Epidemiology of hepatitis C infection in the North West 2010

An Update 2011
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Executive Summary

Hepatitis C remains a major public health problem with estimates of around 161,320 individuals with chronic infection in England.¹ The Hepatitis C Action Plan for England,² published in 2004, specified the following areas for action:

- surveillance and research;
- increasing awareness and reducing undiagnosed infections;
- high quality health & social care services; and
- prevention.

This report focuses on epidemiology of hepatitis C infection in the North West region using surveillance data that are routinely available.

The key issues for the region are:

- Hepatitis C is a significant problem in the North West region, with recent estimates indicating that at least 22,500 people in the region are living with chronic hepatitis C. This figure (based on national data) is likely to be an underestimate because prevalence of the disease is higher in the North West compared to other regions, and many people will be living with an undiagnosed infection.

- Between the years 2005 and 2010, 5% of people who were tested for hepatitis C had a positive result. Males accounted for around two-thirds of positive tests, and the peak age group was 35 to 44 year olds.

- Injecting drug use remains by far the most significant risk factor, with 65% of injecting drug users in the region tested anonymously in 2010 having evidence of infection. This compares with the national figure of 49%. The proportion of drug users reporting having had a voluntary test has increased from 50% in 2000 to 86% in 2010. Harm reduction measures appear to be taking effect, with decreases in levels of sharing. Three in four drug users taking part in the anonymous survey reported that they have had the hepatitis B vaccination.

- As injecting drug use often begins in adolescence and early adulthood, encouraging indications that incidence may be decreasing can be seen from recent data: the number of young people aged 15 to 24 being tested has increased by 56% but the proportion of positive tests had decreased by two-thirds from 3% to 1%.

- The cost of treating those already identified as having hepatitis C in the region is estimated at over £32 million.

- Whilst the number of drug users aware of their infection has exceeded 50%, this leaves a large proportion unaware that they have hepatitis C. This may result in a greater risk of transmission to others.

- Routine data on the proportion of those with chronic infection referred or treated are not available. However, the results of a HPA pilot study show that it may be feasible to estimate numbers from drug treatment data.

- There are examples of good practice in the region, which are featured in this report.

Recommendations for commissioners:

- Injecting drug use remains by far the most significant risk factor for hepatitis C in England and particularly in the North West. Local commissioners of drug treatment and prison services should ensure that a range of harm reduction strategies are available across their areas. These should include good access to testing for hepatitis C, needle exchange services, opiate substitution therapy, hepatitis B vaccination, advice and talking therapies, education and outreach programmes, and support to stop using intravenous drugs.¹³⁵

- Commissioners of hepatitis C services should ensure that access to testing services in their areas is equitable and has good coverage. Testing in primary care in the North West appears to be good, but commissioners should explore less invasive methods such as dried blood spot testing across all settings.

- In view of the predicted burden of disease, awareness campaigns to decrease the spread of infection and encourage asymptomatic sufferers to be tested are essential across the region. Organisations should consider how they can work together to effectively use resources in a coordinated fashion that complements national campaigns.

- Robust information is essential to monitor the prevalence and burden of disease. Ensuring accurate data and reporting from laboratories should be among the considerations when commissioning services. In particular, commissioners should look for opportunities to improve data from service providers on the proportions tested who are referred and treated, as this is an issue of national and local need.¹

- Integrated care pathways that are effective and robust are vital to ensure early diagnosis and treatment. Clear coordination of these across all primary and secondary care organisations and their partners is essential and clinicians should be aware of these pathways, and how to refer to specialist services.
Introduction

Hepatitis C is a significant problem in the North West. A blood-borne virus, it can be contracted from infected blood (including transfusions before 1991 in the UK), tattoos or invasive procedures with unsterilized equipment. However, the main risk factor in the UK for transmission of infection is injecting drug use (IDU). In particular, heroin users are more likely to inject than other drug users. This is important because in 2008/9 the North West had the highest estimated prevalence of opiate use across all government regions, with 9.86 users per 1,000 population aged 15 to 64 compared to an England average of 7.69. In the North West, data on risk exposures are available for a relatively small number of individuals (1,481) testing positive between 2002 and 2006 (Figure 1) and show that injecting drug use was the main exposure in the region.

People with hepatitis C infection often have no symptoms; it is referred to as ‘the silent disease’. Estimating the true incidence and prevalence is therefore difficult. Laboratories in the UK report hepatitis C infections, so data from tests are used as a proxy measure. Whilst laboratory reports may not be complete, they are useful in monitoring diagnostic testing and the impact of awareness raising, although laboratory reports reflect patterns of testing rather than trends in incidence or prevalence. In addition, infection is often concentrated in marginalised groups, like IDUs and so anonymous testing and surveys may be used to gather data on prevalence and risk factors. This report uses data from both routine laboratory tests and the Health Protection Agency (HPA) Unlinked Anonymised Prevalence Monitoring Survey at a North West level. All data are provisional.

Routine and Sentinel Laboratory Surveillance

Routine laboratory surveillance monitors blood samples that are positive for the antibody to hepatitis C (anti-HCV). A positive test for anti-HCV indicates that a person has been exposed to hepatitis C; it cannot distinguish between a current or past infection. A positive antibody result should prompt a PCR or antigen test to test for active infection. Dried blood spot testing is less invasive than venepuncture and is particularly useful in drug services.

In 2002, the Sentinel Surveillance of Hepatitis Testing Study was set up to enhance routine laboratory surveillance of hepatitis C. It collects data on positive anti-HCV results and demographic data for all individuals tested for anti-HCV in 24 sentinel laboratories in England, covering approximately one third of the population. Participating sentinel laboratories are shown on page 16. Limitations of the data include some duplication of individual patients and exclusion of dried blood spot, oral fluid, reference testing, and testing from hospitals referring all samples which do not have the original location identified. Individuals aged less than one year, in whom positive tests may indicate the presence of passively-acquired maternal antibody rather than true infection, are excluded.

Prevalence Monitoring in IDUs

The HPA Unlinked Anonymised Prevalence Monitoring Survey measures the changing prevalence of hepatitis C in current and former injecting drug users (IDUs) who are in contact with 60 specialist drug agencies (e.g. needle exchange services and treatment centres) in England, Wales and Northern Ireland. The programme also monitors levels of risk and protective behaviours among IDUs. Full data for this survey is available in Appendix I.
Estimating the prevalence and incidence

The Health Protection Agency’s ‘Hepatitis C in the UK: 2011 Report’ estimates that 0.4% of the population, which is around 161,320 individuals in England, are living with chronic hepatitis. If mid-year population estimates from the Office for National Statistics are used, this means that at least 22,500 people in the North West are chronically infected. However, this is likely to be an underestimate as the data below show.

Laboratory Reports

Between 2000 and 2010, laboratory reports of hepatitis C have more than doubled in the region (Figure 2). In line with national trends, there was a slight decline (8.4%) in confirmed laboratory reports in 2010 compared to the previous year in the North West (2,185 reports in 2009 and 2,001 in 2010). Figure 3 shows that since 2000 this region has consistently had the highest number of laboratory reports across the UK each year, a total of 17,730 reports over the whole period.

![Figure 2 Laboratory reports of hepatitis C infection in the North West 2000–2010](image)

*Provisional
Includes individuals with a positive test for hepatitis C antibody (a marker of past infection) or detection of hepatitis C RNA (a marker of active infection).

![Figure 3 Laboratory reports of hepatitis C infection 2000–2010 by region](image)

*Provisional
Includes individuals with a positive test for hepatitis C antibody (a marker of past infection) or detection of hepatitis C RNA (a marker of active infection).
In the North West, 154,076 people were tested between the years of 2005 and 2010. Of these, 7,740 tests (5.0%) were positive. Figure 4 shows the age and sex distribution of the positive tests. Although approximately equal numbers of men and women were tested, males accounted for just under two-thirds (62.1%) of all positive tests. The highest proportion of positive tests (9.0%) was in the 35 to 44 age group. In this age group, 10.7% of males and 6.7% of females tested were anti-HCV positive. However, this was not the age group with the largest number of people tested. The 25 to 34 age group was the most tested group, accounting for 26% of all tests.

South Asians are more at risk of hepatitis so the number of tests and the proportions positive among this group are of interest. A campaign to raise awareness among this population was launched in 2009. As ethnicity is not routinely available from participating laboratories, a computer programme (NamPenchan) was used to estimate those names of South Asian origin. Figure 5 shows that the highest number of people of South Asian origin (2,250) were tested during the first year of the campaign and that the downward trend in the proportion of people testing positive within this ethnic group has continued since the campaign. In 2010, only 2.9% of tests among South Asian individuals were positive for anti-HCV, compared to 3.6% of all tests in the same year.

NamPenchan, a computer programme designed to recognise names of South Asian origin, was used to identify individuals of this ethnicity as this information is not routinely available from the participating laboratory information systems.
Prevalence among injecting drug users

There has been a general upward trend in the prevalence of hepatitis C infections among injecting drug users taking part in the HPA Unlinked Anonymised Prevalence Monitoring Survey\(^{10}\), as indicated by the proportion of participants testing positive for hepatitis C virus antibody (anti-HCV). When adjusted for the sensitivity of the test, 65% of all drug users tested positive in 2010 compared to 55% in 2000 (Figure 6).

Incidence

There is no routine test for new infections and estimates are difficult to obtain. However, as most new infections are acquired via injecting drug use, which often begins in late adolescence and early adulthood, the number of positive tests in individuals aged 15 to 24 years can be used as a proxy indicator of incidence\(^{1}\) (Figure 7). The numbers of young people in this age group who have been tested has increased by 56% over the past five years from 3,427 in 2005 to 5,337 in 2010. This may reflect that awareness of hepatitis C and the need to be tested has increased among young people. It is encouraging to see that during this same period, the proportion of young people testing positive for anti-HCV has decreased from 1.7% to 0.6% in 15 to 19 year olds, from 3.6% to 1.1% in 20 to 24 year olds and from 3.0% to 1.0% across this whole age group. This might indicate that those who are using drugs are practicing more safely, or intravenous drug use itself has decreased in this population, especially given that increasing numbers are testing positive in other age groups.

Data taken from the HPA Unlinked Anonymised Prevalence Monitoring Survey\(^{10}\)
Being able to predict the number of people likely to require treatment for chronic hepatitis C infection is important to facilitate effective planning and commissioning of services. Estimates of the future burden of disease and the costs of treatment, based on modelling by the Health Protection Agency in 2011, are shown by Drug Action Team Area (DAT) in Table 1.\textsuperscript{1,2} It is estimated that the total infected population in the North West is nearly 40,000 people, with a range of 631 people in Halton DAT to 5,711 people in Lancashire DAT. The areas with the second and third highest estimated numbers of people infected in the North West are Manchester DAT, with 4,999 individuals estimated to be hepatitis C positive, and Liverpool DAT with 3,326, reflecting that intravenous drug use is higher in inner city areas. By 2015, nearly 7\% (2,712 individuals) will have died as a result of the disease. The total cost of treating those already identified as having hepatitis C in the region is estimated at more than £32 million. The costs within Lancashire and Manchester DATs are more than £4 million in each area and in the Liverpool DAT area, more than £2.7 million. The estimated annual cost to the North West health services of treating all cases who are not already receiving this care is a further £4.2 million every year.

### Table 1: Estimates of hepatitis C prevalence, burden, treatment and cost of treatment by PCT in the North West\textsuperscript{1,2}

<table>
<thead>
<tr>
<th>HPU</th>
<th>Drug Action Team Area (DAT)</th>
<th>Estimated total infected population</th>
<th>Estimated Burden in 2015</th>
<th>Estimated cost of treating those already identified</th>
<th>Estimated additional number requiring treatment</th>
<th>Estimated annual cost of treating additional cases</th>
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Local estimates of the number of current injecting drug users are derived from estimates produced by the Home Office/NTA at Drug Action Team level. Data on the prevalence of ex-injectors are obtained from household surveys, corrected for under-reporting, and assigned to broad areas. Data on the progression of liver disease in individuals with hepatitis C are highly variable and are affected by co-morbidities, alcohol use, age at infection etc. For this template, population-based progression rates are based on national data that are likely to be more representative of the whole infected population (including those who are asymptomatic). This is likely to produce lower estimates of progression than most estimates from the literature or data from local providers. The template is based mainly on estimates from national prevalence studies, and therefore infections have largely been acquired through injecting drug use in early adulthood. These studies may therefore underestimate the disease state for individuals who acquired infection overseas, who may have been infected for longer, who may be infected with particularly virulent strains or who may have co-morbidities that increase the risk of progression. The template makes no allowance for incident infections over the next few years. Costs of care are estimated for individuals embarking on and receiving the full cost of treatment based on NICE estimates. Costs of the initial assessment (including assessment, genotyping and biopsies where undertaken) are not included, and costs are not adjusted for individuals who cease treatment early because of lack of response or side effects.
Increasing awareness and reducing undiagnosed infections

General Population Awareness
As hepatitis C is often asymptomatic, it is important to raise awareness amongst the general population in order that undiagnosed individuals come forward and get tested. The Hepatitis C Action Plan\(^2\) sought to increase awareness of hepatitis C among health professionals and the public through campaigns such as “FaCe It” and “Get Tested, Get Treated”. Trends in testing are one indicator of increased awareness. The data in Figure 8 from sentinel surveillance\(^9\) show the numbers tested and proportions positive in the region.

The number of people tested has increased since 2005 and reached a peak in 2008 of 27,322 individuals tested in the North West during that year. Although the number tested has decreased slightly since then, the downward trend in the number of positive tests has continued (from 6.4% in 2005 to 3.6% in 2010). The increasing numbers of people tested is very important because this will help to ensure that more people are aware of their infection, and increase the chances of early diagnosis and treatment. It also gives an opportunity for harm reduction messages to reach drug users, including the promotion of safer practices such as not sharing needles and support to stop using intravenous drugs.

The majority of testing is conducted in general practice, but only 4.9% of around 38,000 samples are positive, compared to prison and drug user services, where positivity is 27.3% and 36.9% respectively (Figure 9). This shows the higher prevalence among the drug-using community and highlights the importance of drug use as a risk factor for hepatitis C infection. However, these data come from venepuncture testing and do not include dried blood spot testing and oral fluid testing, more commonly used in drug services (see below).

Figure 8 Number of individuals tested and testing positive for anti-HCV in the five sentinel laboratories in the North West (January 2005–December 2010)\(^9\)

The number of people tested has increased since 2005 and reached a peak in 2008 of 27,322 individuals tested in the North West during that year. Although the number tested has decreased slightly since then, the downward trend in the number of positive tests has continued (from 6.4% in 2005 to 3.6% in 2010). The increasing numbers of people tested is very important because this will help to ensure that more people are aware of their infection, and increase the chances of early diagnosis and treatment. It also gives an opportunity for harm reduction messages to reach drug users, including the promotion of safer practices such as not sharing needles and support to stop using intravenous drugs.

The majority of testing is conducted in general practice, but only 4.9% of around 38,000 samples are positive, compared to prison and drug user services, where positivity is 27.3% and 36.9% respectively (Figure 9). This shows the higher prevalence among the drug-using community and highlights the importance of drug use as a risk factor for hepatitis C infection. However, these data come from venepuncture testing and do not include dried blood spot testing and oral fluid testing, more commonly used in drug services (see below).

Figure 9 Number of individuals tested for anti-HCV and % positivity by service type in the five sentinel laboratories in the North West (Jan 2005–Dec 2010) excluding dried blood spot, oral fluid, reference testing, and testing from hospitals that refer all samples which do not have original location identified\(^9\)

† Other ward types includes cardiology, dermatology, haematology, ultrasound, x-ray
‡ Specialist liver services refer to infectious disease services, hepatology departments and gastroenterology departments.
^ Unspecified wards are hospital services may include any of the secondary care services mentioned above.
§ These services are currently being investigated to identify specific service type.
Injecting Drug Users

Data from Sentinel Surveillance including venepuncture, dried blood spot testing and oral fluid testing data from drug services shows that testing has more than doubled from 853 in 2005 to 1,718 in 2010 (Figure 10). The proportion of people testing positive among this group has decreased over the past five years from a baseline of 45.6% in 2005 to 30.5% in 2009 (Figure 10). There was a slight rise to 32.8% in 2010. However, this remains much higher than in other regions with the next highest region being London with 24.1% positivity among this population in 2010 and the lowest in the North East with 12.4% positivity.

Table 2 shows the proportion of positive tests notified by the five Sentinel Laboratories in the North West among people who reported using intravenous drugs (63.0%) compared to people who did not report intravenous drug use (4.7%). This again emphasises that injecting drug use is the key risk exposure for hepatitis C in our region.

A good indicator of the success of local drug intervention services in working with this community to increase uptake of testing is the proportion of IDUs taking part in the HPA Unlinked Anonymised Prevalence Monitoring Survey who report having had a voluntary confidential test. The latest data shows this has increased from 50% in 2000 to 86% in 2010 (Figure 11). Another effect of this work is an increase awareness of the disease among the community, indicated by a rise from 30% to 54% in the proportion of users who are aware of their hepatitis C infection over the same 10-year period. Nevertheless, this still means that a significant number of injecting drug users are unaware of their infection.

Table 2  Injecting Drug User (IDU) status of individuals tested for anti-HCV in the five sentinel laboratories in the North West from combined questionnaire data and clinical details, (January 2005–December 2010)

<table>
<thead>
<tr>
<th>IDU status</th>
<th>Number tested</th>
<th>Number positive</th>
<th>% positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDU reported</td>
<td>729</td>
<td>459</td>
<td>63.0</td>
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<tr>
<td>IDU not reported</td>
<td>153,347</td>
<td>7,281</td>
<td>4.7</td>
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<tr>
<td>Total</td>
<td>154,076</td>
<td>7,740</td>
<td>5.0</td>
</tr>
</tbody>
</table>

A good indicator of the success of local drug intervention services in working with this community to increase uptake of testing is the proportion of IDUs taking part in the HPA Unlinked Anonymised Prevalence Monitoring Survey who report having had a voluntary confidential test. The latest data shows this has increased from 50% in 2000 to 86% in 2010 (Figure 11). Another effect of this work is an increase awareness of the disease among the community, indicated by a rise from 30% to 54% in the proportion of users who are aware of their hepatitis C infection over the same 10-year period. Nevertheless, this still means that a significant number of injecting drug users are unaware of their infection.
Prevention and harm reduction: focus on injecting drug users

Prevention of hepatitis C should focus on injecting drug use as it is the most important risk factor in the UK. Strategies include reducing injecting and sharing injecting equipment, opiate substitution treatment, reducing harm from other blood-borne infections (for example by hepatitis B vaccination), early diagnosis through better testing, education and outreach programmes, and talking therapies. 1,3-5

There are indications that harm reduction interventions are beginning to have an effect. Levels of direct sharing of needles have decreased from a baseline of 20% to a level of 15% for the past two years (Figure 12). There is a similar downward trend in indirect sharing behaviours (which includes sharing of containers, filters and water) combined with direct sharing from 54% in 2000 to 31% in 2010. This is in line with national trends and a report from the National Treatment Agency that fewer drug users, especially heroin users, are injecting. 6

Positivity in IDUs from Sentinel Surveillance data appears lower than that from Unlinked Anonymised Prevalence Monitoring Survey. One reason for this is that Sentinel Surveillance data is likely to reflect testing of some ex and past as well as current IDUs. This might also explain why, despite the decrease in sharing, prevalence has increased from 55% to 65% over the same period in data from the Unlinked Anonymised Prevalence Monitoring Survey.

It is also encouraging to see that hepatitis B vaccination uptake has increased from less than half of all survey participants in 2000 (43%) to three-quarters (75%) in 2010 (Figure 13). In order to continue to see these improvements, there is an ongoing need to ensure services are commissioned so that intravenous drug users in the area continue to have access to comprehensive services to prevent, identify and treat hepatitis C.
Treatment of individuals diagnosed with hepatitis C

HPA pilot study to estimate numbers of individuals undergoing treatment

Co-ordination of high quality services for assessment and treatment was one of the key issues in the Hepatitis C Action Plan. If patients are left undiagnosed and untreated the future burden of the disease will be substantial. Currently there are no national surveillance systems to monitor referral, uptake or response to treatment. In 2009/10, the HPA undertook a pilot study to explore feasibility of estimating the numbers of individuals undergoing treatment for hepatitis C. Amongst other things, the study collected data on: (i) the use of the drugs, Interferon and Ribavirin, by hospitals that treat patients with hepatitis C, and (ii) information supplied via questionnaire by clinical centres on the numbers of individuals seen and treated.

Table 3 summarises the data that have been reported by clinical centres that treat patients with hepatitis C in the North West in 2008 (columns 1-5) and also shows that an estimated 820 patients have been treated, calculated from doses of drugs purchased in 2008 for the region (column 6).

<table>
<thead>
<tr>
<th>Number of hospitals/centres treating patients with Hepatitis C</th>
<th>Number of hospitals/centres returning questionnaire data</th>
<th>Number of new patients seen</th>
<th>Number of patients starting treatment in 2008</th>
<th>Number of patients completing treatment in 2008*</th>
<th>Estimated number of patients treated calculated from doses purchased, 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>8</td>
<td>179</td>
<td>382</td>
<td>263</td>
<td>820</td>
</tr>
</tbody>
</table>

Survey of HPUs regarding treatment care pathways

In October 2010, the HPA hepatitis leads group conducted a survey of Health Protection Units (HPUs) and asked for information about:
· The proportion of PCTs that had treatment care pathways in place.
· The proportion that had specific provision for prisoners.
· The proportion of Drug Action Teams (DATs) that had joint prevention plans.
· The extent to which Health Protection Units were involved in the development of treatment care pathways or prevention plans.

The results are summarised in Table 4. All PCTs in Greater Manchester and Cumbria and Lancashire were reported to have treatment care pathways. There may still be some work to be done to ensure all PCTs have treatment pathways in Cheshire and Merseyside.

<table>
<thead>
<tr>
<th>HPU</th>
<th>Number of PCTs</th>
<th>Proportion with treatment care pathway</th>
<th>Number of prisons</th>
<th>Proportion of care pathways with specific provision for prisoners</th>
<th>Proportion of HPU involvement in development or review</th>
<th>Number of DATs</th>
<th>Proportion of DATs with joint prevention plans</th>
<th>Proportion of HPU involvement in DAT Prevention Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheshire &amp; Merseyside</td>
<td>8</td>
<td>63%</td>
<td>6</td>
<td>More than half</td>
<td>Less than half</td>
<td>8</td>
<td>Less than half</td>
<td>Less than half</td>
</tr>
<tr>
<td>Cumbria &amp; Lancashire</td>
<td>6</td>
<td>100%</td>
<td>7</td>
<td>All</td>
<td>All</td>
<td>2</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>Greater Manchester</td>
<td>10</td>
<td>100%</td>
<td>4</td>
<td>All</td>
<td>All</td>
<td>10</td>
<td>All</td>
<td>None</td>
</tr>
</tbody>
</table>
Local initiatives and good practice

This section gives some examples of prevention and treatment initiatives in the North West region.

**Greater Manchester Hepatitis C Strategy**

The Greater Manchester Hepatitis C Strategy (GMHCVS) is in the process of implementing the Greater Manchester Blood-Borne Virus (BBV) Prevention Strategy. This was based on Greater Manchester BBV Prevention Joint Strategic Needs assessment (2009). The GMHCVS has produced a GM BBV Prevention Commissioning Guide. All the documents are available at [http://www.greatermanchesterhepc.com/document_repository/](http://www.greatermanchesterhepc.com/document_repository/)

The GMHCVS has commissioned Manchester Mental Health and Social Care Trust to develop and deliver a training programme for people working with clients with a high risk of being infected with BBVs. The aim of the training is to cultivate BBV prevention ambassadors who will champion BBV prevention within their own service.

The GMHCVS is in the final stage of agreeing a GM Service Specification for Hepatitis C Virus (HCV) services across Greater Manchester. This will standardize treatment across GM, ensuring that only chronic HCV patients are referred to secondary care and that patients are referred directly to a treatment centre. As part of this, a GM Clinical Care Pathway has been uploaded onto the Map of Medicine. The next stage of this project will involve providing training and information about the new care pathway to local GPs, particularly those who work in areas with high levels of hepatitis C among the population. For more information about this project please contact Siobhan.fahey@hmr.nhs.uk.

An important part of hepatitis C treatment is the provision of patient support. The GMHCVS has commissioned a third sector organisation, the BHA (The Black Health Agency) to support the development of patient support networks across Greater Manchester [http://www.thebha.org.uk/hepc](http://www.thebha.org.uk/hepc)

**Awareness Raising – NHS Lancashire Care Trust**

The viral hepatitis team, which is a part of NHS Lancashire Care Trust, is undertaking a project to raise awareness of hepatitis B and C within the South Asian community in Preston.

The project will identify those from the South Asian community by targeting six local mosques within the Preston area, focusing on the increasing number of Pakistani ethnic group because research has shown this particular cohort has a 2% higher risk of liver disease. The project objectives are:

- To raise awareness of HBV and HCV in the Asian Community.
- Undertake detailed risk assessment to identify individuals to dry blood spot test.
- Offer diagnostic testing to individuals for HBV and HCV using dried blood spot testing and confirmation venous testing where the individual has a positive result.
- Refer to gastroenterology for chronic disease assessment, management and treatment.
- Contact tracing and hepatitis B immunisations to prevent ongoing transmission.

**HCV Prevention – Blackburn with Darwen**

Hepatitis C virus (HCV) prevention is a major element of drug treatment and harm reduction provision across the borough. “Never share” messages are constantly displayed in services, complemented by updated displays and availability of Harm Reduction Works campaign materials.

Access to sterile injecting equipment is primarily through a level 3 specialist Needle and Syringe Programme (NSP) at the Jarman Centre in Blackburn, supported by three NSP participating community pharmacies.

Dried blood spot testing (DBST) has been available for several years at the NSP, and, for the past two years has been provided by NSP staff at the specialist young people’s service. Recent surveys suggest that it has an 85% problematic IDU customer testing coverage ratio within Blackburn with Darwen. DBST availability has also recently started to be provided by the adult substance misuse service.

The pathways to treatment at East Lancashire Hospitals NHS Trust are well tried and robust. The viral hepatitis nurse with the harm reduction service helps to prepare and monitor patients before (from first positive result) and after treatment. East Lancashire Hospitals NHS Trust is one of the top four in the area in terms of numbers treated for hepatitis C.
Health Assessments for Drug Users – Western Cheshire Primary Care Trust & Cheshire Drug Action Team

Harm reduction services in Chester, Ellesmere Port and Neston have found that some clients have been refusing blood-borne virus testing and hepatitis B vaccinations. Some of these clients had not received a health assessment for many years. It was decided to offer a yearly health assessment to all clients in an attempt to test all clients for hepatitis C and vaccinate for hepatitis B. This is working well with the majority of clients now accepting testing and vaccination.

Referral for hepatitis C treatment is done by the harm reduction team. The team work closely with the Gastroenterology Unit at the Countess of Chester Hospital. As this hospital does not carry out the actual treatment, the team also work with the Royal Liverpool University Hospital.

Once treatment is started, clients are referred to the harm reduction team who will take bloods and instruct in the technique for the self-administration of hepatitis C treatment, a drug that requires injection using prefilled syringes. The team monitor the client’s bloods and inform Royal Liverpool University Hospital of any chaotic blood results. They will monitor the client on a regular basis and refer them to their GP for treatment of rashes or other side effects. Any depression noted will be reported to Royal Liverpool University Hospital and the appropriate medication prescribed.

The team will shortly be employing two grade 3 members of staff who, it is hoped, will escort clients to their appointments. This will give the clients information about their hospital visit en route and an explanation of what they have been told by the consultant on their way home.

It is hoped that once the Countess has funds to carry out full treatment then the harm reduction team will work as a satellite clinic for the Countess. The DAT will also look at setting up a peer-led support group to help people before and during hepatitis C treatment.
References/Data Sources

12. Commissioning Template for Estimating HCV Prevalence by PCT and Numbers Eligible for Treatment. Table 1 in this report is taken from unpublished data produced in 2011 and reproduced with permission of Dr M Ramsay, HPA Colindale. Previous data is available at: http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1194947397614

Glossary of abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-HCV</td>
<td>Antibodies to Hepatitis C Virus</td>
</tr>
<tr>
<td>BBV</td>
<td>Blood-Borne Virus</td>
</tr>
<tr>
<td>DAT</td>
<td>Drug Action Team</td>
</tr>
<tr>
<td>DBS</td>
<td>Dried Blood Spot</td>
</tr>
<tr>
<td>GUM</td>
<td>Genitourinary Medicine</td>
</tr>
<tr>
<td>HCV</td>
<td>Hepatitis C Virus</td>
</tr>
<tr>
<td>HPA</td>
<td>Health Protection Agency</td>
</tr>
<tr>
<td>HPU</td>
<td>Health Protection Unit</td>
</tr>
<tr>
<td>IDU</td>
<td>Injecting Drug User</td>
</tr>
<tr>
<td>MSM</td>
<td>Men who have Sex with Men</td>
</tr>
<tr>
<td>NSP</td>
<td>Needle and Syringe Programme</td>
</tr>
<tr>
<td>PCT</td>
<td>Primary Care Trust</td>
</tr>
<tr>
<td>RNA</td>
<td>Ribonucleic Acid</td>
</tr>
<tr>
<td>VCT</td>
<td>Voluntary Confidential Test</td>
</tr>
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</table>
Acknowledgements and contact details

Health Protection Agency Centre for Infections:
- Ms Sarah Collins, Mrs Lisa Brant and Dr Sam Lattimore (Sentinel Surveillance of Hepatitis Testing & oral fluid testing data provided by Concanteno Plc) - [http://www.hpa-bioinformatics.org.uk/hepc/home.php](http://www.hpa-bioinformatics.org.uk/hepc/home.php)
- Dr Vivian Hope (Data from Unlinked Anonymous Monitoring Survey of HIV and Hepatitis in Injecting Drug Users)
- Dr Helen Harris & Dr Brenda Thomas (Results of a pilot study to explore feasibility of estimating the numbers of individuals undergoing treatment for hepatitis C)
- Dr Mary Ramsay (Commissioning Template for Estimating HCV Prevalence by PCT and Numbers Eligible for Treatment; general comments and help with co-ordination of data for the template)

Local initiatives & Good Practice, case study details provided by:
- Siobhan Fahey, Association of Greater Manchester PCT’s Hepatitis C Strategy (Programme Manager), Greater Manchester Public Health Network
- Christine Landon, Lead Nurse for Hepatitis C, Lancashire Care Trust
- Jenny Wadsworth, Viral Hepatitis Nurse (Substance Misuse), Lancashire Care NHS Foundation Trust
- Dr Emer Coffey, Consultant in Public Health, Liverpool PCT
- Lorraine Guy, Joint Commissioning Manager & DAT Team Lead, Cheshire Drug Action Team

Compiled by:
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- Dr Catherine Quigley, Regional Epidemiologist, HPA North West
- Mrs Kathy Chandler, Regional Surveillance Office, HPA North West
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North West laboratories
Chester HPA laboratory (via Manchester)
Liverpool HPA laboratory (via Manchester)
Manchester HPA laboratory
Preston HPA laboratory (via Manchester)
Royal Liverpool Hospital

Participating Sentinel laboratories

<table>
<thead>
<tr>
<th>Key Site participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active - trend 2002-10</td>
</tr>
<tr>
<td>Active - trend 2005-10</td>
</tr>
<tr>
<td>Active</td>
</tr>
<tr>
<td>Not currently active</td>
</tr>
</tbody>
</table>

- Newcastle (2)
- Leeds (2)
- Hull
- Grimsby
- Nottingham
- Cambridge
- London (9)
- Bristol
- Brighton
- Ashford
- Portsmouth
- Preston
- Manchester
- Liverpool (9)
- Chester
- Birmingham
- Grundy
- Norway
- Sutton
- Middlesex
- UCH
- North Middlesex
- St Bartholomew’s
- King’s College
- St George’s
- Chelsea & Westminster

Percentage of population covered by sentinel surveillance laboratories:
- 60 - 70% coverage
- 40 - 50% coverage
- 20 - 33% coverage
- 0 - 19% coverage
## Appendix I: Unlinked Anonymised Prevalence Monitoring Survey

### Hepatitis C prevalence*, injecting equipment sharing, hepatitis B vaccination uptake, and uptake of testing for hepatitis C 2000–2009 (In 2009 a phased change in the sample type from oral fluid to dried blood spot (DBS) started)

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anti-HCV Prevalence</strong>†††</td>
<td>55%</td>
<td>58%</td>
<td>61%</td>
<td>66%</td>
<td>64%</td>
<td>67%</td>
<td>64%</td>
<td>63%</td>
<td>62%</td>
<td>62%</td>
<td>65%</td>
</tr>
<tr>
<td><strong>Proportion of samples anti-HCV positive</strong></td>
<td>51%</td>
<td>54%</td>
<td>56%</td>
<td>59%</td>
<td>61%</td>
<td>59%</td>
<td>58%</td>
<td>57%</td>
<td>56%</td>
<td>63%</td>
<td>64%</td>
</tr>
<tr>
<td><strong>Number of samples anti-HCV positive</strong></td>
<td>455</td>
<td>361</td>
<td>322</td>
<td>250</td>
<td>160</td>
<td>288</td>
<td>340</td>
<td>288</td>
<td>246</td>
<td>244</td>
<td>276</td>
</tr>
<tr>
<td><strong>Total number of samples collected</strong></td>
<td>896</td>
<td>674</td>
<td>573</td>
<td>409</td>
<td>288</td>
<td>489</td>
<td>553</td>
<td>489</td>
<td>489</td>
<td>423</td>
<td>434</td>
</tr>
<tr>
<td><strong>Total Anti-HCV Prevalence</strong></td>
<td>43%</td>
<td>44%</td>
<td>46%</td>
<td>46%</td>
<td>55%</td>
<td>56%</td>
<td>59%</td>
<td>61%</td>
<td>67%</td>
<td>68%</td>
<td>63%</td>
</tr>
<tr>
<td><strong>Proportion of samples anti-HCV positive</strong></td>
<td>51%</td>
<td>54%</td>
<td>56%</td>
<td>59%</td>
<td>61%</td>
<td>59%</td>
<td>58%</td>
<td>57%</td>
<td>56%</td>
<td>63%</td>
<td>64%</td>
</tr>
<tr>
<td><strong>Number of samples anti-HCV positive</strong></td>
<td>377</td>
<td>292</td>
<td>257</td>
<td>188</td>
<td>152</td>
<td>266</td>
<td>311</td>
<td>313</td>
<td>313</td>
<td>320</td>
<td>320</td>
</tr>
<tr>
<td><strong>Total number of samples collected</strong></td>
<td>874</td>
<td>659</td>
<td>553</td>
<td>406</td>
<td>286</td>
<td>484</td>
<td>545</td>
<td>477</td>
<td>477</td>
<td>429</td>
<td>429</td>
</tr>
<tr>
<td><strong>HCV Voluntary Confidential Test (VCT) Uptake</strong></td>
<td>50%</td>
<td>57%</td>
<td>62%</td>
<td>66%</td>
<td>55%</td>
<td>63%</td>
<td>69%</td>
<td>75%</td>
<td>76%</td>
<td>75%</td>
<td>75%</td>
</tr>
<tr>
<td><strong>Number reporting a VCT for HCV</strong></td>
<td>382</td>
<td>364</td>
<td>330</td>
<td>256</td>
<td>173</td>
<td>322</td>
<td>347</td>
<td>333</td>
<td>342</td>
<td>342</td>
<td>355</td>
</tr>
<tr>
<td><strong>Total number answering question</strong></td>
<td>769</td>
<td>634</td>
<td>531</td>
<td>406</td>
<td>286</td>
<td>484</td>
<td>545</td>
<td>477</td>
<td>477</td>
<td>429</td>
<td>429</td>
</tr>
<tr>
<td><strong>Proportion aware of HCV infection</strong></td>
<td>30%</td>
<td>37%</td>
<td>35%</td>
<td>42%</td>
<td>37%</td>
<td>47%</td>
<td>42%</td>
<td>41%</td>
<td>49%</td>
<td>52%</td>
<td>52%</td>
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<tr>
<td><strong>Number aware of their HCV infection</strong></td>
<td>112</td>
<td>115</td>
<td>95</td>
<td>93</td>
<td>53</td>
<td>123</td>
<td>127</td>
<td>103</td>
<td>114</td>
<td>114</td>
<td>140</td>
</tr>
<tr>
<td><strong>Total number answering question</strong></td>
<td>371</td>
<td>311</td>
<td>271</td>
<td>221</td>
<td>144</td>
<td>264</td>
<td>299</td>
<td>251</td>
<td>210</td>
<td>218</td>
<td>258</td>
</tr>
</tbody>
</table>

### Among those who had injected in preceding four weeks

#### Level of direct sharing ‡‡

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number reporting direct sharing</strong></td>
<td>20%</td>
<td>23%</td>
<td>24%</td>
<td>23%</td>
<td>18%</td>
<td>24%</td>
<td>23%</td>
<td>21%</td>
<td>16%</td>
<td>13%</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total number answering question</strong></td>
<td>76</td>
<td>103</td>
<td>94</td>
<td>81</td>
<td>61</td>
<td>89</td>
<td>73</td>
<td>65</td>
<td>53</td>
<td>33</td>
<td>38</td>
</tr>
</tbody>
</table>

#### Level of sharing (direct & indirect) ‡‡‡

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
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<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number reporting sharing</strong></td>
<td>246</td>
<td>179</td>
<td>188</td>
<td>139</td>
<td>142</td>
<td>163</td>
<td>132</td>
<td>61</td>
<td>67</td>
<td>88</td>
<td>88</td>
</tr>
<tr>
<td><strong>Total number answering question</strong></td>
<td>486</td>
<td>387</td>
<td>316</td>
<td>216</td>
<td>162</td>
<td>290</td>
<td>331</td>
<td>292</td>
<td>227</td>
<td>230</td>
<td>180</td>
</tr>
</tbody>
</table>

* The sensitivity of the oral fluid test for anti-HCV is approximately 92%, and that for anti-HBc 75%.

††† Anti-HCV Prevalence = [(no of oral fluids anti-HCV positive/0.92) + no of DBS anti-HCV positive] / (no of oral fluids + no of DBS)x100

‡‡ Sharing of needles & syringes among those who had last injected during the four weeks preceding participation in the survey.

‡‡‡ Sharing of needles & syringes, mixing containers, filters or the water used to prepare drugs among those who had last injected during the four weeks preceding participation in the survey.