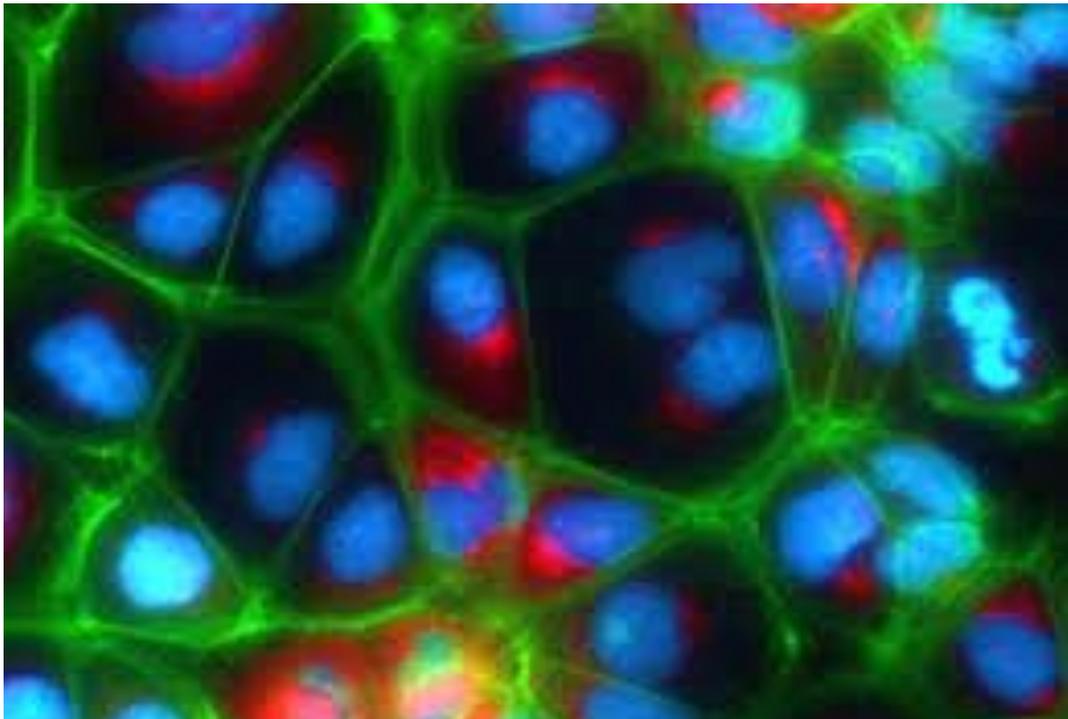


Find The Missing Millions



NI Regional Hepatitis B&C Managed Clinical Network Annual Report 2020

We are delighted to present the 2020 report of the Northern Ireland Hepatitis B & C Managed Clinical Network.

This report highlights the ongoing work across Northern Ireland to target those particularly at risk of acquiring hepatitis B and C with access to harm reduction, testing and treatment. We would like to thank everyone who is part of this for their hard work and commitment.

There is still a long way to go to meet the WHO goals of eliminating viral hepatitis as a public health threat by 2030 but working together we are making real progress which we will build on in the coming years. The annual rates of new infection with hepatitis B and C have not decreased, and there are still many people living with viral hepatitis who are unaware of their infection.

With the availability of new direct acting antiviral drugs that can cure hepatitis C in a matter of weeks, initiatives to increase diagnosis and referral into care, and new outreach services, we are well-placed to eliminate hepatitis C as a major public health threat by 2030.

This is achievable by continued close working our partners to improve prevention, raise awareness, increase testing and get more individuals diagnosed and into treatment and care.

Tim Wyatt

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Consultant Microbiologist – PHA
Interim Chair of
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TABLE OF CONTENTS

| | |
|--|----|
| INTRODUCTION..... | 3 |
| HEPATITIS B..... | 3 |
| THE EPIDEMIOLOGY OF HEPATITIS B IN NORTHERN IRELAND 2009-2019..... | 4 |
| TREATMENTS FOR HEPATITIS B..... | 5 |
| HEPATITIS B NOTIFICATION..... | 5 |
| ANTENATAL..... | 6 |
| HEPATITIS B VACCINATION PROGRAMME..... | 6 |
| HEPATITIS C..... | 7 |
| THE EPIDEMIOLOGY OF HEPATITIS C IN THE UK..... | 7 |
| THE EPIDEMIOLOGY OF HEPATITIS C IN NORTHERN IRELAND 2009-2019..... | 7 |
| TREATMENT FOR HEPATITIS C..... | 11 |
| CO-INFECTION..... | 12 |
| INCREASE IN CASES OF HEPATITIS C INFECTIONS IN NORTHERN IRELAND AMONGST PEOPLE WHO INJECT DRUGS (PWID)..... | 13 |
| NEEDLE EXCHANGE SERVICES IN NORTHERN IRELAND..... | 14 |
| BBV AWARENESS, DIAGNOSES AND TREATMENT IN PRISONS IN NORTHERN IRELAND..... | 15 |
| LOOKING AHEAD TO 2021 AND BEYOND..... | 15 |

INTRODUCTION

Chronic hepatitis B and C can cause serious liver damage, cancer, and premature death. Globally there are more than 240 million people with the hepatitis B virus and up to 71 million with the hepatitis C virus (WHO, 2019). Worldwide viral hepatitis is one of the leading causes of death, accounting for 1.34 million deaths per year. It is further estimated that the majority of people living with hepatitis B and hepatitis C are unaware they are living with the disease, resulting in the real possibility of developing fatal liver disease or liver cancer at some point in their lives and in some cases, unknowingly transmitting the infection to others (WHO, 2018).

Hepatitis B and C are silent epidemics, disproportionately affecting children and marginalized populations, particularly people who inject drugs (PWIDs), Indigenous Peoples, people in prison, men who have sex with men, migrants and people living with HIV/AIDs. About 2.9 million people living with HIV are co-infected with hepatitis C virus and 2.6 million with hepatitis B virus (World Hepatitis Alliance, 2019)(WHO, 2016).

With the availability of effective vaccines and treatments for hepatitis B and a cure for hepatitis C, the elimination of viral hepatitis has become achievable, however this will require greater awareness and understanding of the disease and the risks, access to diagnosis and treatments. In May 2016, the UK signed up to the World Health Organization (WHO) Global Health Sector Strategy (GHSS) on Viral Hepatitis which commits participating countries to the elimination of hepatitis C as a major public health threat by 2030. <https://www.who.int/hepatitis/strategy2016-2021/ghss-hep/en/>

HEPATITIS B

Hepatitis B is a viral infection that attacks the liver and can cause both acute and chronic disease. It often doesn't cause any obvious symptoms in adults until decades later when they develop hepatitis (inflammation of the liver), cirrhosis (severe liver disease), or cancer of the liver (hepatocellular carcinoma) (WHO, 2019). In children it often persists for years and may eventually cause serious liver damage. The likelihood of a patient developing chronic infection is inversely related to age at the time of infection. Chronic infection occurs in at least 90% of infected neonates, 25% of children aged 1-5 years and 5% or less of adults (HSE, 2019).

Hepatitis B virus is transmitted by exposure to infected blood and body fluids (i.e. semen and vaginal fluid) from a person infected with Hepatitis B, from contaminated sharp instruments or other equipment used by PWIDs, or mother-to-baby transmission at or around the time of birth. Tattooing and acupuncture led to a significant number of cases in the 1980s; however, with improved sterilization this has become less common.

Hepatitis B is less common in the UK than other parts of the world, but certain groups are at an increased risk. This includes people originally from high-risk countries, people who inject drugs, and people who have unprotected sex with multiple sexual partners. Hepatitis B is most common in sub-Saharan Africa, Asia, South America and southern parts of eastern and central Europe, the Middle East and the Indian subcontinent (WHO, 2019).

Workplace exposure in the healthcare setting usually occurs as a result of needle-stick injury, injury with other contaminated sharp instruments, or as a result of contamination of the mucous membranes (eyes, nose and mouth). Workplace acquisition of HBV has been significantly reduced due to the availability of an effective vaccine (HSE, 2019).

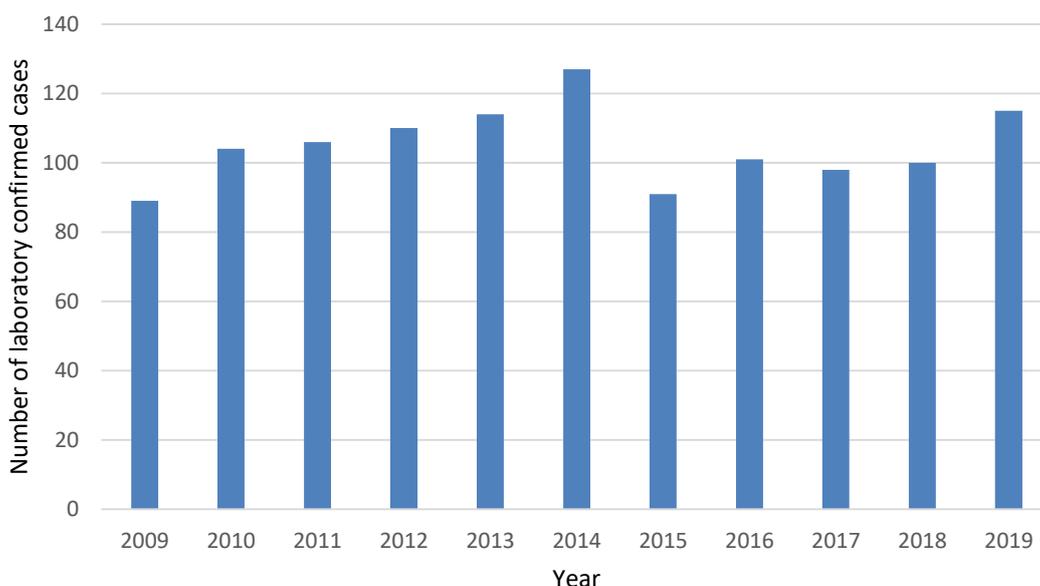
THE EPIDEMIOLOGY OF HEPATITIS B IN NORTHERN IRELAND 2009-2019

Northern Ireland is a very-low prevalence country for HBV with an average of 90 -110 new cases being diagnosed every year. The rate of diagnosis may vary between individual communities.

Certain ethnic groups living in Northern Ireland have strong links with the high risk countries mentioned above, where children often acquire infection from their mothers during birth or through close contact in early infancy (Stasi, 2017).

In the UK and Northern Ireland, HBV infections are usually acquired in adulthood, principally resulting from sexual activity or injecting drug use (HSE, 2019).

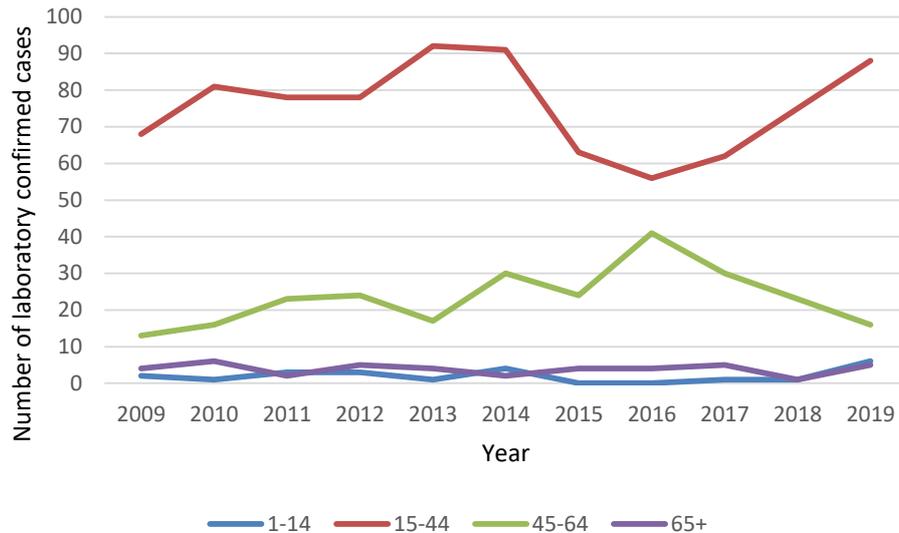
FIGURE 1: LABORATORY CONFIRMED CASES OF HEPATITIS B DIAGNOSED EACH YEAR, NORTHERN IRELAND, 2009-2019



Source: Regional Virology Laboratory/PHA 2020

In Northern Ireland, a total of 115 new hepatitis B infections were reported in 2019.

FIGURE 2: LABORATORY CONFIRMED CASES OF HEPATITIS B BY AGE GROUP, NORTHERN IRELAND, 2009-2019



Source: Regional Virology Laboratory/PHA 2020

77% of those newly diagnosed in 2019 were aged between 15 and 44 years of age (figure 2). The number of children diagnosed between the ages of 1-14 years has remained very low.

TREATMENTS FOR HEPATITIS B

Chronically infected individuals with persistently elevated ALT's, a marker of liver damage, and high HBV viral loads are candidates for therapy.

All treatment of chronic hepatitis B in Northern Ireland is based at the Royal Victoria Hospital Liver Unit. Patients are treated in line with NICE guideline CG165. In addition, the antenatal hepatitis B pathway results in treatment of 2-3 women per year with oral antiviral therapy in the last trimester of pregnancy to reduce the risk of transmission of hepatitis B to the neonate.

HEPATITIS B NOTIFICATION

Hepatitis B is a statutorily notifiable infectious disease i.e. the clinician suspecting the diagnosis is required to notify the Public Health Agency (PHA) in Northern Ireland. The PHA is responsible for surveillance and control measures including prevention of onward transmission and outbreak investigation. It recommends that all patients with chronic hepatitis B are referred for specialist follow up to hepatology. All pregnant women who are hepatitis B positive should be referred and seen by a Hepatology consultant within 6 weeks of the referral being received as per local protocol and the National Key Performance Indicator* , to assess the need for any antenatal interventions to reduce the risk of mother to baby transmission.

**Key performance indicators for the NHS screening programmes. Definitions and data submission guidance. 1 April 2017 to 31 March 2018.*

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/616400/PHE_Screening_KPIs_2017-18.pdf

ANTENATAL SCREENING PROGRAMME

38 pregnant women were diagnosed with hepatitis B in 2019. 22 of these cases were new diagnoses, and the remaining 16 had been previously diagnosed. All were referred to Hepatology and offered appointments as per the local protocol.

HEPATITIS B VACCINATION PROGRAMME

The hepatitis B vaccine is highly effective at preventing hepatitis B infection. Routine immunization of all infants against hepatitis B infection was introduced in August 2017, and is delivered in the hexavalent vaccine (DTaP/IPV/Hib/HepB). Vaccination coverage statistics for the hexavalent vaccine by 12 months of age show average uptake of 94.3% from vaccine introduction to March 2020.

Babies born to hepatitis B positive women are also offered additional hepatitis B vaccines. These babies have been exposed to the virus during birth, and should be given the 1st hepatitis B vaccine within 24 hours of birth. They should be given another dose of the monovalent vaccine at 4 weeks, and then follow the routine childhood vaccination schedule (three doses of the hexavalent vaccine at 2 months, 3 months and 4 months of age). They should have another dose of the individual hepatitis B vaccine at 12 months of age. They will also be tested for hepatitis B infection at this time (NICE, 2017).

Babies born to women who are thought to be particularly infectious may also be given hepatitis B immunoglobulin at birth. This provides immediate, temporary protection while the baby develops their own immunity through vaccination (NHS, 2018).

A monovalent hepatitis B vaccine is offered to other risk groups such as PWID, people in prison and sex workers.

NHS Patient group direction (PGD) template to help provide hepatitis B vaccine. Available at:

<https://www.gov.uk/government/publications/hepatitis-b-vaccine-patient-group-direction-template>

HEPATITIS C

Hepatitis C is a serious and often-silent liver infection caused by the hepatitis C virus. It can lead to end-stage liver disease and cancer, which of which both have poor survival rates. The good news is that current treatments offer a cure (Hepatitis C in the UK, 2019).

Hepatitis C is transmitted when an infected person's blood enters a healthy person's bloodstream, for example, via sharing of contaminated needles (including unsterilized tattoo needles) and drug taking paraphernalia, accidental needle stick injuries in healthcare workers, use of poorly sterilized medical equipment and less often, unprotected sex (EMCDDA, 2016).

Globally, an estimated 71 million people are living with HCV infection (chronically infected), but many are unaware, hence the campaign to 'find the missing millions'. Although the quality of epidemiologic data and prevalence estimates vary widely across countries. It is argued that in most developed countries the prevalence of HCV infection is <1.0%. However in some other countries the occurrence is said to be much higher. For example Eastern Europe (3.3% in Russia, 2.2% in Latvia) and certain countries in Africa (6.3% in Egypt, 7.0% in Gabon), the Middle East (3.0% in Syria), the South Caucasus and Central Asia (4.2% in Georgia, 4.3% in Uzbekistan) and southern and eastern Asia (3.8% in Pakistan, 6.4% in Mongolia, 2.1% in Taiwan) (CDC, 2020) (EMCDDA, 2016).

THE EPIDEMIOLOGY OF HEPATITIS C IN THE UK

Hepatitis C continues to be a major problem amongst people who inject drugs (PWID) in the UK, with around 1 in 4 currently infected with HCV. There is early evidence for a modest reduction in chronic hepatitis C prevalence concomitant with the scale-up of direct acting antiviral (DAA) treatment among PWID (Shooting up, 2019).

Of the 143,000 people estimated to be living with HCV in the UK, more than half are thought to be undiagnosed, hence the need to increase efforts to identify these people and offer them treatment (Hep C in UK, 2019).

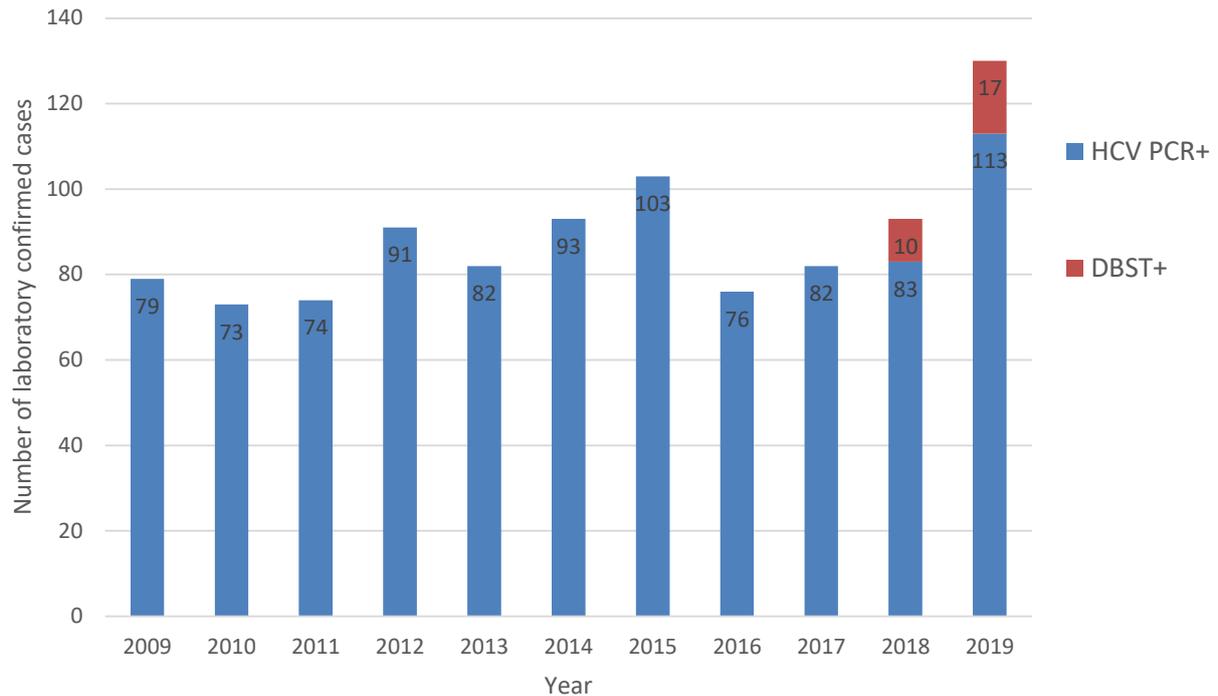
More information on the epidemiology of hepatitis C in the UK is published annually by Public Health England. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/831155/Hepatitis_C_in_the_UK_2019_report.pdf

THE EPIDEMIOLOGY OF HEPATITIS C IN NORTHERN IRELAND 2009-2019

Over a ten year period from 2009 to 2018, the mean number of new HCV PCR positive cases diagnosed per annum was 85, with a range of 73 to 103 (figure 3). The cumulative total number of hepatitis C PCR positive cases in Northern Ireland from 1990 to 2019 is 3,258.

In 2019, there were 130 new diagnoses, representing a substantial increase on the previous 10 year average. This probably reflects an increase in testing and diagnosis of cases due to the efforts of the network, rather than a true rise in incidence. It is worth noting that dried blood spot testing (DBST) was introduced across Northern Ireland in 2018, and in 2019 detected 17 of the 130 new cases diagnosed.

FIGURE 3: LABORATORY CONFIRMED HCV PCR POSITIVE CASES, NORTHERN IRELAND, 2009-2019



Source: Regional Virology Laboratory/PHA/Addiction Services 2020

Of those diagnosed in 2019, 83/130 (64%) were male and 47/130 (36%) were female. 75% were aged between 15 to 44 years of age.

The most common route of infection remains injecting drug use, for those patients who presented for specialist assessment from 2000-2020, (Table 1).

TABLE 1: ROUTE OF HCV TRANSMISSION RECORDED BY PATIENTS PRESENTING FOR TREATMENT, NORTHERN IRELAND, 2000-2020

| Route (where recorded 2000-2020) | Number (%) |
|---|-------------|
| PWID | 1002 (59%) |
| Blood/blood products | 128 |
| Sex | 95 |
| Needle stick injury | 12 |
| Tattoo | 87 |
| Overseas healthcare (28 as result of blood transfusion) | 83 |
| Mother to baby and household | 4 |
| Other | 21 |
| Unknown/Not recorded | 264 |
| TOTAL | 1696 |
| Data Source: Regional Hepatology Unit, Belfast Hospital and Social Care Trust 2020 | |

Source: RVH local HCV database 2020

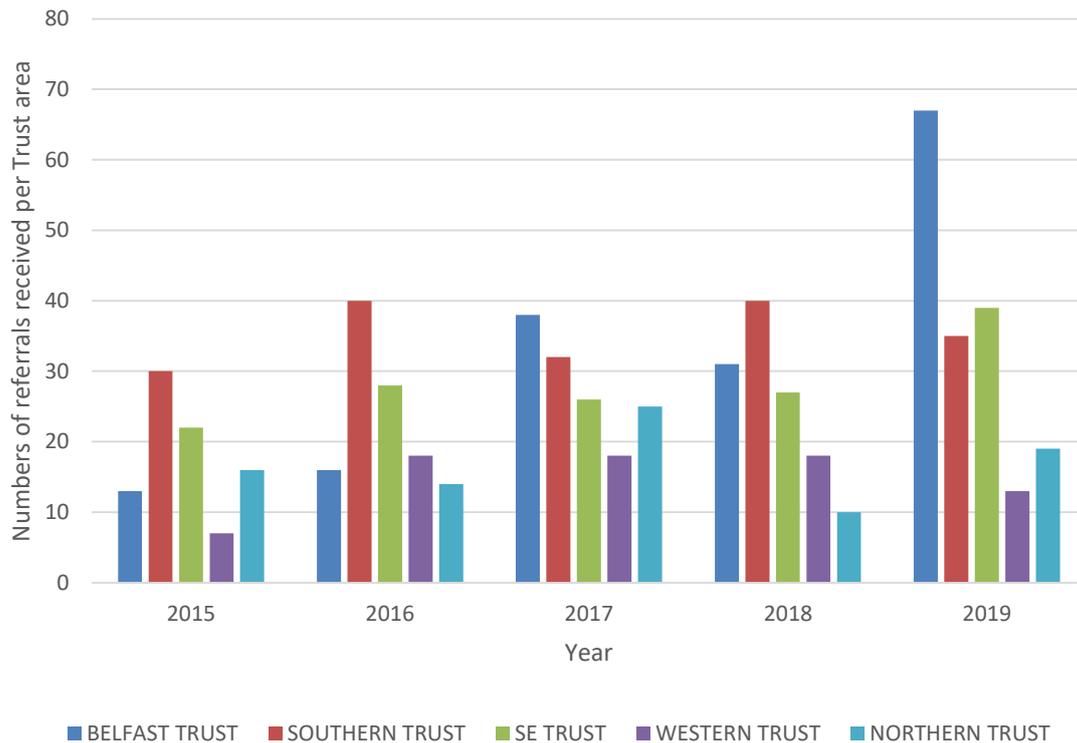
REFERRALS FOR HEPATITIS C TREATMENT

The Regional Hepatitis B and C Network follows up on all HCV PCR positive cases diagnosed, with 97% of those who test positive referred to the liver clinic, and the remaining 3% not wishing to engage or lost to follow up. The high referral rate however does not equate to the attendance at the liver clinic or those following through to treatment. The Hepatitis Network continues to actively follow up on those who do not attend for their clinic appointments.

Referrals to Hepatology for specialist assessment of hepatitis C are received from all over Northern Ireland with 173 referrals received in 2019. This included 111 people with a new diagnosis, with the remainder being re-referrals of those who had never attended clinic appointments (see figure 4).

Of the 130 cases diagnosed in 2019, 111 referrals were received. Of the remaining 19: 5 were deceased, 7 spontaneously cleared the virus, 5 were not referred, and 2 lost to follow up. Of the 5 people not yet referred, they have now been traced and referrals are awaited.

FIGURE 4: REFERRALS RECEIVED FOR SPECIALIST ASSESSMENT OF HEPATITIS C PER TRUST AREA. NORTHERN IRELAND, 2015 - 2019



In Northern Ireland, there has been a focus on screening and harm reduction education amongst PWIDs. Actions include raising awareness of the risks of bloodborne virus transmission among PWID and those working with them, increased testing of PWID for bloodborne viruses following the introduction of dried blood spot testing (DBST), and work continues to increase the ready availability of clean injecting equipment.

The focus has moved from simply treating patients who are known or found to be infected, to proactively identifying people who are infected but are not known to, or engaged with, health services. As well as working hard to find those who remain undiagnosed, it is also important to re-engage those who have been diagnosed in the past but have not cleared their infections.

HEPATITIS C PATIENT RE-ENGAGEMENT

The Liver clinic has an extensive database of patients known to have HCV infection and in February 2019 it started using the database to try to reconnect with those with whom we had lost contact. A 'call back' process was started to trace and treat patients who were previously diagnosed as having a chronic active infection and referred, but who never attended clinic. Several of these patients were identified, contacted and offered testing to confirm whether they still had an active infection and then invited to clinic to be assessed for the newer more effective treatments.

Of those identified and contactable, only 7% came forward for specialist assessment and treatment and have since cleared the virus. The rest of those individuals identified were either uncontactable, refusing to engage, no longer living in Northern Ireland or had died.

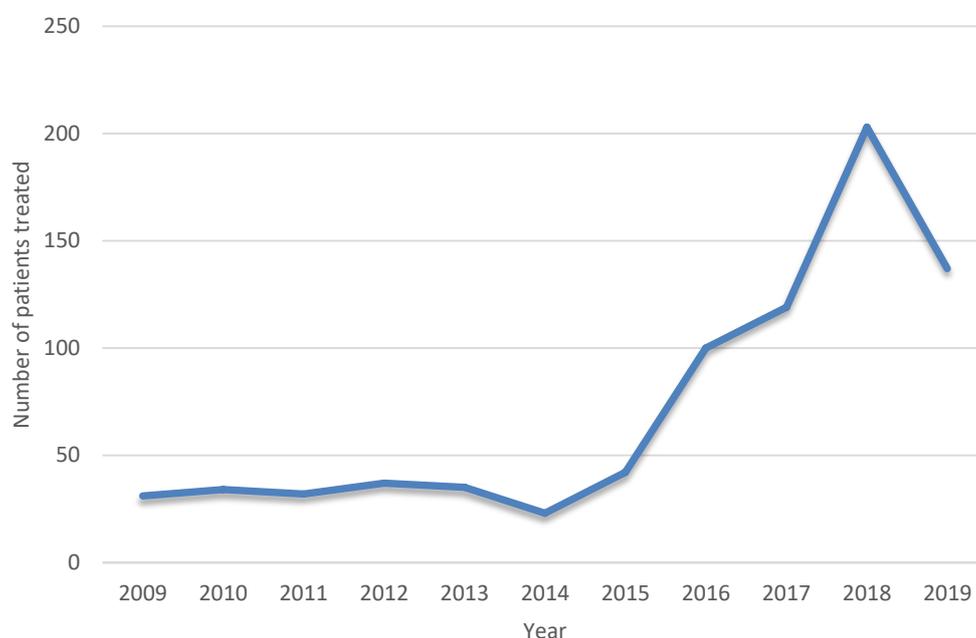
All those who were uncontactable or who did not attend appointments during the 'CALL BACK' process will be sent follow up letters, and the outcomes of this will be reported on at a later stage during 2020.

TREATMENT FOR HEPATITIS C

In Northern Ireland, hepatitis C is treated using direct acting antiviral (DAA) drugs. These treatments are considered the safest and most effective medicines for treating hepatitis C and are highly effective at clearing the infection in more than 95% of people, with very few side effects. The all-oral therapies last for 8 to 12 weeks with the length of treatment dependent on existence of other underlying medical conditions, and genotype of infection.

The challenge is now not so much how to treat patients, but how to identify them in the first place, as many might not even be known to health services or wish to engage with services. Reasons for this include being unaware of their infection, not feeling they need treatment, being unaware of the new treatments available, or being part of underserved populations such as people who are experiencing homelessness, living in prison, or PWIDs (Han, 2019) (Grebely, 2017).

FIGURE 5: HEPATITIS C TREATMENT INITIATIONS IN NORTHERN IRELAND, 2009-2019



Source: Local RVH treatment database and nursing records 2020

The number of patients treated per year for Hepatitis C rose dramatically from 2014, peaking in 2018 at over 200 patients. During 2019 the number fell by 33% compared to 2018 (figure 5). A review of all treatments with interferon free all-oral HCV treatment in 2019 demonstrated a success rate (clearance of HCV) of > 95%.

The decline in treatment initiations for Hepatitis C is probably due to the fact that most of those who were previously on a waiting list for direct acting antivirals have now completed treatment.

HEPATITIS C TREATMENT OUTREACH CLINICS

Hepatitis C disproportionately affects populations who are marginalized and underserved and have poorer access to healthcare and health outcomes (Hep C in UK, 2016). Therefore, efforts are now focused on engaging these groups with treatment services.

Some reasons for lower levels of engagement include lack of awareness of being infected, not seeing the importance of treatment as they do not feel ill, fears of the side effects of the treatments (based on older treatments), and challenges in engaging with treatment due to chaotic life circumstances (Thursz, 2017). Other barriers may include financial constraints, and an overall distrust of health services (Grebely et al, 2017).

During 2019, the Liver clinic set up an outreach service to bring treatment to patients in services for people experiencing homelessness and those attending addiction services, facilitated by the BHSCT Inclusion Health Service and addiction services in the Southern, Northern and Western trust areas. These clinics were for their service users who had been diagnosed with hepatitis C infection but had not attended several hospital appointments. Hepatitis C outreach clinics are also provided for people in prison in HMP Maghaberry.

The purpose of the clinics is to improve engagement with treatment. Patients are able to meet with a consultant or nurse specialist to discuss hepatitis C treatment, and have their preliminary workup done including fibrosis staging and blood tests, in a setting they are familiar with. This reduces the number of outpatient appointments and travel required. Many more of these clinics are becoming nurse led.

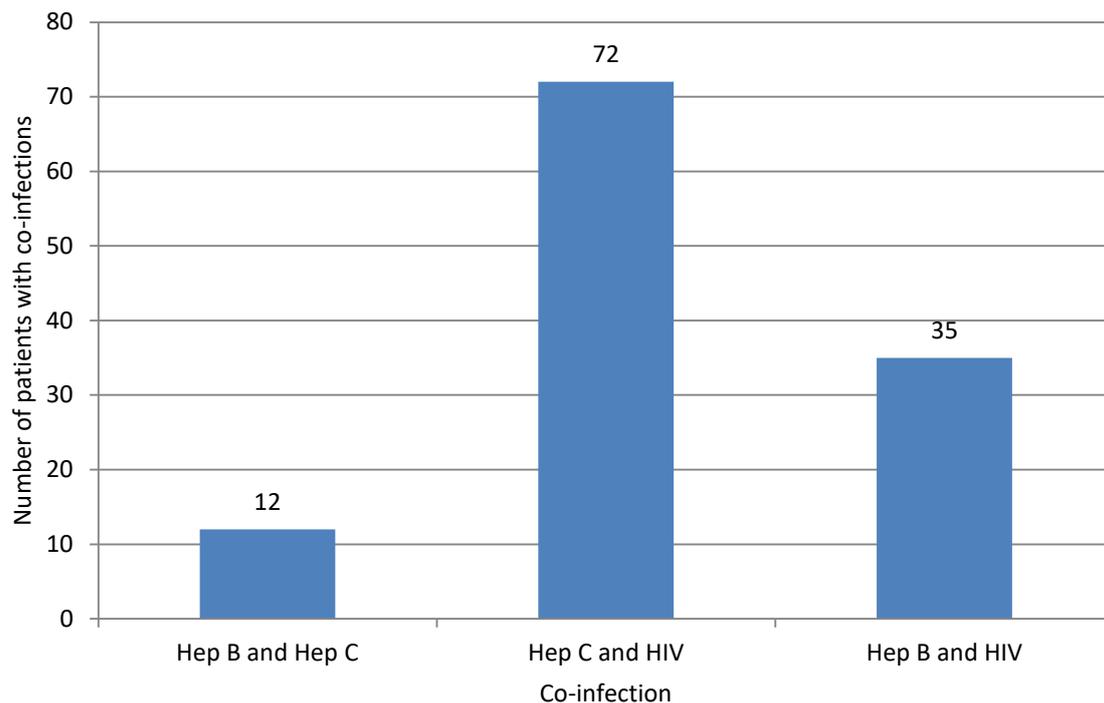
BLOODBORNE VIRUS CO-INFECTIONS

People may be infected with several BBVs simultaneously. Co-infections with a combination of HIV, Hepatitis B and Hepatitis C occur, and due to viral interactions and complexities with treatment, disease progression can be faster, with greater morbidity and mortality compared to mono-infections (Kourtis et al, 2012), (Konstantinou et al, 2015).

In Northern Ireland co-infection levels may be considerably lower than other parts of the world. Of those cases referred to the liver clinic for specialist assessment of viral hepatitis from 2000 to date:

- 12 (0.7%) were co-infected with Hepatitis B and C;
- 72 (4.8%) with HIV and Hepatitis C;
- 35 (2.5%) as infected with both Hepatitis B and HIV;
- A small number (i.e. <5) had HIV, Hepatitis B and C (Fig 6)

FIGURE 6: CASES OF BBV CO-INFECTION DIAGNOSED IN THOSE REFERRED TO THE REGIONAL LIVER CLINIC, NORTHERN IRELAND, 2000-2019



Source: RVH local database/ Regional virology laboratory 2020

INCREASE IN CASES OF HEPATITIS C INFECTIONS IN NORTHERN IRELAND AMONGST PEOPLE WHO INJECT DRUGS (PWID)

The changing patterns of psychoactive drug use here and in the rest of the UK, remains a concern because changes in psychoactive drug preferences can lead to riskier injecting practices such as increased frequency of injecting, sharing equipment or groin injecting (Shooting up report, 2019)

Northern Ireland has a lower prevalence of hepatitis C infection in its PWID population compared with the rest of the UK. The Unlinked Anonymous Monitoring Survey 2019 found anti-HCV prevalence of 22% in Northern Ireland, compared to 56% in England and Wales 56%.

In 2016-17 an increase in cases of hepatitis C among a cohort of PWID was detected in Northern Ireland highlighting the ongoing risk of hepatitis C in PWID, particularly in close networks, and the continued need for ongoing surveillance to detect cases quickly to allow for an appropriate timely response.

Continued sharing and re-use of injecting equipment remains a concern. The Shooting Up Report, (2019) stated that issues have not improved much in recent years with only around 3 in 5 PWID in England, Wales and Northern Ireland reporting adequate needle/syringe provision for their needs. Re-use of an individual's own injecting equipment is commonly reported in the UK and this can also put individuals at risk of infection around their preferred venous access sites. Adequate provision and access to new, sterile injecting equipment is vital to reduce sharing and re-use and the associated risks (Shooting up report, 2019).

NEEDLE EXCHANGE SERVICES IN NORTHERN IRELAND



Harm reduction interventions for PWIDs, including access to sterile injecting equipment and effective drug dependence treatment, can help prevent and control the spread of hepatitis C. Optimal access to clean injecting equipment and opioid substitution treatment (OST) is crucial in curbing the spread of HCV, particularly given that it also has the potential to prevent reinfection after treatment.

The Needle and Syringe Exchange Service (NSES) is a free, confidential, low threshold service for people who inject drugs. The service provides sterile injecting equipment to reduce the risk of injecting drug users catching viruses, like HIV and hepatitis B and C, which are spread by contact with infected blood. The service also disposes of used equipment safely, which reduces the risk of other people coming into contact with these viruses via used needles or syringes.

The service offers advice, information and support to help service users to reduce the risk of harm from injecting as well as supporting service users to access other relevant services, such as housing, alcohol use, mental or physical health problems and treatment services.

There are currently 21 Community Pharmacies within Northern Ireland which deliver the NSES as well as four Trust based services, two in the BHSCT, one in the NHSCT and one in the SEHSCT. The Public Health Agency is also funding a community-based needle exchange service, which is being piloted in Belfast, as well as Low Threshold Services based in each Trust area which provide outreach needle exchange services.

A total of 33,992 visits were made to the NSES during 2018-19, a 13% increase in visits compared to the 2017-18. The highest number of visits (62%), were in the Belfast Health and Social Care Trust. The Western Trust was the only area to record a decrease, with a 13% fall in visits compared to 2017-18.

Of the total visits to the NSES, 69% injected opiates only; 23% injected steroids, or steroids as well as tanning agent and opiates and 3% injected tanning agent only.

More information on needle exchange services please see:

<https://www.publichealth.hscni.net/publications/needle-and-syringe-exchange-scheme>

INCLUSION HEALTH SERVICE

An inclusion health service operated by the Belfast HSC Trust provides proactive health care for people experiencing homelessness, as well as other underserved populations.

The Homeless Health Service continues to actively screening service users for Hepatitis B, C and HIV. With their assistance, the Liver clinic have been able to deliver outreach specialist assessment and treatment for Hepatitis C to those who have previously not engaged with health services. The first clinic was held in December 2019. It is planned to continue with these outreach clinics.

BBV AWARENESS, DIAGNOSES AND TREATMENT IN PRISONS IN NORTHERN IRELAND

Globally, the burden of certain communicable diseases such as HIV, and viral hepatitis is higher among current and former drug users entering prison settings than would be found in the general population (ECDC, 2018). The main risk factors being linked to proximity, high-risk sexual behaviour, and practices of injecting drugs with shared, unclean equipment, unsafe tattooing and piercing (EMCDDA, 2012).

Prisons are not isolated institutions. Many people enter and leave prisons every day and return to their families and the wider community, putting others at risk of infection. Giving prisoners adequate access to awareness raising, testing, diagnosis and treatment for infectious diseases is good medical practice and provides public health benefits to the community (NAT, 2017).

There is strong evidence that one of the most effective ways of preventing the spread of infectious diseases in prisons is through the provision of harm reduction services, including access to condoms, needle and syringe programmes (NSPs) and opioid substitution therapy (OST). Yet the availability of these life-saving services remains extremely limited in comparison to what is available in the community (NAT, 2017).

Although the operational risk to prison staff from BBVs is very low, it is important they understand how these infections can and cannot be transmitted both for their own protection and to ensure the appropriate and sensitive treatment of others (PHE, 2019). The Hepatitis B & C Network and South Eastern HSC Trust (SET) Health Development Team continue to deliver bloodborne virus (BBV) awareness sessions to prison officers and prisoners alike.

Participation at health fairs in the 3 prisons has permitted engagement with additional prisoners about risk factors, modes of transmission, how to protect themselves, testing and how to avail of hepatitis B vaccinations.

Closer working links with Prison Health has allowed for the organization of regular hepatitis clinics in HMP Maghaberry, with the capacity of seeing 5-7 patients at every clinic. The majority of those patients who have been assessed at these clinics have been started on treatment and have cleared the hepatitis C virus. More clinics are being planned.

LOOKING AHEAD TO 2021 AND BEYOND

In May 2016, the UK signed up to the World Health Organization (WHO) Global Health Sector Strategy (GHSS) on Viral Hepatitis which commits to the elimination of viral hepatitis as a major public health threat by 2030 (See appendix 1). The WHO targets for hepatitis C elimination are an 80% reduction in rate of HCV infections, and a 65% reduction in mortality by 2030.

The Network is working closely with the Department of Health to build on this strong position by developing a hepatitis C elimination plan for Northern Ireland. Unfortunately work was temporarily paused due to the Covid-19 pandemic, however the plan is currently out for a targeted consultation

with key stakeholders. It is likely to include a focus on raising awareness, finding those who are living with hepatitis C but are unaware, and using innovative outreach based approaches to engaging people in treatment who are in underserved populations.

APPENDIX 1: GLOBAL HEALTH SECTOR STRATEGY FOR VIRAL HEPATITIS

| TARGET AREA | BASELINE 2015 | 2020 TARGETS | 2030 TARGETS |
|---|--|--|--|
| Impact targets | | | |
| Incidence: New cases of chronic viral hepatitis B and C infections | Between 6 and 10 million infections are reduced to 0.9 million infections by 2030 (95% decline in hepatitis B virus infections, 80% decline in hepatitis C virus infections) | 30% reduction (equivalent to 1% prevalence of HBsAg ¹ among children) | 90% reduction (equivalent to 0.1% prevalence of HBsAg among children) |
| Mortality: Viral hepatitis B and C deaths | 1.4 million deaths reduced to less than 500 000 by 2030 (65% for both viral hepatitis B and C) | 10% reduction | 65% reduction |
| Service coverage targets | | | |
| Hepatitis B virus vaccination: childhood vaccine coverage (third dose coverage) | 82% ² in infants | 90% | 90% |
| Prevention of hepatitis B virus mother-to-child transmission: hepatitis B virus birth-dose vaccination coverage or other approach to prevent mother-to-child transmission | 38% | 50% | 90% |
| Blood safety | 39 countries do not routinely test all blood donations for transfusion-transmissible infections 89% of donations screened in a quality-assured manner ³ | All countries have haemovigilance systems in place to identify and quantify viral hepatitis transfusion transmission rates | Reduce rates of transmission by 99% compared with 2020. |
| Safe injections: percentage of injections administered with safety-engineered devices in and out of health facilities | 5% | 50% | 90% |
| Harm reduction: number of sterile needles and syringes provided per person who injects drugs per year | 20 | 200 | 300 |
| Viral hepatitis B and C diagnosis | <5% of chronic hepatitis infections diagnosed | 50% | 90% |
| Viral hepatitis B and C treatment | <1% receiving treatment | 5 million people receiving hepatitis B virus treatment 3 million people received hepatitis C virus treatment | 80% of eligible persons with chronic hepatitis B virus infection treated 80% of eligible persons with chronic hepatitis C virus infection treated |

APPENDIX 2: MEMBERSHIP OF THE STEERING GROUP 2019

| | | | |
|-----|----------------------------|---|--|
| Dr | Tim Wyatt | Consultant Microbiologist - Health Protection, PHA | Interim Chairperson of NI Hepatitis B&C MCN |
| Dr | Neil McDougall | Consultant Hepatologist, Belfast Trust(Clinical Lead) | Clinical Lead for the NI Hepatitis B&C MCN |
| Dr | Ian Cadden | Consultant Hepatologist | Belfast Trust |
| Dr | Stephen Bailie/ Peter Ryan | GP Adviser, Directorate of Integrated Care | Health & Social Care Board |
| Ms | Helen Creighton | Pharmacist | Health and Social Care Board |
| Mrs | Kelly McIlroy | Health Protection Nurse | Public Health Agency |
| Dr | Conall McCaughey | Consultant Virologist | Belfast Trust |
| Ms | Seana Murray | Admin Support NI Hepatitis C Clinical Network | Belfast Trust |
| Mrs | Annelies McCurley | Regional NI Hepatitis C MCN Manager | Belfast Trust |
| Mrs | Orla McCormick | Hepatitis Specialist Nurse | Belfast Trust |
| Mrs | Karen Patterson | Hepatitis Specialist Nurse | Belfast Trust |
| Dr | Position Vacant | Consultant in Genitourinary Medicine | Belfast Trust |
| Mrs | Lorna Hawe | Regional Antenatal Screening Programme Co-ordinator | Public Health Agency |
| Mr | Michael Owens | Health and Social Wellbeing Improvement Manager | Public Health Agency |
| Mrs | Linda Wylie | Senior Health and Social Wellbeing Improvement Officer (Northern Area) | Public Health Agency |
| | Position vacant | Clinical Nurse Lead for Prison Healthcare | South Eastern Trust |
| Ms | Gemma Wasson | Hepatology Pharmacist | Belfast Trust |
| Dr | Helen Toal | Consultant in Addictions Psychiatry | Belfast Trust |
| Ms | Sonya Johnston | Team Lead &Substitute Prescribing Practitioner | Community Addictions Team, Ards Community Hospital |
| Mrs | Susan Semple | Senior Nurse for Homeless nursing Service/ The Belfast Inclusion Health Service | PHA Homeless Nursing Service |

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