).

“He'd get his detox, whatever his detox was. Some of them took it and some of them said no, I'm just going to get through... just going to get through it. Or someone would supply them with whatever stuff they needed so as it didn't make them rattle. But the majority of them rattled. And it was a four-five day thing and then they were brand new after that. You'd see them down in the hall battering into their dinner.” (Prison 2, II Officer, Male 2).

“When I started they had a three day detox, which was basically just valium for three days. You had them down scrubbing, hands and knees, sweating it out of their system, tell them to go in for hot baths; see, after three days, the [prisoners] were better than they’ve ever felt before, because it took that three to... it made them sweat it out of their system. But now, it seems to drag on.” (Prison 2, II Officer, Female 3).

However, other participants had ambivalent views about whether a reduction programme would be a better option than a methadone maintenance programme:

“I've heard that three weeks and they're clean. Just go through the rough bit. Three weeks and they're clean. And then they do it again. But yet the Scottish Government is spending millions on it. It's not really... for me, it's not the answer. But then again, for somebody to come off it, cold turkey, or whatever, or through a detox with valium, or whatever, it's... they're still the same person at the end of that three weeks, and they might just go and do it again.” (Prison 3, II Officer, Male 2).

Contrary to the view that either short-term detoxification or allowing prisoners to withdraw from opiates without any medical support are viable treatment options, the healthcare and addiction staff valued the use of medical supports in assisting drug users through the drug withdrawal process.

“So I think, you know, from that point of view it’s actually probably become much more humane for people with a drug misuse problem in the fact that we’re able to treat their withdrawals or try to prevent the having significant withdrawals and, where possible, maintain them on the methadone program.” (Prison 3, FG Health and Addiction, Female 3).

Clearly, there were mixed views with regard to the question of whether or not the prisons should be focussing on a long-term methadone programme or a shorter methadone reduction programme, with healthcare and addiction staff more able to perceive the benefits of long term prescribing.

A further area of contention which produced a diversity of opinion about the impact of the methadone programme concerned the issue of bullying associated with ‘holding back’ and selling on methadone.

### ***Bullying related to methadone***

A minority of participants, officers and managers in particular, argued that bullying in prison increases because of the availability of methadone to prisoners, although many more felt that, in comparison to the bullying (and violence) that accompanies the dealing of illegal drugs, the bullying associated with methadone prescribing is much less.

Those who perceived that bullying increases because of methadone, talked about the regurgitation or ‘holding back’ of methadone that prisoners are able to achieve:

“Well, the bullying increases. There was a spate where [prisoners] were obviously... they can keep everything at the back of their throat. Obviously, they’ve got to drink

water after they've taken methadone now, but they can bring it back up, they can..." (Prison 2, II Officer, Female 3).

"The other thing in terms of the methadone is, it is another thing that's abused by people in here, and people sometimes, in my opinion, maybe try to get on it for the purposes of selling it on, or they're under pressure to evidence that they require methadone so that they can provide it to others. Again, it's supervised, but again, they regurgitate it, and they're quite happy to share that." (Prison 3, FG Managers, Male 3).

"There's an awful lot of bullying within the prison and that's an awful lot of issues, even bullying to get [prisoners] with methadone off them. So it creates more bullying basically because the [prisoners] are there and it's like, how much are you on, and they try and save it for them and... but they have to drink like a full cup of water, but some of them are so good at regurgitating it's unbelievable." (Prison 2, II Officer, Female 10).

Those who believed that bullying has increased because of the availability of methadone were also those who were generally opposed to giving methadone to prisoners because they could see no positive function in it.

However, other officers also considered that there is less bullying and violence associated with methadone than there was in relation to the buying and selling of heroin and therefore these officers perceived that methadone has been associated with a decrease in bullying.

"Yes, I mean, the fact that they're getting methadone and they're getting it supervised, it cuts out a lot of things like bullying and folk getting medication taken off them and getting drugs taken off them and whatever. It is... it still goes on to an extent but I don't think to the extent that it was going on and to let it carry on like it had been going on, it would be horrendous now. I don't know where we would have

been now. But I think it has definitely had an effect for the better, hopefully.”  
(Prison 4, II Officer, Male 2).

### **Staff views on the impact of the methadone programme on prison in general**

#### ***Calms the prison***

The view that the provision of methadone within the prison has helped to reduce violence associated with drug dealing in prisons was pervasive. This notion was frequently mentioned by officers, managers and health and addiction staff. The reduction in violence was largely referred to in terms of methadone preventing the ‘chasing of drugs’ by prisoners, and therefore the conflict that accompanies illicit drug dealing.

“It makes life an awful lot easier, it makes life an awful lot easier, and if they’ve got something... I know some guys do top up over and above the methadone, which isn’t a good thing, but most of them, it stops them running about all day looking for their next fix, it takes away a lot of the assaults, it definitely keeps things a lot calmer, makes it a lot easier to work with them, and if a guy’s not rattling, you know, and he’s comfortable, it’s much easier to work with him and the day to day things that you need to do with them in the hall.” (Prison 5, II Officer, Male 2).

“Well, I can go back, again, I was up in [another] prison, when they actually brought it in, and we had had something like four riots in a year, and they brought methadone in, and it all went very quiet. And it’s been like a cemetery, like, you know. It does keeps them quiet. It does.” (Prison 1, FG Health and Addiction, Female 2).

“I think it's quietened the prison down a lot, because at the end the day, if they're getting their methadone, they're not chasing drugs. If they're not chasing drugs, they're not getting in debt, they're not getting angry, and they're not stabbing other prisoners who come in, who think they're banked and have got drugs, so it saves all sorts of problems.” (Prison 4, II Manager, Male 1).



### ***Control over prisoners***

Closely related to the perception that methadone has calmed the prisons was the view that the provision of methadone has also allowed a degree of control over the prisoners that was not so evident prior to the introduction of the methadone programme.

“if you’re asking me from a point of view of the area that I look after which has got 400 prisoners in it, many of them have chaotic drug lifestyles, then methadone has brought a degree of order and control to their life, and that’s good for us.” (Prison 4, II Manager, Male 3).

“Again, it’s a cultural thing, there was a period in the 80s when methadone first came out and it was almost that... to quote the prison term, methadone junkies. A lot of guys were just going... and this was before even the support services when prison staff were doing addiction type work. Guys were almost put on methadone... same as in the community, but it was a calming influence; it was a control measure in some respects, rightly or wrongly.” (Prison 4, FG Health and Addiction, Male 3).

While many of those who referred to this control aspect of methadone considered it as a fortuitous by-product of the introduction of the methadone programme, a small number of participants thought that the methadone programme was introduced specifically for control purposes.

“... we use it as a control mechanism, although the healthcare will not tell you that. They’ll tell you we use it in the purest form, we’re a long-term prison, and it’s amazing the lack of control that you’ve got if you try and take these people off methadone and reduce their script.” (Prison 1, FG Managers, Male 1).

“But benefits for who; it’s benefits to us because they’re manageable.” (Prison 4, FG Officer, Male 4).

“ If they don’t get their methadone [when they come into prison], two things are going to happen: they’re either going to go high risk, and they use that as a method of blackmailing us – give me my methadone or I might harm myself or they’ll smash their television. You know, so it’s in our best interest to get them on a methadone script as quickly as possible to control them.” (Prison 1, FG Managers, Male 1).

### ***Prison as a safer environment***

As a consequence of calming the prison and allowing greater control of prisoners, the view was expressed that methadone prescribing also makes the prison a safer environment for all.

“But I would say probably the place is not the prison that it used to be because it used to be a total shithole and that was obviously the people out of their face, trying to get stuff. Obviously they were climbing the walls if they’re not getting it then, which brings on the violence and everything else. So I think maybe one thing it’s controlled, it’s made it a safer environment and there’s not as much...” (Prison 3, II Officer, Female 6).

“Well there’s no doubt about it, for those prisoners that have a chaotic lifestyle under drugs, it stabilises them, and that’s quite good for us. Whether you agree with methadone or not, is probably another matter, but in terms of the dynamic of prison and our responsibility to make sure that it’s a safe and ordered environment for people to live and work in, then it has helped.” (Prison 4, II Manager, Male 3).

“So I think the staff are in a gradual process of realising, and it's a bigger picture, just to realise that in actual fact we're talking about the safer environment, as opposed to just people getting an extra hit...” (Prison 4, II Manager, Male 6).

### ***Impact on the running of the regime and on officers’ roles***

It was widely perceived by participants that the methadone programme has little impact on the day-to-day running of the prisons other than on the occasions when methadone

dispensing can run on late and hold up work parties etc. However, this was not mentioned very often. The methadone programme was seen most often as something that was part of the job and had little impact on officers' roles.

"It's just the norm – it really is just...it's just the norm." (Prison 2, II Officer, Female 1).

"You really just see it as part of your job role. When you're working on the discipline side it's just, really is just part of your role." (Prison 2, II Officer, Female 10).

"It doesn't really do [affect us]... on the top flat we do the methadone first, so we're opening up about 7.20 am to do the guys that are on methadone, and they're locked back up before the actual hall is opened up at eight o'clock. So it doesn't really affect us. It basically gives us something to do in the morning, rather than waiting for other guys to come in, before we can open up." (Prison 4, II Officer, Male 5).

The view that the dispensing of methadone in the prisons every day had little impact on the prison and on officer's roles was not a unanimous one, however, and so some participants expressed the opposite view, that there is a major impact on prison routines:

"It takes... the whole medication side of it, between methadone, handing out prescribed drugs and things like that, takes up a fair percentage of your day. I would say about two hours in total because we'll get an hour in the morning to hand out pills, methadone. We start at eight o'clock, not finished until about quarter past nine. Then at lunchtime we're handing out pills for about an hour and then at eight o'clock, nine o'clock we're handing out pills for an hour. So that is a fair chunk of your day, in my opinion, we would be better spent interacting with prisoners rather than, open your mouth, have you swallowed your tablet, away you go." (Prison 5, II Officer, Male 1).

“It has a major impact on the regime because of the length of time it takes. Also there needs to be two people, you know, administering it, we have to get people over, but it's a priority for the women. But the length of time that it takes to administer it definitely impacts on the regime or the nursing compliment, whatever, you know, they've got two places now. Or if somebody's being violent but they're on methadone, you know, how do they get it to them? Because, you know, there's all the security aspects, it's a Class A drug, how do you monitor it and all that, so I know there is difficulties round about that.” (Prison 2, II Manager, Female 5).

This view was also echoed by some of the health and addiction staff participants who commented on the amount of time that methadone dispensing takes.

“It has a major influence on the running of the prison, because it takes up the majority of the time. It's a four-hour job.” (Prison 2, FG Health and Addiction, Female 1).

“And it does seem like it's climbing and climbing and climbing and I think it has got a bigger impact on the prison because, you know, routine can't go on in this place until methadone's done. So if you had an incident, everything stops for the incident, but the methadone still has to go on, so it still has a big impact on everything else that goes on in the jail. So I kind of think that it does take over the massive bulk of the morning shift because nothing can happen until it's done.” (Prison 3, FG Health and Addiction, Female 2).

### **Staff views of drug treatment within the prison environment**

As was the case with regard to perceptions about the appropriateness of conducting HCV testing and treatment in prisons, the prison environment itself was viewed by many participants as conducive to facilitating drug using prisoners to access treatment for their drug use and to receive support for drug reduction and/or cessation.

“As they will tell you, if they genuinely want to come off it, and need support, this is the best place to do it, because people that need, right, you get your medication, you have to take it, and there’s a whole different world within this, where you get people coming to you.” (Prison 5, II Officer, Male 4).

Health and addiction participants in particular tended to consider that prison was a good environment in which drug using prisoners could attempt to reduce their methadone but in the relative safety of the prison environment where additional supports are on hand for drug users.

“Ironically if somebody’s in prison for long enough, the prison is often the best place to actually test out these things, if they feel they’ve got a safety blanket at the end of it just in case things don’t quite work out, but potentially prison is, you know, the perfect rehab opportunity. So it could actually be... and also if it’s a longer sentence they can reduce and then, you know, if it doesn’t work then there are opportunities there for it to be recommenced...” (Prison 4, FG Health and Addiction, Female 1).

In addition, some of the health staff considered that the structure and routines of prison life such as going to work and/or being passmen for example could also assist people in their attempts to substitute methadone for illicit drugs.

“I think that’s why some of them come off of it, from the programme as well; they’re just on the methadone programme because they’ve got that structure, they’ve got some work, they’ve got some other activity to keep them going in the day and it’s not just a case of there’s methadone and go back to bed.” (Prison 3, FG Health and Addiction, Male 5).

The next quote, also from one of the health and addiction staff, makes the point not only that prison might be a good environment in which to get treatment for drug misuse but also highlights that prison may also be able to provide more support than is available within the community outside of prison. Indeed, this was reiterated by other participants.

“I would say for my caseload in the years that I've been here, I would say it's been like a kind of revolving door, I've got to say. I would say I've seen quite a lot of guys come back in continuously and they feel more safe, and that sounds bad. But, you know, they have the structure in, you know, things are cemented here for them and I think it's the fear factor for people going out there because there isn't a lot of support available. So, you know, guys have actually committed a crime just to get back.” (Prison 3, FG Health and Addiction, Female 2).

“It's kind of sustaining that in the community seems to be the problem. There's... they are stable in here, but they're going out, and then they're mixing with old associates, and...” (Prison 2, FG Health and Addiction, Female 3).

“But then it's easier in the jail [to stay off drugs] than the temptation, I suppose, outside. I don't really understand it what it's like when you go back in the community, I suppose.” (Prison 2, II Officer, Female 4).

On the other hand, not all participants agreed that prison is the best place to experience a drug detoxification because of the fact of being exposed to other drug users during the process:

“Plus perhaps the absence of drug-free halls within prisons as well, drugs support areas, because some prisons have, but very few have, so the environment that people will remain in following a potential detox is to be surrounded by people who are still using; which, you know, no proper treatment programme would allow for somebody to be in that situation.” (Prison 4, FG Health and Addiction, Female 1).

### **Staff views of changes in drug culture and the perceived reduction in injecting in prison**

As well as the methadone programme, some staff thought that factors such as having increased security in the prisons, more support services available for drug users, and a

perceived change in drug taking cultures more generally, were also possibly having an impact on the reduction of drug injecting in prisons.

“Because I can see a reduction [in injecting], even in [this prison] from the time that we’ve been here. There was a period and we’ve tightened things up and offered support so as well as security we’ve clamped in that way but there’s also been the plan that we need to give them the support at the same time. So Cranston then turned into Phoenix and there’s a lot more support there; there’s addiction nurses now, there’s a lot more methadone now, it’s not as difficult to put your hand up and say, I’ve got a drug habit and I want to try and kick it.” (Prison 4, FG Officers, Male 3).

“And I think there’s a very small amount of intravenous drug users in prison at the moment, and a lot of that is down to as everybody said, we are a lot better on our safety protocols, a lot of our security protocols, it’s a lot harder to get things into prison.” (Prison 4, FG Managers, Male 2).

The perceived change in ‘drug culture’ referred to the notion that currently drug users in prison are engaged more in non-injecting forms of drug use such as smoking and taking prescription medication.

“I think, as we stated earlier on, the culture has moved on what type of drug they’re using, to popping pills.” (Prison 3, FG Officers, Male 3).

“Like I say, the culture has slightly changed for... don’t say jagging now, but that’s the terminology we used back when I was younger to more smoking.” (Prison 5, II Officer, Male 1).

“There’s the odd occasion where there’s meant to be a set of works and whatever else in the block here, but it doesn’t raise its head very often. No, it does not. It’s more smoking than... I know there were a few [prisoners] who’d taken Subutex as

well. But injecting, you don't really, I mean, there will be but you don't really hear that many people talking about it. So, it's more just smoking it." (Prison 2, II Officer, Female 4).

"I think the culture outside has changed as well. They've moved on to different types of drugs as well, which is more tablet form, etc, which is probably harder for us to detect." (Prison 1, FG1 Officers, Male 5).

"I think the jail's changed, in so much as that there's more abuse of prescription drugs now." (Prison 3, II Officer, Male 2).

In terms of explaining the shift in drug using culture, some participants related this to a fear amongst prisoners of blood-borne viruses, including HIV and HCV:

"There's been a huge big shift since I started in the Prison Service 15 years ago to where we are now, even within the community, people injecting. I know there's still a lot of it goes on, but actually probably, you know – and this is just a personal view – I think some of that injecting practice has reduced over the years because of the risk with HIV and hepatitis C and things like that. People are much more aware of it so personally I think there's been a reduction so people are much more likely to be trying to smoke it or whatever than inject." (Prison 3, FG Health and Addiction, Female 1).

"And attitudes have slightly changed as well. Back in the late 80s/90s drugs, intravenously, was part of the culture outside. It was the way it was done and all the rest of it whereas nowadays everybody's had all these big campaigns, AIDS thing and all the rest of it, so nowadays prisoners are more likely to try and chase, you know, temgesics and all these kind of tablets that they can take that are just giving them the same kind of hit, for pennies, you know, rather than trying to chase up heroin." (Prison 3, FG Officers, Male 3).



“Various things also contribute to that. I don’t know why there wouldn’t be any way for them to... is it a case of maybe that they’ve thought about Hep C, they’ve thought... looked at other folk that’s maybe OD’d, the state of their bodies, their abscesses or their look?” (Prison 3, II Officer, Female 6).

Another common view amongst participants was that prison drug users also wish to distance themselves from the stigma that surrounds perceptions of injecting drug users or ‘junkies’.

“I don’t know if that’s a kind of culture. I don’t know. Not a culture thing, a... just moving on and wanting to take a bit of recreational drugs but not look like a junkie.” (Prison 3, II Officer, Female 6).

## **Summary**

This chapter has presented staff views of the methadone maintenance programme as the key harm reduction measure that staff knew of, in relation to drug injecting and hence HCV prevention. Methadone was widely perceived as having played a significant role in reducing the extent of injecting drug use occurring in prisons, and this was perceived to have reduced it significantly to minimal levels. Other factors that were viewed as having impacted on the perceived reduction of injecting in prisons were the increases in security and also a change in drug culture from injecting drug taking in tablet form.

Staff views on the impact of methadone on the prison environment were largely positive and the impact on officers’ roles was mainly viewed as negligible and simply ‘part of the job’. In addition, many staff considered that the provision of methadone within the prison has led to the prison being a safer environment for staff and prisoners by preventing the violence associated with ‘chasing drugs’ that had been prominent in the past.

With regard to the impact of methadone on IDU prisoners, staff views were mixed. Many staff thought that methadone failed to help reduce non-injecting drug use in the prison overall, and also failed to motivate drug users to get help for their drug use; on the contrary,

taking methadone was often viewed in negative terms such as prisoners' 'playing the system' and getting a 'free hit'. On the other hand, it was generally accepted that the methadone programme has helped to improve the overall health and stability of prisoners so that they can potentially address other issues in their lives.

The most negative, and a pervasive, view about the methadone programme, particularly amongst officers, was that a maintenance programme should not be utilised in prisons. Many of the officers believed that the maintenance programme should be replaced by a reduction programme that focuses on abstinence. Many officers considered that it was not appropriate for prisons to allow drug use to continue within prison, even in the form of a legally prescribed substitute such as methadone.

As was the case with testing and treatment for HCV, a number of staff considered that prison is a good place for IDUs to undertake drug treatment due both to the immediacy of support that prisoners have access to in prison, and because of the structured life of prison itself.

## **CHAPTER 8. STAFF VIEWS ON NEEDLE EXCHANGE IN PRISON**

Interviewees were asked about their views on the usefulness of having a needle exchange in prison as a potential harm reduction measure to reduce needle/syringe sharing among drug injectors and hence to reduce the potential transmission of blood borne viruses within the prison setting. The majority of comments, however, regarding the possible introduction of this initiative were quite negative, and certainly a greater number of reasons not to introduce needle exchange in prisons were cited than those in support of the notion. Two central topics emerged from discussion on the provision of needle exchange in prison: the arguments both for and against; and the practicalities of how a needle exchange might be managed within a prison setting.

### **Arguments in support of in-prison needle exchange**

The main arguments supporting the idea of establishing needle exchange services in prisons were that: i) it would help to prevent the transmission of HCV and other blood-borne viruses; ii) it would make the prison a safer environment for staff as well as prisoners; iii) the provision of a needle exchange for IDU prisoners is a missing component of the overall harm reduction approach within prisons; and, iv) it would remove contaminated needles from circulation. These arguments are elucidated below.

#### ***Prevent HCV transmission amongst prisoners***

One of the main arguments in favour of providing a needle exchange in prisons was that it would help prevent the transmission of HCV between drug using prisoners, by reducing the potential re-use of contaminated needles:

“If it makes it possible doing it if it’s safe, it’s reducing the possibility of contracting Hep C and any other viruses then why not. It might be a radical viewpoint for me but that’s how I see it.” (Prison 3, II Manager, Male 3).

“And if we could have a needle exchange, at least what needles are in there... the lads have chances to get needles for themselves, one use and throwaway, and they

can get clean ones, as well. So, to me, there's a lot less risk having the needle exchange, than not having it, and not having a clue what's going on there and how many people's used it and what kind of infections are on it, you know." (Prison 5, Health and Addiction, Female 6).

"So, people have opposing views on it. It's almost like you're giving them the needle to take the drugs with, but as I said, then again, they're doing it anyway. Are you not better making it a bit safer for them, I would say?" (Prison 3, II Officer, Female 3).

"Maybe more work in the short term but less in the long term by not having so many people presenting with hepatitis C and other BBVs." (Prison 4, FG Health and Addiction, Female 1).

"Well, if they're using and they're injecting, they've got to get clean needles to inject their kit, which is obviously lessening the risk for them." (Prison 4, II Officer, Male 5).

"Well, you're not going to stop them from taking drugs if they want to. I said that earlier. If they want something badly enough then they'll get it, so to me, if they were given a clean needle then that's a good thing, because they're not going to share with someone else..." (Prison 3, II Officer, Female 5).

### ***Makes prison a safer environment for staff***

Another of the arguments that was made in support of the idea of having a needle exchange in prisons was that it would make prison a safer environment for staff, by helping to prevent the risk of becoming infected with HCV from a used and potentially contaminated needle:

"But there is something to be said, because there's safety involved in that, in keeping a clean needle, and they're actually not leaving that needle lying about somewhere for someone else to see, or for staff to have a needle stick injury." (Prison 3, II Officer, Female 5).

“I would, I personally would, just because, if nothing else, it would stop a member of staff catching a... any sort of virus. And you can't stop people doing what they want, and they're going to do it anyway, so if you can manage it, safer.” (Prison 4, II Manager, Male 1).

“I'd be a lot more worried if I'd got a needle-stick injury from a needle in there now, than if we had a needle exchange, to get a needle-stick injury. I'd be a lot more worried about what needles are in there at the moment.” (Prison 5, II Health and Addiction, Female 6).

Specifically, the idea of allowing prisoners to have needles safely stored in sharps bins was something that some participants thought would be advantageous in trying to prevent needle-stick injuries:

“Well, because if there's needles there and if they're exchanging them and we had secure places for them to keep them, therefore we could go and take them in and we wouldn't have to search them. If they said, in a cell search, I've got a needle, Boss, it's in that container, we would then just dispose of that needle, because the prisoner could get a fresh needle, therefore he wouldn't be placed on report for it, and we wouldn't be finding it hidden behind a bed or under something, and getting, you know, it stuck in our fingers. If we gave him a container to keep it in, and he declared it during a cell search, and there's no action then taken on him, and it's disposed of, and he had access to a fresh needle, it could be safer for staff.” (Prison 4, II Manager, Male 1).

### ***Providing needles is a missing part of harm reduction strategies in prisons***

A few participants suggested that although harm reduction packs are already available in prisons to try to help prevent the transmission of blood-borne viruses, that it was counter-intuitive not to provide a needle alongside the pack:

“I don’t understand why we have harm-reduction kits that don’t have needles in them; I don’t see why, really... why we give them filters, why we give them everything else, if we’re not giving them a needle to go with it. What’s the point? It’s like giving you a pie with no meat, you know. There’s no point at all.” (Prison 2, FG Managers, Female 3).

“I think when you look at research as well, you know, and Sweden and Germany and things like that, they’ve had good success with the needle exchanges. So for me I can see the benefits of it. If you’re giving them a pack why are we not giving them a needle? And it comes down to very much the unions rather than being the whole holistic approach to the person and give them the pack with the needle.” (Prison 3, FG Health and Addiction, Female 1).

However, as well as being supportive of the idea of providing needle exchange for drug using prisoners, a small number of participants also talked about further harm reduction approaches that could be introduced including the provision of prescribed heroin:

“I think it should go further and supply the stuff, prescribe it. It’s a bit ironic that you’re going to give them fresh needles and everything like that, and yet you don’t know what they’re putting into their system. You’d be as well just putting it through the health centre and getting the doctor to prescribe the heroin and put it in a controlled, sterile environment.” (Prison 3, FG Managers, Male 3).

As well as the idea of providing prescribed heroin, other participants considered the possibility of, and implications of, introducing a drug consumption room within the prison setting:

“I think if you’re in some place possibly like the open estate, like an injection room would be I think probably a better idea, but these prisoners are free to a certain extent to walk about establishments as they want. So if they want to drop in there

they can kind of do so in the hours that it's open". (Prison 4, FG Health and Addiction, Female 2).

Some of the health and addiction staff, however, also had reservations about the notion of providing safe injecting rooms:

"...but I'm not sure that I would be happy, you know, supervising somebody injecting. It puts a completely different slant on your job. You know, Friday afternoon, [name], is your slot in the injecting room. Not great. 'Stand by, what's going to happen'." (Prison 4, FG Health and Addiction, Female 5).

As well as the potential fear that healthcare staff may have in supervising drug injecting rooms, another of the healthcare staff suggested that this may also constitute an ethical issue in terms of providing nursing care for drug users:

"Is that not to do with ethics of care, that maybe you're there to care and you're not there to observe someone doing something detrimental to their health? That must be difficult for someone that's gone into nursing." (Prison 4, FG Health and Addiction, Female 2).

### ***Needle exchange would remove used/dirty needles from circulation***

Another reason that participants gave in favour of in-prison needle exchange was that it would serve to remove used needles, which may be contaminated with HCV and other blood borne viruses, from circulation within the prison:

"And so, if you gave them a needle and you got that needle back then there aren't so many in circulation, so it's a bit safer for staff that way, and for prisoners it's a safer way of doing it too." (Prison 3, II Officer, Female 5).

"If there's prisoners who are actively taking drugs, I would rather... I'm not condoning it at all, but I would rather they took drugs with clean needles. I would

rather have clean needles going about the jail than dirty needles and everybody using dirty needles.” (Prison 3, II Officer, Female 4).

However, other participants felt that any discussion about introducing either needle exchange and/or injecting rooms in prisons was an irrelevance owing to the legal issues surrounding these potential measures:

“You cannot condone... you cannot allow... at this moment in time, it’s against the law. Personal opinion doesn’t come into it, really. It’s against the law, and until any such law changes, nothing else will change, because that’s when other people jump on the bandwagon. It’s against the law. You know, to take drugs, be in possession of drugs, and the supply of drugs. So if we’re giving them the drugs and the needle, we can be done for supply. You know, at the moment, we don’t have any laws for legal heroin. We don’t have the laws for a shooting room. So until such time as I think there’s no point in going there.” (Prison 2, FG Health and Addiction, Female 1).

### **Arguments against needle exchange**

Numerous arguments were made against the notion of introducing a needle exchange in prisons. The main arguments against needle exchange were that: i) there was a lack of need for a needle exchange; ii) it would jeopardise safety and security in the prison; iii) it would increase the risk of a needle-stick injury; iv) it would encourage drug use and injecting drug use; v) that prisoners would themselves oppose needle exchange and that drug using prisoners would not use a needle exchange; and vi) it is too difficult within the prison setting. These arguments are illustrated below in turn.

#### ***Perceived lack of need for a needle exchange***

One of the most commonly reported views by participants who opposed the notion of introducing needle exchange in prison was that there is simply no need for one because of a perceived lack of injecting occurring in the prisons.



“I don’t think the need’s there anymore. I think maybe years gone by when it was more prevalent, certainly. But as [name] said, the majority of our experiences now is - it’s decreasing. We don’t see it as much. It’ll still go on but I don’t think it’s as bad as it once was.” (Prison 1, FG1 Officers, Male 1).

“We were looking at it, but they’re not using needles in here, why give them clean needles?” (Prison 4, FG Managers, Male 2).

“I think if jagging was a big problem, but it's not. It isn't here. It’s definitely not. And I think the boys are quite open...” (Prison 1, FG Health and Addiction, Female 2).

Indeed, some of the health and addiction staff said that they felt that some prisoners who are drug injectors outside of prison actually make a conscious choice not to inject in prison in order to try to improve their wellbeing. This was also therefore mooted as an argument against providing needles in prison:

“I'm certainly not aware of any injecting drug use in the jail. I came from the Homeless Services outside, and a lot of the boys actually used to say they used the jail as like a rehab, to give their veins a little rest, coming into jail.” (Prison 1, FG Health and Addiction, Female 1).

“It's not a big thing in here, injecting. It's more they're smoking drugs in here. There are... quite a few people have said that they do come in here as a wee bit of respite to get themselves back on track to then go back out.” (Prison 1, FG Health and Addiction, Female 4).

“But a lot of guys come in to prison to get away from the drugs scene, to get away from injecting, to get themselves a bit healthier. So they're looking to various ways to actually have a respite period first of all.” (Prison 3, FG Health and Addiction, Male 1).

***Needle exchange would jeopardise the safety and security of the prison – needles as weapons***

Another issue that frequently arose in the interviews, and particularly in the interviews with officers, concerned that of safety and security within the prison. Participants expressed many concerns about both their own safety and that of the prisoners if a needle exchange were to be introduced. In particular, the biggest concern related to needles being used as weapons against them:

“Well, there is always the kind of security side of it for a start and if you're, you know, freely giving them a needle then it's something else we've got to watch out for. And some of them can be used against us; that's my main view on it.” (Prison 3, FG Managers, Male 1).

“I mean, it's just... it's another weapon. I mean, just taking it... we give them plastic knives, forks, and spoons so that they can't use them as weapons. Why would we want to give them a needle?” (Prison 4, II Officer, Male 7).

“My personal view would be no, not for prisoners for staff safety. These are the type of clientele we're dealing with; they're long-termers so they're not in for breaking the minister's windows.” (Prison 3, II Officer, Female 6).

“But the danger is, we're introducing more needles into the residential areas, which for me, increases the risks, not just to prisoners, but it increases the risk to staff, it then becomes a weapon, and a threatening weapon.” (Prison 4, FG Managers, Male 2).

“But the main thing then was very few of them [needles], but they were used as weapons and obviously as threats. People come to your door, I've got a needle, full of blood whatever, I've got the Hep, I've got the virus, you're getting it unless you get this, you get that, and it's a bad thing.” (Prison 4, FG Managers, Male 3).

“Bullying, this is my blood in here, I’ve got Hep C.” (Prison 2, FG Managers, Female 2).

As well as speculating about the potential threat from prisoners if they had access to needles, one participant also spoke about events in the past where staff had actually been threatened with syringes full of blood:

“There have been instances in the past where staff have been threatened with loaded syringes, you know, loaded with blood, loaded with, I don’t know what, not here that I’m aware of, but there certainly have been incidences in other jails, and if we’re making that stuff available to them, you just never know, these individuals, what they’ll do, you know, if things don’t go their way, you’re introducing another threat for staff that way.” (Prison 5, II Officer, Male 2).

While the participants above were mainly concerned about the risk to staff from having a needle exchange in the prison; others also considered the risks to prisoners. Here, an officer refers to the risk of needles being used as a weapon on other prisoners:

“Because the nature of some of the [prisoners] we are getting now are vicious, they would use it, you get the [prisoner] that would spit in your face, because they know of the worry that causes..... but to spit in your face is different, it’s a different ball game, and if those [prisoners] have needles, they’re going to go for staff and other [prisoners] with needles.” (Prison 2, FG Officers, Female 2).

But another type of risk that was mentioned by some participants was the potential risk to a drug injector, should s/he suffer a fatality while injecting in prison:

“And what happens if... I wouldn’t feel comfortable with it in the respect that, say some guy comes up and says oh I’ve got something can I get a needle? And then he dies the next day because there was something in that package that wasn’t right and

basically that's basically me giving him the means to kill himself. So I wouldn't feel comfortable with that." (Prison 3, II Officer, Female 7).

### ***Increased risk of needle-stick injury***

As well as concern about the risk of being attacked or threatened by a needle, participants were also concerned about the role of needle exchange facilities in increasing the risk to staff of receiving a needle-stick injury.

"... and I have, kind of, been in the frontline, getting somebody with a needle-stick and a colleague gets a needle-stick injury and the background of that, when you have to go home to your wife and say, listen, I have a needle-stick injury, doctors have advised me from intimate contact for how long and this that, and this thing. That whole fear of the family side of things, I've had a colleague who had that and he said it was terrible and I could see it first hand, it was, kind of, terrible for him. So there's that side of it which is not the nice side. So as far as I'm concerned needles – keep them out here, not in here and that's just my view and I think it would be the view..." (Prison 2, FG Managers, Male 4).

"I think one of the concerns about this... and see somebody asking confidentially for needles or whatever, if you're turning over their cell around you ended up with a needle-stick injury because the prisoner didn't want to admit he was taking drugs that was a real worry for staff." (Prison 1, FG Managers, Male 6).

Underlying this belief for some of the officers was a perception that prisoners would not be sufficiently *responsible* as to dispose of any used needles safely.

"But if they're more commonplace the nature of the people you're working with is they will discard them carelessly. After a while the laundry are just getting them in the laundry, they just get carelessly discarded because they're not as precious a commodity as what they are now. And, again, you would find them in empty cells etc." (Prison 4, FG Officers, Male 3).

“They’re lazy by definition a lot of them and if we were to give them free needles they wouldn’t put them in the receptacles to get rid of them. They wouldn’t put them in a sharps bin, they’d be discarded everywhere, they’d be put in the laundry bags because, as [name] says, there’s not actually a commodity, easier just to, sort of, throw away.” (Prison 4, FG Officers, Male 1).

“I just don’t agree with it at all in terms of... we can provide them with methadone, we can provide with substitutes, it’s about the responsibility, the responsible prisoner – this great thing that we’re wanting to have is a responsible prisoner – but we all know that their responsible prisoner will maybe use the needle against a member of staff at some point; maybe has then got a disregard about how he disposes of it and then somebody else gets a needle-stick injury”. (Prison 2, FG Managers, Male 4).

“If they’re willing to use needles and drugs within a house, home environment, when there’s kids running about, they’re not going to worry about staff or other prisoners.” (Prison 4, FG Officer, Male 3).

### ***Needle exchange would encourage drug use and drug injecting in prison***

For many officers in particular introducing a needle exchange was perceived as tantamount to condoning drug use, and hence to encouraging drug use and drug injecting in the prison:

“No, because you’re starting to condone it.” (Prison 1, FG2 Officers, Male 2).

“But I think it's condoning drug use.” (Prison 4, II Manager, Male 1).

“You’re condoning drugs; you’re letting them use drugs in the prison. Whereas I believe there’s posters all over the place about zero tolerance to drug taking. Well that’s not zero tolerance, handing them out paraphernalia, ‘take drugs’”. (Prison 5, II Officer, Male 1).

“Rather than give them a needle exchange, which I would say would be encouraging drug use, I don’t see that’s a harm reduction method. That’s encouraging them to keep using.” (Prison 1, FG1 Officers, Male 4).

“Just seems like stepping the other way. You know that there’s intravenous use and it’s, like, making it acceptable.” (Prison 4, FG Officers, Male 5).

“I would worry that the safety aspect and removing all the danger would increase the number of people in jail to take it, or it would encourage people in jail to take drugs. Because if you take the danger away, they've lost everything else, they've lost the sex, drugs and rock ‘n roll and things like that, so what else is there if you're going to want them things?” (Prison 3, FG Managers, Male 3).

“I just think, no. I just think it’s like encouraging it. I think it’s... Yes, it’s like accepting that it does happen – although it does happen – but I just think to then say... no, I just think it’s like saying ‘on you go, it’s all right to do it’. But then I suppose that they’re looking at it though, it’ll stop them hurting everything else, continually passing it on, but I just think it’s like saying, ‘yes, it’s fine’.” (Prison 2, II Officer, Female 1).

As well as being viewed as potentially encouraging drug use in general in the prison, some participants also considered that providing a needle exchange would signal to drug using prisoners that it is acceptable to inject in prison:

“...we’re offering people, you know, a way to abuse drugs that they don’t currently have, and drugs in jail are more expensive than drugs outside, and if I can get a bigger hit by injecting then I’ll inject.” (Prison 4, FG Managers, Male 2).

“It could escalate people who aren’t injecting outside. If we try and get a better hit this way or it’s more intense because it’s available. People who don’t inject outside, maybe smoke outside, you get free needles in the jail, I’ll give that a go, and then

we're creating another generation of injecting addicts which we don't have at the moment, and possibly we'll never have." (Prison 4, FG Managers, Male 2).

"I assume, if they're smoking it, it's less harmful than injecting, so why would we make it easier to do the more dangerous one of the two?" (Prison 2, FG Officers, Female 2).

These comments above show that the staff concerned were worried about the potential danger of encouraging those currently using drugs, but not injecting, to initiate injecting. Other participants, however, could see potential risk but also the potential benefit of providing clean needles:

"It's a difficult one, I mean, there's definitely health benefits to having clean injecting equipment about, but if it's going to encourage people to inject again, they're fine for injecting drug users, but the big danger is that they are actually getting a faster, better, hit off injecting than they do smoking it, so it might encourage people to start injecting, so there's mixed feelings about that personally." (Prison 5, II Officer, Male 2).

Increasing health-related risks associated with injecting drug use were also mentioned by some participants as reasons not to introduce needle exchange in prisons, and in particular, the risks of injecting sites becoming infected.

"It's not so much trying it, it's just, if we're going to get a needle, let's just inject it, and injecting is not just the problem with the drug in the system. It's a problem with injection sites, the sores and things that, you know, what it's called, when they get their abscesses and things like that, you know, there's more to it than just the actual Hep C or blood borne virus, there's the injury caused by the needles." (Prison 2 FG Officers, Female 2).

“I think as well there’s, like, so many other risks involved, like, our safety and making sure they’ve got clean needles or whatever but there are so many other risks involved with injecting. You know, they inject wrongly and, like, I mean, I don’t know that much about it but all of the guys had, like, loads of sores from injection sites. I’ve seen guys, like, getting skin grafts and all that so there’s, like, loads of different issues, health issues around injecting that I don’t know if a needle exchange would solve anyway, you know, and you’re creating so many more problems. So I wouldn’t be in favour of it.” (Prison 4, FG Officers, Female 8).

Another participant expressed concern, not that the introduction of an in-prison needle exchange in prison could potentially escalate the risks associated with drug use towards drug injecting per se, but that it might discourage the cessation of injecting behaviour by providing a choice to continue to openly inject. In this way, the participant expressed concern that the extent of drug injecting may then increase within prisons.

“... we’ve not got a massive problem with needles in custody, so why would we want to introduce a system that’s going to really promote, but, not discourage people from needle use, if you like, but those who that was their choice, would continue to do that if they knew they could exchange, whereas they may change their habits when they come in here and move away from the injecting, whereas to me they might not do that, and then there’s the, that just brings the other risks associated with it.” (Prison 1, FG Managers, Male 3).

A number of participants talked about a potential impact of having needle exchanges available in prison as escalating the risks associated with drug use. One participant who was in favour of needle exchange in prisons spoke about the need to consider this aspect of needle exchange:

“But that’s the whole risk register, the issue of harm reduction, is that you don’t elevate people’s practices; you deal with what’s there.” (Prison 4, FG Health and Addiction, Female 1).



***Prisoners would neither want nor use a needle exchange***

While a minority of participants perceived that drug injecting prisoners would access and utilise a needle exchange if it were available, it was very commonly suggested that, in general, drug injecting prisoners would not utilise such a service and that the wider prisoner population would not be accepting of such a service either. The latter notion was often expressed in terms of there being a stigma attached to being a drug injector; a stigma amongst the prison population in general:

“But I don’t think you would get the uptake of prisoners. I really don’t. I don’t think you would, because of the stigma there is attached to that now. And there is. It’s certainly there.” (Prison 3, II Officer, Male 2).

but also amongst non-injecting drug users:

“Because we’ve got an awful lot of prisoners who are very anti junkies and this could be the prisoners who smoke it and prisoners who use it in here but never use it in the community. And I think there can be quite an amount of ill-feeling towards junkies – that’s their terminology, not mine, by the way – and there is quite negative feeling, I think, towards junkies. And if it was felt that this has been encouraged by the prison or adopted by the prison, I think there’d be a sizeable number who wouldn’t be comfortable with that, even though they know it’s going on behind doors.” (Prison 3, FG Managers, Male 2).

“I don’t think so, because you’ll even... I’ve got lads that are on their methadone and if they hear of anybody, and this is going back a few years, oh you dirty junkie, oh aye you dirty junkie, at least I just smoke it.” (Prison 3, II Officer, Female 6).

Some participants also mentioned that, such is the stigma and dislike surrounding injecting drug users, prisoners known to be using a needle exchange could be at a greater threat of violence and assault:

“It’s just like in the hall or something, if there’s a needle, everybody knows there’s a needle, and that person will get spoken to or will get assaulted, or... because they don’t like it.” (Prison 4, FG Managers, Female 6).

As well as the perception that prisoners would not want a needle exchange in the prison because of a general dislike of injecting drug users, many participants also commented that prisoners would not utilise a needle exchange if it were available. One of the main reasons given for this was that they would know they were making themselves targets for cell searches:

“I mean, if we see who’s going for needle exchanges then we’re then going to know who’s likely to be using, the information’s going to go around about that and those individuals are liable to be targeted [for cell searches] as well, and that would cause difficulty as well with the prisoners.” (Prison 5, II Manager, Male 5).

“... But then how many are then going to come forward to get it? Because if there are... swap, exchange of needles then you’re going to know they’re going to get... So then you would... you’d want to go searching because you think, well, if they’ve got needles it’s usually because they’ve also got stuff to use.” (Prison 2, II Officer, Female 1).

“They also looked at I think the prisoners’ perspective where if you’ve got a needle watch on the hall they’re going to have to go in and ask for a needle and then you’re identifying yourself to staff and they felt they wouldn’t do that anyway. They were going to go and hide all that because they’d want to hide their drug use in the first place. So the last thing they were going to do is out themselves, for them then to be targeted by staff ...” (Prison 4, II Manager, Male 1).

Even some of the health and addiction staff thought that prisoners would not use a needle exchange:

“There’ll be that stigma as well. They don’t pick up the harm reduction packs because they’re going to get their cells searched, so if they picked up needles, it would be the same there.” (Prison 1, FG Health and Addiction, Female 4).

On the other hand, some participants considered that drug users would use a needle exchange and drew on evidence that the same argument had been used erroneously in the past when other harm reduction methods were being introduced:

“Having worked in the prison service when condoms were introduced in prison, when I first started in a [ ] jail; oh my God, you weren’t allowed to issue condoms, you weren’t allowed to talk about it and everybody says, oh well, when you introduce condoms they won’t come and get them – they did. They did come and get them and they were very careful about who they approached and how they did it but they did come and get condoms.” (Prison 2, FG Managers, Female 3).

### ***Too difficult within the prison environment***

For some of those who opposed the idea of introducing needle exchange in prison, the arguments against it were specific to that of the prison environment:

“I think if they want to exchange needles, then they do it when they get out, i.e. when they leave the establishment ...” (Prison 2, FG Officers, Male 3).

“I agree with outside needle exchange where they can take care of themselves, but the chances of someone stabbing you with his needle once he’s just drawn it out of his arm, what would be the likelihood of that or the chances or the percentage? Possibly very, very slim, but I wouldn’t like to go home and tell my family, well I went in and I caught him doing it, so you have that chance as well and you went in and caught someone doing it and got in a fight with him you could be stabbed with it. That would be the only reason is for staff safety.” (Prison 3, II Officer, Female 6).

Even participants who were not necessarily against the idea of needle exchange in prisons acknowledged that the uniqueness of prisons made matters which would be more simple to implement outside of prisons, more difficult inside of prisons:

“But it is difficult. I think you need to appreciate the environment of a prison is very different from one in the community, and the rehabs. Prison is very different, and [security is] an integral function. I think that's... that's just what it's about.” (Prison 2, FG Health and Addiction, Male 1)

“It’s a lot easier to deal with that in the community than it is in custody; too confined a space.” (Prison 4, FG Officers, Male 4).

### ***Control versus care dilemma***

One major dilemma which permeated many of the arguments against the provision of needle exchange in prisons was that of control versus care: this relates to the Scottish Prison Service mission statement that the dual role of prisons is to provide ‘custody and order’ but also to provide to ‘care and opportunity’ to prisoners. This control versus care dilemma and the difficulty for staff of knowing how to balance these two dimensions of work in prisons, was apparent in discussions relating to the provision of needle exchange. Some participants were clear that they were to treat all drug taking within the prison as quite wrong and something that ought to be punished:

“We see it as wrong, totally wrong, and we look at it as from a punitive side; you know, punishing people in the orderly room for taking drugs, rather than saying right I’m going to focus you down this road in terms of addictions and health centre and health care and needle exchange and all that, and try and get the help to safely take drugs to prevent the health issues. We don’t do that as a culture.” (Prison 1 FG Managers, Male 2).

Other participants talked explicitly about the dilemmatic nature of their roles in relation to providing support, including potentially providing needle exchanges for injecting drug users in prisons

“I mean you can’t be seen... it’s a difficult one because you can’t be seen to be encouraging... how can you say “there you go, there’s a needle and there’s the paraphernalia for you to inject drugs that you’ve got from wherever”, we don’t know, it came over the fence at some point, and they say “if I catch you I’m going to put you on report”. Because basically our job is if we catch them is we put them on report for it and we remove it all from them. So you’re in a catch 22. You can’t give them it and take it away and say, “oh by the way I’ve just given you that, oh that’s right you’re on drugs now, give me it back you’re on report”. (Prison 3, II Officer, Female 7).

“We seem to be condoning it, we’d be encouraging it, you know, saying it’s all right for you to have a needle and, here, we’ll give you another needle. And, you know, you’ve got to think of security and safety of staff so it becomes a bit, it’s quite a difficult topic for staff, so there’s a bit of conflict there.” (Prison 2, II Manager, Female 5).

Below, one of the managers talks about the difficulty of allowing an illegal activity to occur in prison:

“But I think it’s condoning drug use, so if you’re giving somebody the needle are we then... we’d then be suspicious, and we’d take a drug test. And I could be punishing him, because I know he’s taking drugs. So it’s like a two-edged sword for me. If I know he’s taking needles, I then presume he’s taking drugs, which is illegal, and it’s my duty then to drug test him, which could affect his progression in the prison service system. So, it’s a hard one for me, it’d have to be anonymous for needle exchanges, and that’s very hard in a prison environment, because we most... we will watch them, wherever they go.” (Prison 4, II Manager, Male 1).

The same manager went further than considering the dilemma of allowing illegal drugs to be taken in prison and suggested that he felt that staff may be guilty of trafficking drugs in some instances:

“If they [the officers] take a prisoner, and therefore, you're letting him take his drugs, so therefore, you're basically trafficking. With the prisoner, there's all sorts of legal complications, and moral for staff, thinking, I know this guy's got heroin, if I'd searched his cell ten minutes ago I could have done him for it, now I'm escorting him to use it. It's a dilemma because our duty is to catch him with the heroin, but if you don't catch him, then do you take him to use it? It's a hard one for staff, and it is a huge dilemma.” (Prison 4, II Manager, Male 1).

Other participants, however, were able to think a bit more widely about the need for the emphasis to shift more from control towards care, and therefore how such a move may in fact be more conducive to a harm reduction approach to injecting drug users in prison.

“So if you've got your discipline head on you're thinking, well, I need to put in a report for that, but if they set something up and it's done legally, and that, then I think it would benefit them, and it would obviously stop the spread of disease as well, and the other things that come with it.” (Prison 3, II Officer, Female 5).

One of the managers also spoke about the potential utility of focussing more on the care and opportunity aspect of the roles of prison staff, but felt that this harm reduction aspect of providing support for drug users is perhaps not made as explicit to staff as it could be:

“So if you're telling somebody on one hand, your job as a custody officer, make sure that everyone's safe, there's good order, discipline maintained, and... but, conversely, we're going to let them use drugs. Eh? If... a good example would possibly be, we do a random cell searching. So you search a cell, and you discover in it a prisoner has a stash of foil that he uses for chasing the dragon, whatever, right, and the staff will take it, and the prisoner is on report because of drug paraphernalia

they're not allowed to have. Now, what they probably don't know is that the background to that individual, if it's been a chaotic injector, who's progressed onto safely smoking the stuff or a safer... you've just removed that option for him. If they go to the orderly room, they're punished for having the paraphernalia, all the... possibly all the work that's been done by the drug team is now undone. So which bit do you want? You're saying to them on the one hand, good order. Good order is you're not allowed to have stuff that's illegal, on the other hand, care and opportunity. So there has to be a balance. I think that isn't sold to staff as well as it might be." (Prison 4, II Manager, Male 1).

One of the managers made the explicit point that one of the main reasons for introducing a needle exchange in prisons is that HCV, and its prevention, needs to be considered very broadly as a matter of public health, and not one of security.

"It's a public health issue; it's not a security issue. And in order to reduce, obviously everybody's possibility of danger, it's actually not a bad thing." (Prison 1, FG Managers, Male 5).

The same participant went further and in some ways made the case for attempting to resolve the care versus control dilemma, by suggesting that a completely new way of thinking about public health would have to be considered by prison staff:

"But that's a massive leap that we need to take; massive, massive leap that we need to take because it is about public safety, your safety as well as mine. And it's not illegal for people to take drugs. It's illegal to have them in your possession, but not to take them, even on the outside, you know. I know obviously if you have them in possession the inference is, you're taking them, but we need to mentally move on with all that, you know. If in fact the public health side of things is going to be the focus in prisons as opposed to the punitive side of things, as (name) was talking about, in terms of drugs, we need to take massive leaps, and I'm not sure we're there yet." (Prison 1, FG Managers, Male 5).

## **Managing a needle exchange programme in prisons**

The practicalities, or otherwise, of managing a needle exchange in prisons was another major theme from the interviews. While a small number of participants were able to visualise how such a service may be able to operate in the prison setting, a larger number of participants either thought that it was too problematic to contemplate or simply did not want to contemplate it.

“I think the benefit, if it was a hard core injecting addict who didn’t have to smuggle stuff in a pair of shoes in the reception process or internally that we people come across by accident, they were able to do that, I think in one of these individuals it would be a good idea, but I do think that the cons outweigh the pros in it, if you like, you know, it would create more problems doing it than we would solve. A small group of individuals who were injecting, to manage them in an appropriate manner would create so much problems for the non injecting drug users and push them down, I think would push them down that road to try it, I think. I don’t think it would be a good idea.” (Prison 4, FG Managers, Male 4).

However, a handful of participants reflected that it might be possible to run a needle exchange, but that the key to its success would be how it was managed:

“So you need a nice process where people could go discreetly to needle exchange and there was a process for managing it; a process certainly for the prison officer side ensuring that the staff are protected from sharp injuries and that as well. It’s that whole gambit, how it’s managed.” (Prison 4, FG Health and Addiction, Male 3).

For some who agreed that an in-prison needle exchange may be appropriate, they proposed that to manage it via the health centre may be the best option:

“It would be looking at an infrastructure to do it, it would probably be something that would be done as a... I don’t think you’d have open needle exchange; it would need to be done through healthcare. It would need to be aware about people who



can go discreetly as well, because again IV users in the prison could become subject to victimisation.” (Prison 4, FG Health and Addiction, Male 3).

“I think having just a free open needle exchange would be very hard to manage, whereas if we had identified and registered intravenous drug users and managed through the health centre, and the needles were exchanged through the health centre rather than in the halls, we could manage it.” (Prison 4, FG Managers, Male 2).

Another issue that health and addiction participants thought would have to be considered in relation to managing a needle exchange was that prisoners and staff would need to be trained (educated) to know that a prisoner requesting a clean needle would not then be subject to being targeted by officers as a known drug user. One health and addiction participant referred to the fact that such training had already been undertaken in relation to the distribution of citric packs in the past:

“but to educate the prisoners that are using them, that it’s not... that’s not such a stigma that they’re going to be watched by officers. Because the training that we had on the citric packs, all the officers were invited as well, and I think it’s been quite accepted here; I don’t think there’s any problem with it. I think it’s just the prisoners themselves think they’re going to be more closely watched if they’re seen by officers to be receiving citric packs; or cell searches, and they’ve got citric packs, then they’re going to be focused on as drug users.” (Prison 5, II Health and Addiction, Female 6).

One officer who was in favour of needle exchange on the basis that it would help to prevent the circulation of dirty needles in the prison, and hence would reduce the possibility of any kind of needle-stick injury with a dirty needle, was only supportive of a needle exchange on the basis that it was managed properly, but not if it would lead to an increased number of needles being in circulation within the prison:

“So the dirty one for a clean one, then I’m happy with that. I don’t want the amount of needles to be increasing, so that they’re everywhere.” (Prison 3, II Officer, Female 4).

***Additionally, the difficulties of providing a confidential service was also viewed as a challenge in the management of in-prison needle exchange:***

“and it’s about how would you necessarily do a needle exchange that’s very confidential in this, kind of, close society, and even allowing for that, you know, people talk. I dare say normal people talk and word would get out, so there would be a range of issues that we would need to think through about how we managed any kind of overspill and knowledge about needles being in the prison has got.” (Prison 4, II Manager, Male 1).

And in particular in the environment of a closed (as opposed to an open) prison:

“But in a closed prison they’re escorted by staff from A to B, so there’s no confidentiality there as to what they’re coming for.” (Prison 4, FG Health and Addiction, Female 2).

## **Summary**

The majority of those who considered that a needle exchange would be an advantage in the prison setting, perhaps not surprisingly, were the health and addiction staff. The main arguments in favour of a needle exchange were that: i) it would help to prevent the transmission of HCV and other blood-borne viruses; ii) it would make prison a safer environment; iii) that it is a missing component of existing harm reduction practices in prisons; and iv) it would remove contaminated needles from circulation.

On the other hand, a high proportion of officers were opposed to the idea of an in-prison needle exchange and for various reasons. The managers who addressed this issue tended to be less vociferously opposed than some of the officers, but less in favour than some of the

health and addiction staff. The main arguments against an in-prison needle-exchange were that: i) there is a lack of need for a needle exchange given the perceived low volume of in-prison injecting; ii) it would jeopardise the safety of the prison; iii) it would increase the risk of needle-stick injury; iv) it would encourage and condone drug use and drug injecting; v) that prisoners would not want or use a needle exchange; and vi) that it would be too difficult in the prison setting. A major dilemma which permeated the arguments against the notion of an in-prison needle exchange was the 'control versus care' dilemma. For some staff this dilemma reflected the difficulties in marrying the dual roles of providing care in the form of such a harm reduction measure while at the same time performing the primary function of providing custody and order.

Finally, the complexities and challenges involved in managing an in-prison needle exchange were also discussed by participants; and, in particular, the notion that confidentiality is harder to ensure in prison was mentioned by some.

## **CHAPTER 9. DISCUSSION OF STAFF VIEWS**

This chapter presents a discussion of the key issues that arose during the staff interviews, as described in Chapters 6-8. First, the findings concerning staff knowledge and awareness of HCV management within the prison are discussed, followed by staff views on methadone maintenance, and last, views on in-prison needle-exchange.

### **The management of HCV within the prisons**

#### ***Participants' knowledge and awareness of the management of HCV within the prison***

With the exception of the health and addiction staff who participated in the interviews, many participants reported that their knowledge of over-arching strategies related to the management of HCV in prison was limited. Generally, participants knew about the provision of testing and treatment for prisoners, and were aware that prisoners can self-refer for HCV testing. However, they felt that they would be unable to describe the policies and/or strategies that prisons employ to prevent and/or reduce the harms associated with HCV. On the other hand, health and addiction staff tended to have extensive knowledge of the numerous prevention and harm reduction strategies that are in place to combat the transmission of HCV in prison, and were able to describe them during the interviews.

#### ***Knowledge and awareness of HCV testing and treatment***

Prison officers' and managerial staff's knowledge of the HCV testing and treatment process was largely confined to knowing that HCV testing was available to all prisoners on request, and that treatment was also available, either in the prison itself or certainly via the health care teams in prisons. With regard to knowledge about the volume of testing and/or treatment that is happening within the prisons, none of the prison officers and very few of the managers knew the details of such matters. It might be argued that it is advantageous for staff to know about the availability of testing and treatment in prisons as they will therefore be in a position to signpost any prisoners who are concerned about their HCV status to the right services (assuming that the prisoners feel confident to ask).

Some managers and officers spoke about the potential utility of knowing more about the treatment process, and its possible impacts, in order that they could better understand the particular requirements of individuals on treatment. For example, some suggested that if they knew more about the effects of treatment on mood-state then it would help them to understand that rather than simply being cranky and/or difficult, those receiving HCV treatment may be experiencing normal side-effects that explain their mood and/or behaviour. Having more knowledge about HCV, therefore, may be useful for prison officers, as they are the people who are in day to day contact with the prisoners and can potentially be more understanding of the behaviour of prisoners who are under-going treatment for HCV. Some officers were able to give examples of instances where prisoners confided in them about their HCV concerns whereupon the staff's lack of knowledge was found to impede their potential to offer even verbal support. According to the World Health Organization (2007), it would be advantageous if prisons adopted a "whole-prison approach to health promotion" in general such that "it should never be treated as solely a health care issue but should be recognized as part of the drive for decency and human rights in a prison" (WHO, 2007:19). In other words, promoting the health of prisoners and of prison staff would be best achieved by conceptualising health promotion activities as part of an integrated multi-staff effort that involves more than only health care staff (WHO, 2007).

On the other hand, healthcare and addiction staff were aware of the testing and treatment processes available, and were also able to give details about the volume of prisoners currently receiving testing and/or treatment in prison. Health and addiction staff in two of the prisons where interviews took place, spoke about challenges to the provision of HCV testing and treatment for prisoners including staff shortages and shortages in other resources.

Some of the health staff spoke about strategies used to pro-actively encourage prisoners to be tested for HCV, including systematically perusing the prisoner lists and targeting those who have not already been tested. Other staff spoke of the necessity of providing a discreet service whereby, owing to the possible stigma surrounding HCV, prisoners who may not want to be identified as either having HCV, or having concerns about having it, should be

permitted to access HCV services under the guise of another service. It is encouraging to know that such pro-active strategies to HCV testing are being pursued within SPS, and not least because a lack of pro-active strategies has been identified in other research as a potential barrier to testing in prisons (Khaw et al, 2007).

The above findings highlight some of the strategies that prison health services have utilised to encourage prisoners to be tested: pro-active testing and additional efforts to ensure anonymity. In the case of the latter example, it is encouraging that because of awareness of the potential stigma attached to those who may be HCV positive, some of the health staff are seeking out other strategies to protect prisoners from this. Stigmatisation associated with HCV has also been identified as a potential barriers to HCV testing and treatment in prisons (Khaw et al, 2007).

### ***Views on the provision of HCV testing and treatment within the prison environment***

None of the participants disagreed with the notion that prisoners should be given access to HCV testing and treatment while in the prison. In fact a number of participants perceived that, in many ways, prison is an ideal environment for testing and treatment because it can be done in confidence and because it was perceived that prison can be a more supportive environment than the community; not least because support from health staff was viewed (in the majority of the prisons) as more immediate than would be the case in the community. It is encouraging that all staff groups expressed their support for the principle of providing testing and treatment for HCV in the prison setting. It is interesting to consider the contrast between support for HCV testing and treatment with the largely critical views that participants (other than health and addiction) had in regard to the provision of methadone maintenance, discussed further below.

### ***Peer support amongst prisoners***

Another topic that was discussed during interviews, and particularly by health and addiction staff, was the notion that informal peer support is currently utilised by prisoners who have concerns about their HCV status and/or have concerns about their treatment. Some participants perceived that this is a valuable aspect of support for prisoners but is also

something that could be pursued for prisoners undergoing HCV treatment and testing even on a more formal basis. Evidence derived from qualitative studies suggests that peer support is valued by clients undergoing treatment in the community (Grebely et al, 2010; Grebely et al, 2007; Norman et al, 2008). This may therefore be a potentially fruitful service development issue that could be considered in the future.

### **Knowledge and practice regarding HCV prevention amongst staff**

As described in Chapter 6, four major issues were evident in staff interviews in regard to knowledge and practice in preventing HCV transmission amongst staff. These were i) treating all prisoners as if they have HCV; ii) issues related to wearing gloves during cell (and body) searches; iii) managing blood spillage incidents; and iv) misconceptions and concerns about contracting HCV.

#### ***Treat all prisoners as if they have HCV***

The notion of 'treating all prisoners the same', as if they have HCV, was a commonly expressed mantra in the interviews and focus groups by prison officers in particular, although a number of managers also repeated this. However, although this was commonly a spontaneous response from many participants, there is also evidence that in practice, taking precautions is not always possible. For example, in dealing with events that arise spontaneously, as discussed below.

#### ***Difficulties in protecting against HCV***

An important issue which arose in the interviews with officers in particular was the difficulty of dealing with incidents such as fights between prisoners. More than one officer spoke of the problem of becoming involved in trying to separate fighting prisoners but without having time to take precautionary action such as putting gloves on before intervening. One officer described the practice of putting gloves on as being 'not your first thought but it should be', thus demonstrating that even although he knew he should be thinking primarily in terms of HCV prevention, he still did not always do that when situations spontaneously arose. Given that there is emerging evidence that HCV can be contracted via physical fighting (Bourlière et al, 2000; Nagami et al, 2011), then it is important that officers protect

themselves from being caught up in fights between prisoners in which they may accidentally, or otherwise, be assaulted themselves, and this should be emphasised in BBV training. Similarly, it is also important that prisoner to prisoner assault is minimised to protect staff (and prisoners) from potential exposure to hepatitis C and other blood borne viruses.

There was a high level of awareness about the need to wear gloves during body and cell searches, and of the potential for accidental needle-stick injury, particularly during cell searches. However, two particular issues that staff mentioned in relation to the availability and practicalities of using anti-puncture gloves (or turtle-skin gloves) for conducting cell searches perhaps give some cause for concern. First, a number of staff mentioned that there were not enough anti-puncture gloves available to them at times, meaning that they might have to walk to a separate floor on the hall to get a pair which was considered as unhelpful. Additionally, some participants mentioned that the anti-puncture gloves that were available were often of the wrong size and therefore were an uncomfortable fit which again was a disincentive to wearing the gloves. The second issue was that the anti-puncture gloves, while clearly designed to prevent needle-stick injuries, were found by some prison officers not to be conducive to cell searching at all due to their thickness which prevented officers from being able to tell what they are actually touching through the gloves. Some staff reported that this feature discourages staff from wearing them.

Tattooing in prison was perceived by many staff to be an episodic occurrence. Staff expressed a range of views regarding prisoners' awareness of the HCV risks associated with in-prison tattooing, these ranged from those who thought that prisoners were aware of the risks, and primarily because of the extent of education and awareness raising that now occurs in the prisons, to those that thought that prisoners were largely unaware of the risks. While there was widespread agreement that posters and information highlighting the dangers of in-prison tattooing associated with HCV were highly visible in the prisons, some participants also thought that this type of information is largely ignored and therefore that other types of awareness-raising were needed amongst the prisoner group, e.g. small group sessions where information is imparted face-to-face.



Chapter 4 has already mentioned the risks associated with tattooing carried out using non-sterile equipment (Hellard et al, 2007). Other research has recommended that prisoners need to be clearly informed about the risks of in-prison tattooing in relation to the transmission of blood-borne viruses, including the dangers of using non-safe ink (Hellard et al, 2007).

### ***Blood spillage incidents***

In general the participants, including the officers, were aware of procedures to deal with blood spillage incidents. They were aware that for blood spillages involving only small amounts of blood, a blood spillage kit was available and required to be used; and in addition, participants were aware that for larger blood spillage incidents, especially trained 'bio-hazard' teams were also a requisite. It is encouraging that staff appear to have sufficient awareness of the risks of HCV transmission from blood spillages to know that preventing themselves from coming into direct contact with blood is important in the prevention of HCV transmission.

### ***Concerns and misconceptions about the transmission of HCV and other blood-borne viruses***

Some of the participants had worries and concerns about contracting HCV; and although some of these concerns were based on accurate information about possible transmission routes for HCV, other concerns stemmed from a degree of misinformation. For example, some participants were concerned about contracting HCV from prisoners via general lack of hygiene, through prisoners spitting on cell walls and floors and also about contracting HCV from cell doors. The aforementioned survey of prison officers in Ireland also found that a substantial minority of prison officers were concerned that they could contract the HCV virus via casual contact such as shaking hands and handling cell doors. (Dillon and Allwright, 2005). This is perhaps an issue that requires further clarification for staff because such misconceptions can cause additional and unnecessary worry for some individuals.

### **Staff views on the methadone maintenance programme**

Overall, the staff interviewed were fairly positive about the provision of methadone within the prison. It was perceived by many that the methadone programme had impacted positively on drug injecting within the prison such that there has been less evidence of injecting being undertaken within the prisons since its initiation. An evaluation of a methadone maintenance programme for prisoners conducted in Iran, which included interviews with prison staff, staff responsible for prescribing methadone, and prisoners, also found that participants perceived there to be less injecting in prisons where methadone maintenance treatment was available. (Zamani et al, 2010). In addition, research evidence generally, including that from systematic reviews, supports the notion that the provision of OST in prisons, leads to reductions in injecting in prison (e.g. Hedrich et al, 2011; Stallwitz and Stöver, 2007; WHO, 2007).

Another reason given by way of an explanation for the perceived lack of injecting in prisons contemporarily was that there has been a change in drug culture – away from injecting and towards ingesting tablet forms of drugs – which stems back to the HIV outbreak in HMP Glenochil in the mid-1990s (Taylor et al, 1995).

Other positive effects of the methadone programme that staff spoke about were that it's beneficial impact on the health of drug users within the prison: they look healthier; it helps them to survive – both inside and outside of prison – and it stabilises prisoners allowing them to have time to consider getting treatment for their drug use rather than spend time trying to source and 'chase' drugs in prison. In a recent study of prisoners' perceptions of the impact of receiving OST in prisons, prisoners themselves reported feeling healthier both physically and mentally (Zamani et al, 2010).

With regard to the impact of the methadone programme on prison officers' roles and on the running of prison regimes, only a minority of interviewees considered that the daily distribution of methadone had a negative impact on roles and/or the running of the prisons. On the contrary, most participants believed that overseeing methadone distribution and

consumption was just part of the role: indeed some officers commented that this regular duty actually gave the officers something to do in what might be an otherwise less busy day.

A common theme that ran through the interviews with staff was that methadone played a positive role in both calming the prison and helping to control the prisoners themselves. By calming the prison, interviewees meant that providing prisoners with methadone reduced the need for drug 'chasing' and drug dealing within the prison and led to far less violence and conflict between prisoners. In terms of the idea of methadone allowing more control over prisoners, this referred to the belief that providing prisoners with methadone gives prisoners a vested interest in adhering to prison rules in order to receive their methadone. A qualitative study of the views of prison staff and prisoners about the provision of methadone in the prison setting conducted in a single prison in the Republic of Ireland (Carlin, 2005) also found that some prison staff considered the role of methadone maintenance to be primarily concerned with control of the prisoners. Whether such perceived secondary consequences of providing methadone would be viewed as positive by prisoners is perhaps another matter, and indeed the same study found that drug using prisoners saw the control aspect as a negative feature of the methadone programme (Carlin, 2005). Additionally, a study of the views of prison staff (and prisoners) in Scottish prisons, conducted by Taylor et al (2006), also found that prison officers perceived methadone to have played a role in calming prisons.

The final key positive impact that the prison methadone programme was perceived to have related to the prison environment. On the one hand, the provision of methadone and the resultant calming of the prison was considered to have contributed to making the prison a safer environment for both staff and prisoners. On the other hand, the environment itself was seen as being conducive to assisting those who wanted to stop taking drugs, by providing less access to illicit drugs, and therefore less temptation, and support from health and addiction services. These are interesting findings given that a prior study in one Scottish prison concluded that the prison environment was not at all conducive to effective drug treatment (McIntosh and Saville, 2006).

All of these positive aspects of staffs' perceptions of the impact of methadone on drug using prisoners themselves and on the roles of prison officers suggest a certain degree of acceptance of methadone treatment within prisons. It is encouraging to find that, in relation to these specific aspects of the methadone programme, staff are generally supportive of the programme. This finding that prison staff are generally positive of providing methadone within prison was replicated in an earlier study of the views of prison officers in relation to methadone maintenance treatment provision in the aforementioned study by Carlin (2005).

Certain aspects of the methadone programme, however, were not perceived positively by many of the staff. Specifically, they thought that, firstly, providing prisoners with methadone does not encourage drug users to seek treatment to stop their drug use; second, it was viewed as problematic that it is a maintenance programme rather than being focussed on methadone reduction and/or abstinence; and, third, that the degree of bullying associated with methadone was not considered as acceptable.

In terms of the role of methadone in assisting drug using prisoners to seek help for their drug use, many officers in particular thought that methadone was not effective in achieving this, and that drug users did not want to stop taking drugs. Rather, it was felt that methadone was being used or taken by prisoners for less positive reasons. For example, the view that drug using prisoners were 'playing a game', 'playing the system' and getting a 'free hit' were terms that were commonly uttered. Similar findings to these were reported in a study by McIntosh and Saville (2006) which found that prison staff generally did not believe that drug users wanted to cease their drug use, and also thought that continuing to take drugs in prison was an easier option for prisoners (McIntosh and Saville, 2006). A related issue in the present study, however, and one with less negative connotations, was that prisoners use methadone as a coping strategy to cope with their time in prison. Again, this finding was replicated in the study by McIntosh and Saville (2006).

The second major negative aspect of the methadone programme for prison officers and managers in particular was that the programme is a maintenance one rather than being

focussed on reduction and/or abstinence. This perception appeared to be related to the notion that providing methadone was simply providing drug users with a 'free hit', as mentioned above, and was therefore seen as sustaining drug habits in prison, rather than as providing a long-term solution.

While other studies have also found that prison staff do not believe that prisoners on methadone intend to stop using drugs (McIntosh and Saville, 2006), and that prison health staff have more abstinence-orientated beliefs than community-based health staff (Gjersing et al, 2007), this finding could be considered as an indication that there is a lack of knowledge about the conditions under which methadone treatment is most successful. For example, many of the positive outcomes associated with methadone treatment have been found to have been linked with both the dosage level and the treatment duration, where it has been suggested that according to the latter criteria the provision of methadone ought to cover the entire duration of the prisoner's sentence (Stallwitz and Stöver, 2007). Therefore, despite the finding of the present study, that many officers, and a number of managers, believed that the methadone prescribing programme in prisons ought to be more reduction focussed - rather than maintenance orientated – the evidence suggests that this may not be the most appropriate harm reduction method (WHO, 2007). In particular, the continuation of methadone maintenance treatment for the duration of a prisoner's sentence is known to substantially reduce the risk of overdose on release from prison (Stöver and Michels, 2010).

### **Staff views on in-prison needle exchange**

As described in Chapter 8, staff views about the possible implementation of needle exchange in prisons were generally negative: specifically, many more arguments against the possible implementation of needle exchange were made than those in support; in addition the strength of feeling against needle exchange was often discernible in the language and body-language used by staff who were opposed to the idea of introducing in-prison needle exchange. Six key arguments were made against in-prison needle exchange: i) there is a lack of need for a needle exchange given the perceived low volume of in-prison injecting; ii) it would jeopardise the safety of the prison; iii) it would increase the risk of needle-stick injury;

iv) it would encourage and condone drug use and drug injecting; v) that prisoners would not want or use a needle exchange; and vi) that it would be too difficult in the prison setting.

The main arguments supporting the idea of establishing needle exchange services in prisons were that: i) it would help to prevent the transmission of HCV and other blood-borne viruses; ii) it would make the prison a safer environment for staff as well as prisoners; iii) the provision of a needle exchange for IDU prisoners drug users is a missing component of the overall harm reduction approach within prisons; and, iv) it would remove contaminated needles from circulation.

### **The arguments in favour of needle exchange**

#### ***Prevent the transmission of HCV amongst prisoners***

One of the supportive arguments that was made, particularly by health and addiction staff, was that providing sterile needles to IDUs in prison would reduce the risk of transmission of HCV amongst prisoners. While it has been suggested that the evidence concerning the impact of needle exchange on HCV transmission is currently insufficient to substantiate any such association, this is due to a lack of robust research rather than due to evidence being to the contrary (Palmateer et al, 2010).

#### ***Make prison a safer environment for staff***

An additional argument that was commonly made by those in favour of providing a needle exchange in the prison setting was that it would make prison a safer environment. The rationale for this argument was that there is less risk of being infected with the HCV virus from a clean needle than a pre-used needle, and so staff would feel safer knowing this. In addition, one of the participants spoke about the potential provision of containers for the safe disposal of a needle, and how again this could lead to their being less likelihood of an accidental needle- stick injury.

### ***Providing needles to IDUs is a missing part of harm reduction strategies in prisons***

A small number of participants, health staff in particular, thought that prisoners who are still injecting in prison should be provided with sterile needles, as they felt this was a missing element of overall harm reduction strategies. They viewed it as illogical to provide IDUs with harm reduction packs that include all other injecting equipment except a sterile needle. However, the political rather than pragmatic reasons in the development of harm reduction policies in regard to prisoners health has been recognised for many years (Lancet Editorial, 2005).

A small number of participants who were in favour of providing IDUs with sterile needles, also supported the idea of providing both clean drugs and/or a drug consumption facility to enable injecting to take place in the safest possible way within the prison. On the other hand, some staff had reservations about going as far as providing a safe injecting room on the grounds that they would have concerns about the ethics of providing such facilities. For example, some of the health and addiction staff expressed concerns about ever being asked to supervise a drug consumption facility, and about their anxieties over the possibility of someone experiencing an accidental overdose or any other fatal accident within that context.

Drug consumption or safer injecting facilities are available in a number of European countries, Canada and Australia but not in the UK, and no drug consumption facilities are available in any prisons. However, concerns about the ethics of providing such harm reduction facilities to IDUs have been explored in research studies. For example, a Swiss study of the views of staff working in a drug consumption room found that a number of ethical conflicts arose and presented staff with a dilemma about their roles (Solai et al, 2006). Such conflicts included situations where clients requested assistance with injecting, where clients did not wish to engage in treatment despite having poor health, and situations involving pregnant women (Solai et al, 2006). It is therefore perhaps not surprising that some of the health and addiction staff in the present study also mentioned such ethical dilemmas.

### ***Remove used/dirty needles from circulation in the prison***

For some of those who were in support of in-prison needle exchange, the simple fact that it may remove used needles from circulation in the prison, i.e. from being passed from prisoner to prisoner, was itself seen as having value in preventing HCV and other blood-borne viruses. Indeed, evaluations of in-prison needle exchange have found that syringe-sharing has either stopped altogether or reduced after the introduction of the needle exchange programme (Dolan et al, 2003).

### **The arguments against needle exchange**

#### ***Lack of need***

One of the most commonly repeated arguments against a needle exchange was a perceived lack of injecting currently happening in the prisons. Certainly, the quantitative data gathered as part of the first part of this study found that only 2.5% (127/5076) of all respondents had injected during their current sentence, suggesting that the rate of injecting is indeed low.

#### ***Jeopardise safety and security – needles as weapons***

Understandably, a number of participants expressed fears about their own safety, as well as that of other prisoners, if a needle exchange programme were to be initiated within the prison setting. In particular, concerns about needles being used as weapons against staff (and/or other prisoners), as well as the potential to increase the perceived threat of accidental needle-stick injuries were listed amongst the concerns. While this fear has been found to have been common amongst prison staff objecting to the initiation of needle exchange programmes in prisons (Nelles et al, 1999), the evidence to date suggests that this is an unsubstantiated fear. For example, in a review of evidence of the impacts of NEPs in prisons, Dolan et al (2003) concluded that there were no reported instances of staff or prisoners being attacked with needles. However, it is also worth noting that some of the few studies that have been conducted to examine prisoners' perceptions of the viability of introducing needle exchange in prisons found that prisoners harboured similar concerns:



both for their own safety and for that of the staff (Long et al, 2004). As was mentioned in Chapter 4 this finding was also replicated in the prisoner's survey.

Some of the staff in this study also expressed concerns about increasing the risk of accidental needle-stick injuries if there was an overall increase in the number of needles in circulation and the likelihood of prisoners carelessly discarding needles. However, research evidence tends not to support this notion and Jacob and Stöver (2000) reported that there were no issues with regard to prisoners discarding needles irresponsibly in their evaluation of needle exchange programmes in prisons in Switzerland.

### ***Needle exchange would encourage drug use and drug injecting in prison***

A frequently expressed argument against the introduction of needle exchange in prison was that it would lead to an overall increase in injecting, both because it would signal to prisoners that injecting drugs in prison is acceptable and also because it would lead to drug users actively choosing to move from drug use by another means to injecting, if it was seen as being condoned. Part of the same argument made in relation to this point was that IDU prisoners possibly choose not to inject in prison at the moment because they know and understand the risks if they were to inject with pre-used/dirty needles. The *lack* of available sterile and/or clean needles in prisons at present was therefore viewed as a deterrent to IV drug use.

However, the evidence available suggests that providing a needle exchange programme does not encourage a change in drug using behaviour from non-injecting to injecting, either in the community (Wright and Tompkins, 2006), or in the prison setting (Dolan et al, 2003; Jacob and Stöver, 2000; Nelles et al, 1999).

### ***Prisoners would neither want nor use a needle exchange***

Another argument that was mooted against the notion of introducing needle exchange in prisons was that prisoners would neither want nor use one. This argument was framed around two particular notions: that prisoners would not self-identify as injecting drug users either to officers or even to health staff, and that the 'anti-injecting culture' amongst

prisoners would mean that the wider prisoner population would not accept a needle exchange within the prisons. However, evidence from evaluations of different modes of distribution of needles within prison needle exchange programmes has shown high volumes of use, and increased acceptability of anonymous distribution, as opposed to face-to-face distribution (Jacob and Stöver, 2000).

As was noted in Chapter 3 one of the questions asked of the prisoners in the prisoners survey element of this study was whether respondents thought that IDU prisoners should be given access to sterile needles and syringes in prison. Almost half of respondents (48%) agreed that IDUs should have access to sterile needles and syringes and only 29% of respondents disagreed. On the other hand, as said above, just over a third of IDUs (34%) said that they would ask health staff for needles and syringes if they were available.

### ***Prison environment not conducive to needle exchange***

For some participants, an argument against the provision of needle exchange related specifically to the prison environment. In other words, the nature of the physical environment of the prison, being one that is both closed and one that needs to be tightly controlled, does not lend itself to the provision of potential weapons to prisoners. However, as has been noted in evaluations of needle exchanges elsewhere, it has been found that in-prison needle exchanges can be implemented in such environments and with no major adverse effects (Dolan et al, 2003).

### ***Care versus control dilemma***

The care versus control dilemma was one that frequently arose when participants were discussing the idea of in-prison needle exchange. For some participants, the provision of such a harm reduction measure was considered as presenting staff with a dilemma concerning their roles as professionals whose main business is viewed as controlling prisons by providing order and custody. Many participants, particularly officers, did not view their primary responsibilities as providing care to prisoners and therefore the idea of providing a form of harm reduction, such as needle exchange, was seen by many as juxtaposed to their role in ensuring order; in the eyes of many of the officers, providing prisoners with

weapons, as well as providing the means to conduct an illegal activity such as injecting illicit drugs, did not sit comfortably with their understanding of their key roles and responsibilities.

It is interesting to note that this same dilemma was found in a prior study on the role of methadone maintenance in Scottish prisons (Taylor et al, 2006), where some staff also claimed that the provision of methadone to prisoners created this dilemmatic role for prisons. Other studies that have focussed more broadly on the role of health care provision within the prison setting have reported on this same quandary (Powell et al, 2010; Willcox, 2002).

### ***Managing a needle exchange***

The complexities and potential difficulties of managing a needle exchange in the prison environment was another theme that emerged in the present study. Health and addiction staff who were supportive of the idea of introducing needle exchange in prison perceived that if such a programme were to be run in prisons then it would have to be incorporated through prison health services. However, other participants perceived that the difficulties involved in managing and operating such a facility in prisons would outweigh any potential benefits that a needle exchange could offer. One of the major difficulties that participants thought would impede the provision of a needle exchange was the inability to provide a wholly anonymous facility within the prison setting.

### ***Confidentiality/Anonymity***

The difficulties associated with providing a confidential needle exchange within prisons was mentioned by a number of participants, and can of course be a major issue, and not only relating to needle exchange services. For example, a number of interviewees commented that because of the need for prisoners to be escorted to and from any support services, they are therefore able to surmise – either consciously or unconsciously, what the prisoner may be attending a particular service for.

Various models of implementation have already been utilised within prison settings including via dispensing machines and by distribution via health services (counselling staff). Jacob and Stöver (2000) speculated that there was greater acceptance of needle exchange when needles and syringes were exchanged anonymously via a dispensing machine rather than being distributed in person via counselling staff.

## **Summary**

Prison officers and managers generally perceived that they had little knowledge about HCV prevention and management strategies overall and were openly saying so in the interviews and focus groups. However, many officers and managers did have knowledge about certain aspects of prevention and management such as awareness of the availability of confidential in-prison HCV testing and treatment, the requirements to wear gloves during cell searches and body searches, and an awareness of the risk of HCV transmission via needle-stick injuries and via bloody fights between prisoners. While many participants were aware of the risks of HCV transmission via blood to blood contact, there was also a good deal of confusion about other possible methods of transmission including fears that HCV could be contracted via contact with faecal matter, via spitting on cell doors and walls, and via generally poor hygiene.

With regard to providing HCV treatment in prisons, health and addiction staff spoke about the need to provide services discreetly and also spoke positively about the possibility of introducing formal peer support groups for prisoners who are experiencing testing and/or treatment.

Particular issues regarding the wearing of both anti-puncture gloves arose in some of the interviews and focus groups. Some staff viewed the anti-puncture gloves as prohibiting a 'proper' cell search because of their lack of sensitivity and so they indicated that this may mitigate against wearing them. In addition, a perceived lack of availability of sufficient quantities of anti-puncture gloves meant that staff who would otherwise use the gloves were, at times, not able to do so.

Another key point that emerged from the data was the fact that it is difficult to take precautions, such as donning surgical gloves, when bloody fights arise spontaneously on the halls. Regarding this matter, some officers spoke of the difficulty of knowing that such precautions are necessary but also knowing that allowing bloody fights between prisoners to ensue and/or escalate is also not possible.

The methadone programme was the harm reduction strategy that participants knew most about and were most able to talk about in detail. While many prison officers viewed the impact of providing the methadone programme on their roles and on the running of the prison regime as almost negligible, and simply part of the role of a prison officer, a minority commented on its negative impact in terms of the time it takes to dispense methadone and the potential secondary effect for the running of prison regimes. Other broadly positive aspects of the methadone programme that were mentioned by participants were that it was viewed as having contributed to a reduction in injecting within the prison, that drug using prisoners appeared to be healthier as a result of the methadone programme as compared to before methadone was introduced, and that having prisoners on methadone helped to keep the prison under control and led to having a calmer and safer environment for prisoners and officers alike.

On the other hand, many officers and managers perceived the role of the methadone programme in encouraging drug users to stop their drug use and to seek help for their drug use as negative. It was largely perceived that taking methadone in prison was part of playing a game and also a way to get 'a free hit' while in prison. In this way, drug users were viewed as manipulating the system in order to keep taking drugs while in prison.

A major aspect of the methadone programme that many officers and managers, and even a minority of health and addiction staff, complained of was that the programme is a maintenance one rather than one of reduction and/or abstinence.

While the number of counter arguments to the introduction of a needle exchange in the prison setting was greater than the number of arguments in support, a variety of views were

evident amongst staff. The prison officers and managers were largely not in favour of introducing a needle exchange, and the most commonly cited reason for this was that there is not enough evidence of injecting occurring in the prisons at present to warrant its introduction. Whether this can be construed as a 'convenient excuse' for objecting to the introduction of a needle exchange programme in prisons is difficult to say but the strength of opposition was certainly evident during the course of the interviews and focus groups.

On the other hand, some of the potential benefits of introducing a needle exchange programme were expressed by participants. These included the prevention of HCV (and other blood borne viruses); that it could make the prison a safer environment by removing potentially contaminated/used needles from circulation; and that the absence of a needle exchange is a missing component of current harm reduction strategies in prisons.

The notion of introducing in-prison needle exchange is obviously controversial, not just in Scotland and the UK but elsewhere in the world as well. In conclusion to the review of evidence of effectiveness of in-prison needle exchange, Dolan et al (2003) suggest that where in-prison needle exchange is implemented it should be done alongside a range of educational and other harm reduction programmes.

## CHAPTER 10. CONCLUSION AND IMPLICATIONS FOR POLICY AND PRACTICE.

This chapter will bring together the findings of both the prisoner survey and staff interviews to consider the implications for policy and practice with regard to the management of HCV within Scottish prisons.

To tackle blood borne viruses in prison there is a need to introduce comprehensive programmes. These programmes include information, education, oral substitution therapy, testing and treatment (WHO et al, 2007). **SPS is to be congratulated for having introduced a comprehensive range of interventions, including the programmes listed above, designed to reduce injecting, prevent transmission of infection and provide treatment, care and support for those already infected with HCV.** There are, however, some areas where improvements could be considered and these are outlined below.

### **Hepatitis C prevalence and incidence**

Overall HCV prevalence (19%) and prevalence among injectors (53%) and non-injectors (3%) was similar to HCV prevalence levels found in the WASH studies (Gore et al, 1999). The prevalence among IDUs was consistent with the recent community study of IDUs in Scotland (University of the West of Scotland et al, 2010).

People with a prison history have a higher risk of HCV infection – which given our results on incidence is unlikely to be generated by excess risk during imprisonment – but reflects extra vulnerability to infection among people who are also likely to be imprisoned (i.e. the association may be due to confounding and shared underlying injecting risk). **Further characterisation of how people who inject who are imprisoned are at greater risk of HCV infection is required in order to support prevention activities in the community (and at the point of prison release).** Furthermore, women have a higher risk of HCV than men which also indicates a greater vulnerability to infection and perhaps greater difficulty in reducing injecting risk amongst women than amongst men who inject.

Prevalence varied between prisons but these differences were likely to be a result of the proportion of prisoners that had ever injected and their demographic characteristics rather than a feature of the prisons themselves. **However, those prisons that have high proportions of HCV infected prisoners should be given special attention by all prisons and the NHS when targeting policies and practices designed to prevent transmission and treat those already infected.**

HCV incidence was very low (<1% or 1 per 100 person years) among the whole prison population. Among prisoners with a history of injecting it was also low (<3%), much lower than that found in the HMP Shotts study in the late 1990's (Champion et al, 2004) and lower than in the IDU community study (University of West of Scotland et al, 2010). It also fell within the lowest rates found in international studies.

We believe that the low incidence of infection is due to the low occurrence and low frequency of injecting reported by prisoners. Staff, too, perceived that injecting was a fairly rare occurrence in their establishments which encourages us to believe our survey findings are reliable. Whilst trend data is not available across the prison estate, it would appear that SPS have been successful in reducing the proportion of in-prison injectors from the much higher rates reported in HMP Glenochil in the mid-1990's (Taylor et al, 1995). SPS are to be commended for the current low rate of injecting. This commendation should not, however, lead to complacency. The low prevalence of injecting may be attributable to the range of policies - in particular the increased availability of opiate substitution therapy - instigated by SPS to tackle drug use and injecting in prison and prevent the transmission of blood borne viruses. Our findings indicate, however, that if injecting was to increase, incidence rates could rise accordingly. **It is imperative, therefore, that prisons continue in collaboration with the NHS to provide these harm reduction measures and increase or improve them where necessary (e.g. by focussing on prisons which report higher than average rates of injecting).** Moreover, whilst the risk and rate of different exposures, including injecting, during current imprisonment was low, risk is likely to accumulate with length of imprisonment. **Thus those prisoners with longer sentences should be a particular target group when promoting harm reduction messages for all risk behaviours.**



Other potential risk factors, such as bloody fights, tattooing and body piercing, were more prevalent than injecting. None of these factors were associated with HCV incidence. **Nevertheless, because they pose potential risk of transmission prisons and the NHS should consider programmes to reduce the use of unsterile tattooing and body piercing equipment.** To prevent possible transmission of blood borne viruses through this route, the provision of safe tattoo rooms and clean tattooing equipment has been suggested (Laticevski, 2007). However, the impact and cost effectiveness of in-prison tattoo services has been questioned because of the low risk of acquiring a BBV in this way (Awofeso, 2010). Moreover, trend data from SPS suggests that the proportions who report having been tattooed in prison is falling but is still considerably higher than most other risk activities (Fraser, 2012). The majority of prisoners in our survey were in favour of an in-prison tattoo service that provided sterile equipment and a high proportion of those in favour would also use such a service. Although staff were not asked directly about the potential utility of an in-prison tattoo service, some believed that prisoners did not have sufficient knowledge about the dangers associated with unsterile tattooing equipment. Furthermore, while staff widely agreed that the SPS poster campaign warning of the risks of contracting HCV from tattooing was visible in prisons, **some staff also believed that further awareness raising and education of prisoners was required.**

Anal sex was not associated with HCV incidence. The risk of HCV transmission through sexual intercourse is thought to be low, but is considerably higher for other blood borne viruses such as HIV and hepatitis B. Despite condoms being freely available in Scottish prisons, only a small minority of those reporting anal intercourse had used a condom. **Prisons and the NHS should increase awareness of the risks of unprotected sexual intercourse and consider enhanced and alternative condom distribution systems to those currently in place.**

### **Opiate substitution treatment**

Most IDUs were receiving OST. As a one-off survey our data could not test whether the increase in OST treatment has led to a commensurate decrease in occurrence of injecting. There was weak evidence that those who had ever injected in prison and reported injecting

in the current sentence were less likely to be receiving methadone compared to those who did not currently inject. Earlier surveys of blood borne viruses in Scottish prisons (Gore et al, 1999) reported higher injecting frequency and were conducted before methadone maintenance (rather than just detoxification) was introduced. Evaluations of other prison methadone programmes also have shown that they reduce drug injecting and equipment sharing (Kastelic, 2007). It is likely, therefore, that widespread availability of OST is one of the key drivers of low HCV incidence through reducing injecting frequency. **Prisons should therefore continue their current OST provision** (and investigate its impact on other health impacts – such as the risk of death following prison release).

While staff expressed a range of views with regard to the role of the methadone maintenance programme in prison, it was viewed largely as positive in terms of improving the health of drug users and providing them with a degree of stability while in prison. Similarly, the methadone programme was thought to have contributed significantly to the perceived reduction in injecting, as well as to a safer, less violent, prison environment. On the other hand, the maintenance aspect of the methadone programme was perceived by many staff, officers in particular, as a misguided policy that discourages prisoners from attempting to become drug free. Therefore, many officers considered that the methadone programme should focus on reduction and abstinence rather than on providing maintenance doses. However it is likely that OST is central to reducing HCV incidence and, if provided during the prison sentence, OST has the potential to reduce elevated risk of drug related deaths in the period immediately after prison release (Merrall et al, 2010). **Further education of the benefits of maintenance therapy is required for staff.**

### **Harm Reduction Packs**

Our data indicated very little knowledge of these packs among prisoners and amongst those who were aware of them there was a very low uptake. Staff, apart from health and addiction workers, also knew little about these packs. This harm reduction measure, designed to reduce the harm associated with injecting, is clearly not working in its current, intended form. We do not know the reasons for lack of awareness; lack of uptake may be due to a perceived lack of anonymity and confidentiality thus preventing prisoners from

requesting packs. **Prisons and the NHS should consider ways to increase use of these packs, including awareness raising and a confidential distribution system.**

### **Hepatitis B vaccination**

SPS deserves to be commended on the high rate of uptake of its HBV vaccination programme for prisoners. However, one quarter of IDUs and less than one half of non-IDUs remained unvaccinated. Three prisons had lower rates of coverage than the rest. **The reasons for this should be identified and strategies put in place to encourage a higher uptake among individual prisoners and those prisons with lower coverage.**

### **Hepatitis C testing**

Success also has been achieved by SPS with regard to its HCV testing programme, particularly among IDUs, most of whom had been tested and most of whom had received their last test whilst in prison. Non-IDUs were much less likely to have been tested, which may reflect that group's perception that they are not at risk of HCV. **However, as fighting and tattooing in prisons have been associated with transmission of HCV and fighting, in particular, was fairly prevalent, it is important that all prisoners are made aware of the risks and encouraged to be tested.** In the recent SPS Prisoner Survey (SPS, 2011a) just under one half of prisoners said that they had received no information about HCV, despite SPS having launched a major hepatitis C awareness campaign in 2009/10 (SPS, 2011a). This lack of awareness may reflect the short-term nature and high turnover of prisoners who may not have been in prison at the time of the campaign. **Prisons should endeavour to repeat the awareness campaigns on a regular basis or ensure adequate, clear information is given to prisoners on entry to prison and throughout their sentence.** It is encouraging to note that staff were almost unanimously aware that HCV testing is available to all prisoners, and that they thought that all prisoners would be aware of the availability and process of requesting an HCV test within the prison.

A proportion of IDUs identified as HCV antibody positive in our survey were unaware of their status, either because they had never been tested or believed themselves to be HCV negative. **It is important that this group is identified so that treatment can be offered, and**

also for the promotion of harm reduction messages to prevent onward transmission. Those that thought themselves HCV negative may have sero-converted since their last test. **Prisoners, therefore, should be encouraged to be re-tested at regular intervals particularly if they have been at risk of infection.**

### **Hepatitis C treatment**

A similar proportion of HCV infected prisoners were being treated compared with the proportion of patients in the community. The proportion of prisoners being treated in prison is a significant increase compared with five years ago and this is to be commended.

Staff in three of the five prisons included in the study, however, pointed out that limited staff resources was having an impact on their ability to provide treatment *and* testing in a timely manner, resulting in long waiting lists. **Prisons and the NHS should consider how staff resources can be increased to enable testing and treatment to take place when prisoners express interest so that the window of opportunity is not lost.**

Many staff who were interviewed, particularly managers and residential officers, felt that they did not have enough knowledge of the side effects of HCV treatment to allow them to deal appropriately with prisoners. This was particularly the case when prisoners were suffering from “mood swings” or were fatigued. An understanding that these were a result of treatment would allow staff to offer support rather than assume that prisoners were “being difficult”. **Prisons and the NHS should consider providing further education and training on HCV treatment and its possible effects for all staff who have day-to-day contact with prisoners.**

**Health and addiction staff in particular also held the view that there was a role for formal peer support for prisoners who were undergoing treatment or considering being tested for HCV.** Some studies suggest that education about risk behaviour in prisons or ways to reduce it is better delivered by peers (Stöver and Weilandt, 2007). Peer support groups, however, need to be properly funded and supported by staff (Stöver and Weilandt, 2007). It would seem that if SPS were to consider such a strategy, staff would be in favour. It is

critical also that treatment success (Sustained Viral Response, (SVR)) of those initiated in prison is monitored to ensure that treatment is continued if required on release and to demonstrate that similar SVRs can be achieved as in the community.

### **Needle exchange in Scottish prisons**

Whilst SPS has to be congratulated on its wide and comprehensive range of policies and practices aimed at reducing drug injecting and its associated harms, one programme that has not been piloted or introduced is that of needle exchange.

As was said in Chapter 1, SPS have been unable to pilot needle exchange in Scottish prisons, despite this being one of the actions of the Scottish Hepatitis C Action Plan (Scottish Executive, 2006), due to opposition from prison Trade Unions. Chapter 1 also indicated that needle exchanges have been implemented in 10 countries and that evaluations have not found any evidence either of an increase in drug use or drug injecting or an increase in use of needles as weapons (Stöver and Nelles, 2003); the very issues and concerns that are raised most often by staff (Prison Officers Association, 2009; Stevens et al, 2010).

The rationale for needle exchange in prisons is the same as that in the community, i.e. to reduce the occurrence of sharing of unsterile equipment and thus the incidence of infection.

In 1993 the WHO recommended that “in countries where clean needles and syringes are made available to injecting drug users in the community, consideration should be given to providing clean injecting equipment during detention and on release.” (World Health Organization, 1993). This was reiterated in 2007 by the WHO, UN, UNAIDS report which stated “There is an urgent need to introduce comprehensive programmes.....As part of these programmes, prison systems should consider introducing needle exchanges.” (World Health Organization et al, 2007).

However, no clear guidance is available on what factors should be taken into account when considering introducing needle exchange in prison. The aforementioned WHO, UN, UNAIDS report (2007) recommends that the higher the level of prevalence of injecting drug use and

associated risk behaviours, the more urgent is the need for in-prison needle exchange. **This would suggest that with the current low level of injecting and associated low incidence rate, there may be proportionately less urgency to introduce needle exchange in Scottish prisons at present.** Others have also suggested that if there is a low rate of injecting and evidence of a low rate of transmission, then sterile equipment should not be provided in prison (Goldberg, 1997), although some suggest that any evidence of injecting is sufficient to consider this provision (Crofts et al 1995).

It is also argued that sterile needles and syringes should be made available to prisoners on the basis of the principle of equivalence (Chu, 2009, WHO, 1993), i.e. that prisoners have the right to the same prevention and treatment strategies as their community equivalents. However, as HCV incidence in prisons is not equivalent in Scotland to that in the community, this argument for in-prison needle exchange does not necessarily apply.

Whilst the above is not a comprehensive review of the arguments for and against in-prison needle exchange, it may give SPS some indication of factors to take into account if they wish to pursue introduction of this intervention.

The programme of harm reduction interventions provided by SPS has been successful to date in achieving a low prevalence of injecting behaviour as well as one of the lowest rates of HCV incident infections that we have been able to identify in the literature. However, whilst prevalence and frequency of injecting in Scottish prisons is low, more than half of injections are undertaken with unsterile needles and syringes. Each injecting episode therefore confers considerable risk but incident infections are few because injecting prevalence and frequency is low. **If needle exchange is not implemented in Scottish prisons close monitoring of behaviour should be undertaken as any increase in injecting could lead to an increase in transmission of HCV. Furthermore, the low prevalence of injecting is not present in *all* prisons, so consideration of what interventions can reduce risks in those prisons with a higher rate of injecting may need to include provision of sterile equipment.**

## Limitations of the study

There are a number of limitations to our study which should be taken into account when considering the results.

- The characteristics of non-participants and participants could not be compared as it was not possible to record demographic data on the non-participants. Representativeness, therefore, cannot be guaranteed. The response rate, however, was high and comparable to many other in-prison HCV studies.
- The two open prisons were not included in the survey because any incident infections found there could not be attributed to in-prison transmission. As open prisons in general contain long-term prisoners and as most HCV prevalent cases are among IDUs who tend to have shorter sentences, it is unlikely, therefore, that this will have affected greatly the prevalence rate of HCV; if anything the overall rate may have been lower if these prisoners had been included.
- The use of self-report behavioural data may have resulted in some misclassification of characteristics such as drug injecting status and in-prison injecting. For example, none of the incident cases reported injecting during the current imprisonment (which was found in previous prison surveys). In addition, our findings on the proportion injecting in prison are similar to those found in the recent SPS Prisoner Survey (SPS, 2011a).
- It is possible that some HCV antibody tests were false negatives and that therefore the positive PCR may not be a marker of recent infection but a result of a missed antibody-positive test, resulting in a lower incidence rate than we have reported.
- One fifth of blood spots had insufficient sample to conduct a PCR test (in order to identify any recent infections). Insufficient samples were more likely to be from prisoners with a lower risk of HCV and so the missing PCR are unlikely to have added considerable bias or led to an under-estimation of HCV prevalence or incidence.
- The staff who were available to take part in interviews or focus groups were limited by the timing of the interviews – those on night shift, for example, would have been unable to participate. Nevertheless, the broad range of staff that did take part, and the broad range of views, encourages the belief that those interviewed were representative of staff in general.

## Concluding comments

This study has achieved all of its objectives. The prisoner survey was successful in obtaining a slightly higher participation rate (79%) than that estimated in the original proposal (75%) and an extremely high proportion of participants provided a body fluid sample for HCV testing. A higher number of staff took part in interviews or focus groups than had been anticipated.

This is the first Scotland-wide study of prevalence and incidence of HCV in closed prison establishments. The previous WASH studies (Gore et al, 1999) surveyed only a sample of prisons and the previous Scottish prison incidence study took place in a single prison (Champion et al, 2004). As far as we are aware, this is also the *only* nation-wide study of in-prison HCV incidence and prevalence. Other studies such as Dolan et al (2010) and Teutsch et al (2010) have conducted a fairly wide coverage of Australian prisons, albeit with substantially lower sample sizes than the present study, but no country appears to have provided prevalence and incidence estimates based on the total number of prisons.

The comprehensive coverage of the Scottish prison estate ensures that there was no selection bias with respect to the type of prison or prisoners, as remand, short and long-term prisons, female prisoners and young offender institutions were represented. The key finding is that HCV incidence was very low, due primarily to the low level of injecting reported in all but one prison. Other positive health indicators included high rates of HBV vaccination, HCV testing and treatment that are all higher or similar to coverage achieved in the community.



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