Viral Hepatitis

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Executive summary

Introduction

Hepatitis B and hepatitis C (HBV and HCV) are blood borne viral infections that can lead to chronic infection. Without treatment these infections can lead to cirrhosis of the liver and liver cancer therefore causing significant costs to the health of the individual and the services providing treatment and care.

Given the clinical and social manifestation of HBV and HCV (complex sometimes asymptomatic diseases often associated with vulnerable groups such as injecting drug users) infected individuals can often go undiagnosed. In turn this increases the risk of liver disease and death.

Prevention, early diagnosis, treatment and aftercare provide the framework for a comprehensive and robust strategic approach.

Unmet need and gaps

- Lack of knowledge and awareness among professionals, the public and at risk groups.
- Nationally and locally there is no agreement relating to how HBV and HCV awareness raising interventions across the settings should be implemented and monitored.
- There is no agreed approach to diagnosing HBV and HCV. In addition there are no nationally or locally agreed treatment targets. Social and emotional aftercare needs have also not been fully scoped.
- The improved HCV treatment offer is expected to increase demand and may challenge service design to include more community based clinics.

- Pending confirmation from NHSE it is not clear what specialised commissioning will encompass and therefore unclear what CCGs will have to fund.
- Data is fragmented and there is a lack of outcome data for monitoring purposes across the care pathway.

Recommendations for consideration by commissioners

- Implement programmes to increase awareness among health professionals, the general public and those at increased risk.
- Implement arrangements to systematically identify those at increased risk.
- Promote and offer HBV and HCV testing and monitor those individuals who continue to put themselves at risk
- Ensure geographically accessible and appropriately configured treatment services.
- Assess the need for support measures (clinical, social and emotional) to be in place for improving outcomes following treatment.
- Support the establishment of an East Midlands clinical network.

Full JSNA report

What do we know?

1. Who is at risk and why?

Viral Hepatitis

Viral hepatitis is a term used to describe inflammation of the liver caused by a viral infection. It should not be confused with alcoholic hepatitis which is caused by drinking excessive amounts of alcohol over a long period of time. There are different viral hepatitis groups; A, B, C, D and E. The purpose of this section will be to focus on hepatitis B and C within Nottinghamshire County and Nottingham City. Hepatitis B and C are the two groups that pose the most serious threat, are often misunderstood, under diagnosed and preventable.

1.1. Hepatitis B

What is it?

The Hepatitis B virus (HBV) is a blood borne virus infection that can be prevented through vaccination. The virus can cause hepatitis (inflammation of the liver) and can cause long term liver damage.

Symptoms

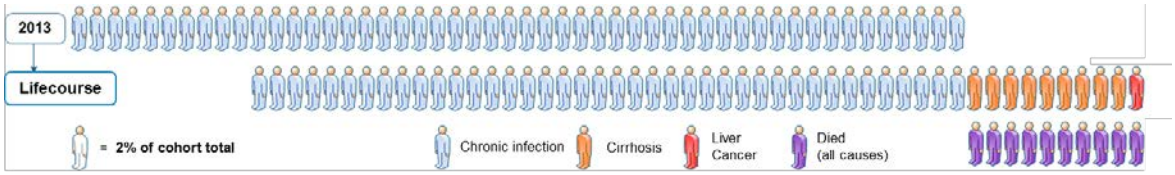
HBV can cause a short-term (acute) infection, which may or may not cause symptoms that may be 'flu like' in nature. Some individuals recover without ever realising they have been infected.

Disease progression

Of those acutely infected the majority (95%) clear the infection and attain future immunity. Of those remaining with a chronic infection, the disease progress over a life course (up to 20-30 years) unfolds as follows:

- 20% chronic infections progress to cirrhosis
- 10% cirrhosis progresses to cancer
- Untreated cirrhosis and liver cancer carry a high risk of mortality / low chance of survival

Figure 1: Diagram to show disease progression over the life course (up to 20 -30 years) of a cohort chronically infected with Hepatitis B virus based on national proportions.



Source: Adapted from NHS Choices[1] *Note: prognosis for untreated cirrhosis and liver cancer is high risk of death*

Transmission

The virus can be transmitted by contact with infected blood or body fluids. Transmission can be perinatal (from mother to baby) but also occurs as a result of injecting drug use or through sexual contact. The full list of associated risk groups can be seen in Figure 3. HBV can survive outside the body for at least seven days. During this time, the virus can still cause infection if it enters the body of a person who is not protected by the vaccine.

International/national picture

HBV is a global health problem with around 600,000 people dying every year due to the acute or chronic consequences of the virus. Worldwide prevalence is highest in sub-Saharan Africa and East Asia.[2]

The UK is classified as a low prevalence country. Within the UK most HBV infections are acquired through adult risk taking behaviour associated with sexual practice and drug use.[3] Estimates however also suggest that only a small proportion of chronic infections are established as a result of infection acquired in the UK (around 200 per year) but an estimated 7,000 chronic (persistent infection) cases of hepatitis B in the UK are as a result of immigration to the UK from high prevalence areas.[4] There is believed to be substantial under diagnosis across all the at risk groups.

1.2. Hepatitis C

What is it?

The Hepatitis C virus (HCV) is a blood borne viral infection that can be prevented but does not have a vaccination available to prevent its transmission. It predominantly affects the liver and is a slow progressive disease which, if left untreated, can develop into serious disease of the liver leading to liver failure or primary liver cancer. Treatment for HCV does offer a cure.

Symptoms

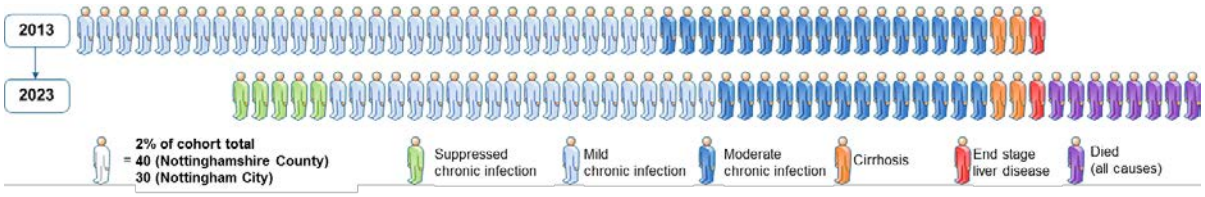
Most people who become infected are not aware of it and approximately 15-20% of infected people clear the infection within the first six months [5] (this is known as the acute phase). For the remainder who go on to develop chronic HCV, approximately 20-30% will go on to develop cirrhosis within 20 years.[6]

For the remainder the outcome is variable given the often asymptomatic nature of the infection. Where symptoms do appear they can present as mild to severe fatigue, loss of appetite, depression or anxiety, poor memory or concentration and pain or discomfort in the liver. Testing and early diagnosis is therefore integral to effective and successful outcomes and avoidance of liver disease and cancer.

Disease progression

Amongst the 5000 local people (Nottinghamshire County and Nottingham City) who in 2013 were estimated to be infected with Hepatitis C, more than 570 will die during the next decade. In addition, dozens of local people who showed signs of minor disease in 2013 will have progressed to cirrhosis or end stage disease. These numbers do not allow for the additional people who will become infected each year through transmission from an infected person.

Figure 2: Diagram to show estimated disease progression within a cohort infected with active Hepatitis C virus over 10 years (2013 to 2023) in Nottinghamshire County and Nottingham City



Note: relative proportions taken from regional and national statistics and only the scale varies between Nottingham City and Nottinghamshire County. [7]

Transmission

Transmission occurs as a result of exposure to infected blood. HCV is most commonly associated with past or current injecting drug users but there are other groups at risk and this is further outlined in Figure 3. Similar to HBV there is believed to be substantial under diagnosis across the at risk groups.

International/national picture

Some of the most affected HCV regions in the world are Central and East Asia and North Africa[8]. The World Health Organisation estimate that there are 130–150 million people globally who may have chronic HCV infection.

Within the UK the most recent national estimates suggest that around 215,000 individuals are chronically infected with hepatitis C (HCV) in the UK.[9] This national data shows that levels of associated end stage liver disease and liver cancer are continuing to rise in the UK. Hospital admissions have risen (612 in 1998 to 2268 in 2011) and deaths continue to increase (98 in 1996, 381 in 2011). Registrations for liver transplants caused as a result of hepatitis C cirrhosis have also increased (45 in 1996 to 124 in 2012).

1.3. At risk groups

NICE public health guidance 43 recognises there are groups of people who are at increased risk of hepatitis B and C.[10] Figure 3 summarises the circumstances and behaviour that may place individuals at increased risk of infection.

Figure 3: Table to demonstrate the groups at increased risk of HBV and HCV infection

Groups at increased risk of infection	HBV	HCV
People born or brought up in a country with an intermediate or high prevalence of chronic hepatitis B/C.	√	√
Babies born to mothers infected with hepatitis B.	√	
Babies born to mothers infected with hepatitis C.		√
Men who have sex with men	√	√ *(HIV positive men who have sex with men)
Anyone who has had unprotected sex. HBV is rarely spread sexually but those who may be at increased risk include:: -people who have had multiple sexual partners -people reporting unprotected sexual contact in areas of intermediate and high prevalence -people presenting at sexual health and genitourinary medicine clinics -people diagnosed with a sexually transmitted disease -commercial sex workers	√	
Prisoners, including young offenders.	√	√
Close contacts of someone known to be chronically infected with hepatitis B.	√	
People who received a blood transfusion before 1991 or blood products before 1986, when screening of blood donors for hepatitis C infection, or heat treatment for inactivation of viruses were introduced		√
Looked-after children and young people, including those living in care homes.	√	√
People living in hostels for the homeless or sleeping on the streets		√
Close contacts of someone known to be chronically infected with hepatitis C		√

Source: List adapted from NICE PH Guidance 43

*More rapid progression of the disease when HIV and HCV co-infection occurs with a potential poor response to treatment[11]

2. Size of the issue locally

2.1. Hepatitis B

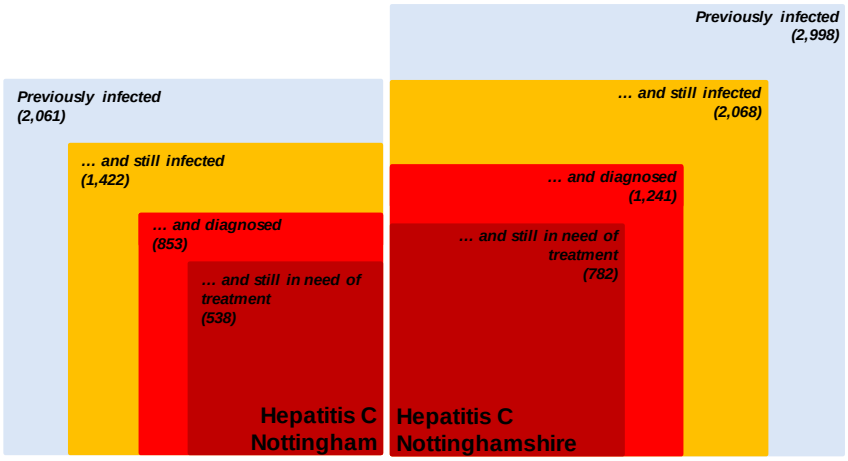
- The majority of hepatitis B cases (based on lab testing) in the East Midlands are in those aged 25 – 44 (in terms of rates per resident population)
- High risk behaviour is likely to account for the higher rates in males compared to females seen at East Midlands level.

- Numbers of people chronically infected in Nottinghamshire County/Nottingham City for 2012 are estimated to be over 3,700 combined. As this is based on national and global prevalence data it is not possible to make separate estimates for City and County. [12],[13]
- Within the East Midlands the majority of tests are requested through primary care and Genito-urinary Medicine. In respect of positivity, prison services identify similar percentages to other clinical services given high proportion of IDUs (Intravenous Drug Users) who receive prison sentences.[14]
- More local level surveillance data is not available at the current time. This reflects a national gap in capturing testing, referral and treatment outcome data.

2.2. Hepatitis C

- The rate of HCV infection (based on lab tests) within the East Midlands is highest in those aged 25 – 44 and is higher in males than females[15]
- Evidence suggests that in 2014 there are more than 5,000 people in Nottinghamshire County (3,000+) and Nottingham City (2,000+) living with Hepatitis C. Almost 1400 of these have not been diagnosed so are probably unaware of the risk to their health.[16] With the passage of time, more people are being infected. See Figure 4 below.
- The majority of tests are currently requested through primary care but substance misuse services and prison services have the highest positive results in the East Midlands.
- The majority of hepatitis C infections appear to be linked with intravenous drug use.
- In England during 2011, 3% (5000 individuals) of those with HCV infection were estimated to be in treatment.[17] More local level estimates are not available.

Figure 4: Number of people ever infected with Hepatitis C in Nottinghamshire County and Nottingham City by stage of diagnosis in 2013



Source: Hep C: PHE Hepatitis C Commissioning Toolkit [18]. Note: County and City totals: Hep C: (Previously infected = 5,058), (still infected = 3,490), (diagnosed = 2,094) and (still in need of treatment = 1,320). Hep B: (chronic infection = 3,700)

3. Targets and performance

Public Health Outcomes Framework/NHS Outcomes Framework:

- Reduce under 75 mortality rate from liver disease[19]

This outcome measure in the Public Health Outcomes Framework relates to the prevention of premature death given liver disease disproportionately affects younger age groups.

Figure 5 shows that during 2010-12 Nottinghamshire county had an under 75 mortality rate of 17.6 per 100,000 (379 deaths during this time period from liver disease) and Nottingham City had 29.2 per 100,000 (173 deaths during this same time period). Nottingham City death rate is therefore significantly higher than England and Nottinghamshire County.

Figure 5: Public Health Outcomes Framework indicator 4.06i – Under 75 mortality rate from liver disease (persons) 2010-12



4.06i – Under 75 mortality rate from liver disease (Persons)	Period	Indicator		Region	England	England		
		Count	Value	Value	Value	Worst/ Lowest	Range	Best/ Highest
Nottinghamshire County	2010 - 12	379	17.6	17.6	18.0	41.6		10.3
Nottingham City	2010 - 12	173	29.2	17.6	18.0	41.6		10.3

Source: PHE Public Health Outcomes Framework Data Tool[20]

4. Current activity, service provision and assets

4.1 Prevention

HBV Vaccination

The HBV vaccine is a series of 3 injections over a number of months and for those at high risk an accelerated schedule can be adopted with a further booster dose for those who may continue to put themselves at risk. This number of injections over a time period of a number of weeks, can pose compliance issues for individuals with chaotic lifestyles such as injecting drug users or individuals who are homeless.

HBV Antenatal and new born immunisation

NHS England lead on the monitoring of the neonatal hepatitis B pathway. Plans are underway to improve identification of high risk babies and the implementation of Dried Blood Spot testing with these infants.

Harm reduction

Harm reduction such as needle and syringe exchange programmes form an integral part of local substance misuse service provision and this in turn supports the national directive.[21]

4.2 Diagnosis

Hepatitis B/C testing is undertaken within a range of settings including:

- Primary Care
- Substance misuse services
- Prison Services
- Hospital (Treatment Centre)
- Hospital (e.g. in-patient wards, out-patient GUM)
- Accident and emergency
- Occupational health

The test protocols may vary within these different settings. For example a HBV or HCV test may be offered opportunistically in the primary care setting whereas within the prison setting an 'opt out' approach may be in operation. This prisoner will be informed that the prison offer testing to all prisoners and the reasons for the test. They will be asked if this is acceptable. At this point a prisoner may then choose to 'opt out'. This latter approach within the prison setting is a recent national offender management directive.[22]

Professional education

The RCGP Certificate in the Detection, Diagnosis and Management of Hepatitis B and C in Primary Care is available for professional individuals to access. It enables practitioners to detect and diagnose HBV and HCV and provide advice about reducing infection. This is available free as an online self-directed learning tool. To obtain the full RCGP Part 1 Certificate, accredited face to face training days need to be attended and there is an associated cost.

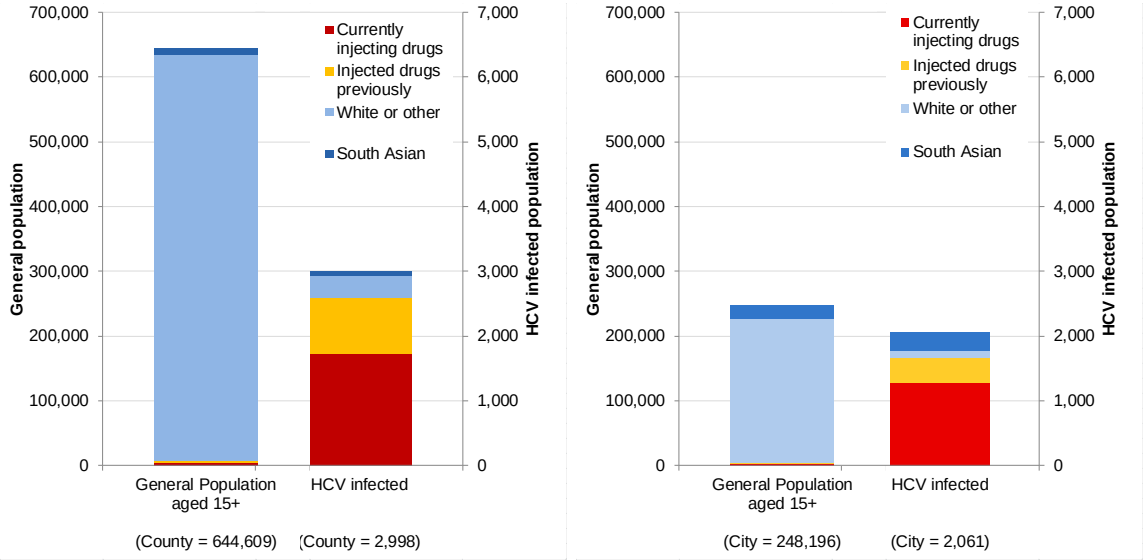
Bespoke education sessions can be arranged through The Hepatitis Trust and the British Liver Trust. Academic modules can also be accessed such as the Blood Borne Infection modules through the University of Nottingham.

Blood Borne Virus (BBV) Reference Tool

Case finding involves actively searching systematically for at risk people, rather than waiting for them to present with symptoms or signs of active disease. It provides a risk stratification of the population for further investigation and possible diagnosis.[23] Given the higher prevalence of HBV and HCV within Nottingham City, a BBV Reference Tool was devised for use by local GP practices in identifying possible individuals with blood borne viruses, specifically HBV, HCV and HIV. This tool was originally devised in 2011 and further reviewed and refreshed in 2014. It is available via the Nottingham CCG web portal. Recent evaluation has demonstrated that this tool is not widely used by Nottingham City practices with most GPs who responded stating they were not aware that it existed.

Figure 6 outlines the estimated size of the at risk (HCV) populations within Nottinghamshire and Nottingham City.

Figure 6: Diagram to show relative sizes of at risk subgroups for HCV within the general population – Nottinghamshire County (left) and Nottingham City (right)



Note 1: Different axis scales for General Population and HCV infected to show detail in HCV population.

Note 2: Hepatitis B has similar at risk subgroups in the general population. Little is known about the relative size of these at-risk subgroups.

HCV 'Pop up' Prompt Tool

The Royal College of General Practitioners advocates the testing of patients at risk of HCV infection within primary care. This targeted case finding approach has been found to increase the uptake of asymptomatic patients, is cost effective and more effective than using opportunistic testing in isolation.[24]

Recently, a HCV 'Pop up' Prompt Tool has been designed for SystmOne, a popular GP clinical system. This has been designed to support opportunistic case finding in practices which use SystmOne[25]. By automatically searching the electronic record of a selected patient, for hepatitis C risk factors, the template prompts the GP where the patient may benefit from a discussion about testing or continued monitoring for HCV infection.

This template has only recently become available. It is not widely used or known by local GPs and at the moment is only compatible with the SystmOne clinical system. Within Nottinghamshire 88/106 (83%) practices have SystmOne in place and within Nottingham City 41/62 (66%). Work is under way to pilot the software in a small number of local practices, and to develop a tool with the same functionality which can be implemented in EMIS, another widely used clinical system by primary care practices.

Social factors relating to early diagnosis

Diagnosis is dependent on the individual coming forward for testing. HBV and HCV have an associated social stigma that may affect early presentation. Social level factors such as discrimination, lack of housing and fear of criminalisation may affect access but further research is required to understand these perspectives more fully.[26]

4.3 Treatment

Treatment settings

At the time of this report, Hepatitis B/C treatment within Nottinghamshire and Nottingham City is available at the Nottingham Treatment Centre, HMP Nottingham, Health Care at Home, substance misuse service settings (one in Mansfield and one in Nottingham City) and one primary care practice (the Windmill Practice in the Nottingham City area). In the latter case, the treatment model adopted in the Windmill Practice reflects a close collaboration with secondary care specialists and takes a 'shared care' approach between primary and secondary specialist care. This model shows how the right care and support delivered in a primary care setting can facilitate people who are still injecting to successfully complete treatment.[27]

It has been known for some years that the capacity of HCV treatment services in the Mansfield and Ashfield locality, and to a lesser extent in Newark, is insufficient to meet demand. This results in longer waiting times and loss to completion of treatment. Mansfield and Ashfield CCG have agreed to develop a business case for a modest expansion in local services.

New treatments for HCV

New HCV treatments are under review by NICE. Current treatment for HCV involves a regime with harmful side-effects, lasting approximately 24 – 48 weeks (depending on genotype). The new treatments involve oral medication, will be less toxic, and of much shorter duration of 12 weeks. The new regimes are expensive. The cost of the medication will be funded through NHS England Specialised Commissioning. Some patients may be cured after shorter periods of treatment.

4.4 Aftercare

Long term specialist clinical follow-up is available to address the clinical needs of those with chronic HBV/HCV infection. The extended range of services (such as social care or emotional support services) beyond this clinical perspective is not known.

5. Evidence of what works

5.1 Prevention

Awareness raising

It is recognised that health professionals need to increase their awareness of HBV and HCV infection. In turn those at increased risk will be identified and the public better informed.10

NICE PH Guidance 43 identifies a number of actions that can take place to promote and raise awareness of HBV and HCV among the general population, those at increased risk and healthcare professionals. The following table serves to summarise the key areas.

Figure 7: Table to demonstrate what action can be taken and by whom to raise awareness among key target groups (information adapted from NICE PH 43)

Target group	Examples of who can take action	Preventative action
General population	• Local commissioners • Providers of services (e.g. primary, secondary care) • Voluntary sector • Commercial sector • Not for profit non-governmental organisation	• Awareness raising campaigns providing up to date information on routes of infection, HBV vaccination, benefits of early testing and the potential for chronic infection to be asymptomatic
Those at increased risk (such as current or previous injecting drug users and those from high prevalence countries)	• Commissioners • Local Authority • Providers of services for children at increased risk of HBV and HCV • Other local/national organisations that promote testing and provide treatment	• Co-ordinated national and local programme of awareness-raising about HBV and HCV among groups at increased risk • Promotion of local testing and HBV vaccination • Production of applicable information material to the most at risk to describe where services can be accessed, what testing involves and the implications of a positive diagnosis
Health professionals	• Clinical and non-clinical staff in primary and secondary care • Those working in substance misuse services and criminal justice settings • Social workers • Statutory and non-statutory staff working with looked-after children • Prison and youth offender staff • Voluntary and community organisations that support migrant populations, people who inject drugs, people with HIV or men who have sex with men	• Education programmes to incorporate national guidance, social and cultural barriers, reduction of morbidity and mortality and improvement in clinical management and quality of life for those diagnosed. • Training to reflect advances in testing, diagnosis and treatment • Education and training should be part of a regional programme of continuing professional development and should be available in taught or electronic format • Education and training to be reinforced and used in staff annual appraisals and personal development plans

HBV vaccination

HBV infection can be prevented by vaccination. Vaccination is one of the most successful and cost effective interventions. High vaccination rates are instrumental in stopping the spread of disease, complications and early death.

Antenatal and new born immunisation

Department of Health policy has supported the provision of universal screening of pregnant women for HBV and immunisation of babies at risk since 2000. Within England, around 90% of babies infected at the time of birth will develop persistent HBV infection and be at risk of serious liver disease in later life.[28]

Robust clinical systems need to be in place to undertake a HBV antenatal screening and new born immunisation programme.[29] To ensure that pregnant women can be identified, the number of children becoming infected reduced, and referrals made to the appropriate health professionals.

Harm reduction

Harm reduction interventions are also recognised as an important component of preventative hepatitis infection work. Harm reduction in this context refers to provision of needle, syringe and other injecting equipment exchange services within the community. This approach was originally promoted in the Department of Health's Action plan for England[30] . There is good evidence that harm reduction interventions such as opiate substitution therapy and needle and syringe programmes can reduce HCV prevalence.[31]

NICE have since issued guidance that makes recommendations around needle and syringe programmes that looks to address the transmission of blood borne viruses caused by sharing injecting equipment[32].

5.2 Diagnosis

Case finding

There are 3 possible options that have recently been proposed for 'active case-finding' of HBV and HCV infections among high risk individuals[33]. These are:

1. Systematic case finding in high risk populations (in which health services identify high risk individuals and invite them to be tested)

2. Opportunistic case-finding (in which testing is offered to high risk individuals only when they happen to make contact with health services for some other reason)

3. Voluntary testing sessions (in which, for example, testing sessions are offered at places of worship or other culturally relevant venues).

A national screening programme for HBV and HCV is not in place at the current time. This is especially relevant for high risk populations within inner cities or prisons.

Quality standards

The way in which testing should be promoted and offered is detailed in NICE Public Health Guidance 43. Testing in this context should be part of a care pathway that also includes standards for local surveillance.

Range tests
HBV and HCV testing can be undertaken using a range of methods including venous blood, Dried Blood Spot (DBS) and saliva. This range of testing offers choice to client groups who might otherwise be difficult to engage. The DBS for instance involves collecting a small sample of capillary blood using a single lancet and transferring this to a protein card thereby offering a more acceptable route for people for whom venous access is difficult. Ensuring the availability of acceptable tests to different groups will therefore need consideration by commissioners and providers of services**.**[10]

5.3 Treatment

Treatment for HBV
Treatment is informed by NICE Clinical Guidance 165, Hepatitis B (Chronic): Diagnosis and management of chronic Hepatitis B in children, young people and adults, June 2013

Treatment for HCV

HCV Genotype 1:

- TA252 Telaprevir for the treatment of genotype 1 chronic hepatitis C April 2012
- TA253 Boceprevir for the treatment of genotype 1 chronic hepatitis C April 2012

HCV Genotype 2 & 3:

NICE technology appraisal guidance:

- TA106 Peginterferon alfa and ribavirin for the treatment of mild chronic hepatitis C issued Aug 2006
- TA200 Peginterferon alfa and ribavirin for the treatment of chronic hepatitis C issued Sept 2010

New treatments for HCV
The new, more effective and less lengthy HCV treatments are currently being assessed by NICE and guidance is pending.

5.4 Aftercare
Due to advances in the treatment for chronic HCV, most elderly patients and even many of those with advanced hepatic fibrosis can achieve a sustained virological response (SVR). SVR means that no detectable HCV virus is found in the blood serum. The appropriate follow-up and monitoring (such as cancer screening) needs to be in place for such patients[34]

Liver disease can follow a fluctuating and complex course making it difficult to identify and manage the end of life period. The End of Life strategy that was launched in 2008 identified what people identified as a ‘good death’ ; being treated as an individual, being without pain, being in familiar surroundings and being in the company of close family or friends.[35] The National End of Life Care Programme has considered this strategy and applied it against patients with advanced liver disease. Their subsequent report looks to better inform commissioners, clinical staff, patients and carers and should be used as part of strategic planning requirements.[36]

More recently the Leadership Alliance for the Care of Dying (LACDP) has provided an approach for dying people that health and care organisations caring for dying people in England should adopt. Meeting the needs of the dying person, their family and others should be applied irrespective of the place of death.[37]

6. What is on the horizon?

Hepatitis C

National data shows that HCV related liver disease is increasing. This places a substantial burden on healthcare services. If the infected population is left untreated, the number of individuals with severe HCV disease will continue to increase. This can be mitigated by increasing treatment uptake as early as possible. Treatment uptake would need to significantly rise to halt the increase in incidence.[38] Consequently there remains a pressing need for treatment to occur as early as possible.

The imminent improvements to treatment may subsequently see a rise in the number of individuals identified. Within the new treatment offer some patients may be cured after 4 weeks. In this scenario given the normal treatment regime would be 12 weeks, more patients could be treated for the same drug cost. The predicted impact of treatment and associated costs within different scenarios is currently at the modelling stage.

7. Local Views

Local strategic Stakeholders

A local strategic stakeholder group was reconvened in November 2013. This group is led by Local Authority Public Health and has senior level representation from across Nottinghamshire and Nottingham City with a focus on strategic development, prevention and early diagnosis through to treatment and associated after care. Stake holders are from a range of specialty areas such as hepatology, virology, health protection, substance misuse, primary care and prison clinical services. The views represented within this group inform a locally agreed work plan.

Substance misuse service users

Substance misuse consultation events took place in Nottinghamshire during June – September 2013 and among the issues identified the following were seen as important:

- Locally based services which are easily accessible and sensitive to local need was a very strong message.
- The importance of a service delivering a holistic approach in one place.

What does this tell us?

8. Unmet needs and service gaps

The following table summarises the key local (Nottinghamshire County and Nottingham City) needs and gaps.

Figure 8: Table to summarise the unmet needs and service gaps within Nottinghamshire County and Nottingham City

Pathway step	Unmet need/service gap
Prevention	• Promoting knowledge and awareness among professionals groups: there is currently no locally dedicated training and resource budget for HBV and HCV and no recognised lead organisation responsible for coordinating and implementing such training. • Nationally and locally there are no agreed standards regarding how HBV and HCV awareness raising interventions across the settings should be implemented and monitored. • Limited awareness amongst general public and at risk groups including current and past IDUs and people migrating from high prevalence countries
Diagnosis	• There is no agreed approach to diagnosing HBV and HCV such as the GP case finding software tool, opportunistic or voluntary testing. • The HCV 'Pop up' prompt tool has currently not been evaluated.
Treatment	• The improved HCV treatment offer is expected to increase demand and may challenge service design to include more community based clinics. • There are no nationally or locally agreed treatment targets. • Pending confirmation from NHSE it is not clear what specialised commissioning will encompass and therefore unclear what CCGs will have to fund
Aftercare	• The additional social and emotional

	aftercare needs have not been fully scoped and the associated needs have not been addressed as part of commissioning plans.
Overall strategic planning	• Lack of outcome data for monitoring purposes across the care pathway. • Data is fragmented and not available from one source.

9. Knowledge gaps

Robust local data

There is a lack of local level strategic agreement in respect of HBV and HCV testing and early diagnosis processes (monitoring and reporting requirements specifically) across the service providers. It is therefore difficult to capture accurate data relating to testing activity and subsequent outcomes.

Children and young people

HCV and HBV testing and hepatitis B vaccination is currently not delivered by substance misuse services for children and young people in the UK. Young people can access hepatitis services through their general practitioner or sexual health service. The level of need has not been determined and further work is required.

What should we do next?

10. Recommendations for consideration by commissioners

10.1 Local recommendations

The local recommendations are itemised as follows:

Prevention

- Implement a programme to increase awareness among the general public and those at increased risk (Local Authority Director of Public Health).
- Promote education programmes that increase knowledge, confidence and a proactive approach among health professionals within priority services and practices. (Clinical leads in provider organisations, CCGs, Local Authority Commissioners)

Diagnosis *

- Undertake a rapid pilot and evaluation of the HCV 'Pop up' Prompt Tool (CGG and Primary Care)
- Implement arrangements to systematically identify those at increased risk, including deployment of the BBV Reference Tool and the HCV 'Pop up' Prompt tool (Service providers).
- Promote and offer HBV and HCV testing in accordance with NICE PH43 guidance (Local Authority Commissioners, CCGs)
- Identify and monitor those individuals who continue to put themselves at risk and consequently require retesting at periodic intervals (CCGs, Local Authority Commissioners).

Treatment *

- Ensure geographically accessible and appropriately configured provision of treatment services that reflect the expressed views of service users and the significant improvement to treatment options (CCGs, Local Authority Commissioners and service providers).
- Increase the capacity of treatment services in the Mansfield and Ashfield and Newark and Sherwood localities to ensure equity of access, acceptable waiting times and good rates of treatment completion (Mansfield and Ashfield and Newark and Sherwood CCGs).

Aftercare

- Assess the need for support measures (clinical, social and emotional) to be in place for improving outcomes following treatment (Local Authority Public Health)
- Ensure end of life services meet the professional standards associated with improving people's experience in the last days and hours of life (CCGs, Local Authority)

Strategic approach

- Support the establishment of an East Midlands clinical network to monitor performance and outcomes across the care pathway (All)

***** Modelling indicates that increasing the numbers of people diagnosed and treated by 140% and 115% respectively by 2018, would subsequently result in a 30% reduction by 2020 in the number of people carrying the virus and a 50% reduction in HCV related mortality.[39]

Key contacts

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Useful resources

HCV Action toolkit

NICE PH43 Guidance

References

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