Viral Hepatitis in Australia

Annual Report of Trends in Behaviour 2021

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<tr>
<td>AOD</td>
<td>alcohol &amp; other drug</td>
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<td>ARTB</td>
<td>Annual Report of Trends in Behaviour</td>
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<td>BBV</td>
<td>blood borne virus</td>
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<td>CHB</td>
<td>chronic hepatitis B</td>
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<td>CRP</td>
<td>Community Reference Panel</td>
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<td>CSRH</td>
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<td>DAA</td>
<td>direct-acting antiviral</td>
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<td>GBM</td>
<td>gay and bisexual men</td>
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<td>GCPS</td>
<td>Gay Community Periodic Survey</td>
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<td>GP</td>
<td>general practitioner</td>
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<td>HBV</td>
<td>hepatitis B virus</td>
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<td>HIV</td>
<td>human immunodeficiency virus</td>
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<td>NSP</td>
<td>needle and syringe program</td>
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<td>OAT</td>
<td>opioid agonist treatment</td>
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<td>OTP</td>
<td>opioid treatment program</td>
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<td>PLHCV</td>
<td>people living with hepatitis C</td>
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<td>PLHIV</td>
<td>people living with HIV</td>
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<td>PLSTI</td>
<td>people living with sexually transmissible infections</td>
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<td>PrEP</td>
<td>pre-exposure prophylaxis</td>
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<td>PWID</td>
<td>people who inject drugs</td>
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<td>STI</td>
<td>sexually transmissible infection</td>
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<td>TasP</td>
<td>treatment as prevention</td>
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Overview

This Annual Report of Trends in Behaviour (ARTB) focuses on hepatitis B and hepatitis C and provides a valuable opportunity to highlight our contributions to strategic responses in Australia. Our research contributes in important ways, both by participating in the monitoring activities that inform prevention, diagnosis and treatment efforts, and by continuing to critique and question the normative assumptions that sometimes underlie research, policy and practice around hepatitis B and hepatitis C and those whose lives are affected by these infections. This report maintains the organisational structure used in previous years, presenting material to reflect the respective prevention, care and treatment cascades. Below we highlight four key observations from our body of work in 2020.

Responding to hepatitis B requires better understanding of social and cultural knowledges of affected communities

Over the past few years our work has paid increasing attention to the social and cultural contexts of hepatitis B, a focus that has arisen from the remarkable lack of research in this area. Hepatitis B is the most common blood borne virus in Australia. In 2018, it was estimated that 226,566 Australians were living with chronic hepatitis B, yet 32% were not aware of their status and 78% (176,595 individuals) were not engaged in care (ASHM 2018). One of the key challenges for Australian governments, with their focus on Western biomedical approaches to hepatitis B, has been to recognise and navigate the cultural structures and values of communities affected by hepatitis B. This includes the different ways in which health and bodies may be understood among affected communities, the cultural meanings and values ascribed to hepatitis B, and the difficulties people living with the virus may have in navigating the Australian health care system. This is precisely the kind of information that social science research can offer and underscores why the Centre’s formative work with Australian Chinese and Vietnamese communities described herein is so important.

Hepatitis C: Relevant models of care and innovative prevention strategies

In 2020 we continued our work focusing on models of care and treatment for hepatitis C and the ongoing question of how to best address the needs of affected communities. In this work, we think critically about the ways that models of care are conceived and enacted in practice. For example, our work on Visualising the elimination of Hepatitis C investigates the processes by which ‘evidence’ is made and used in relation to new technologies and policies in health,
such as Direct Acting Antiviral (DAA) treatments. Such work provides a critical lens to the way that we understand hepatitis C treatments and policies, and in turn, helps to advocate for a more critical and careful practice-based approach to hepatitis C cure. Relatedly, we continue to stress the need to update and innovate approaches to prevention. We know that there remain sizeable numbers of people living with hepatitis C who either do not know about their status, or do not want, or cannot access treatment; and, indeed, people who have successfully completed treatment and want to remain virus-free.

**Stigma**

In 2020, we continued to examine the impact of stigma on communities affected by hepatitis B and hepatitis C, offering a range of possible interventions to mitigate its negative impact. The Stigma Indicators Project continues to monitor the experience of stigmatisation among key priority populations over time, producing new and compelling data on which to build interventions. Our next challenge will be to better understand how stigma operates in and impacts communities affected by hepatitis B, taking account of the specific cultural values, knowledges and contexts that produce stigma and, importantly, how these articulate with racism.

**COVID-19**

COVID-19 has affected all aspects of our research in 2020, affecting both our capacity to collect data and, in turn, to interpret what our data tells us about prevention, treatment and living with hepatitis B and hepatitis C. We know that, in 2020, there were substantial declines in screening for hepatitis B and hepatitis C in Australia (Doherty Institute, 2020), and that communities affected by hepatitis B and hepatitis C were disproportionately impacted by the pandemic. Our research *Assessing the impact of COVID-19 on harm reduction services* was careful to also identify how affected communities protected themselves against the threat of COVID, and to identify the opportunities and adaptations that arose out of changes to harm reduction and health-care service provision. Interestingly, we found that some harm reduction service users reported minimal disruptions to their daily lives in the face of COVID restrictions, in part reflecting their already socially isolated existence. Some participants reported experiences of hopelessness and increased drug use, yet others reported improved wellbeing due to increases in income support and improved access to takeaway doses of their opioid agonist treatment (OAT). Research about the impacts of COVID will be ongoing and our research to date reveals that care is needed to not assume that all impacts are negative.

Following is a short summary of each CSRH contribution in 2020.

**Community Reference Panel – involving peers in research**

The CSRH Community Reference Panel (CRP), unique in the Australian context, enables researchers to consult with people who have lived experiences of hepatitis B and hepatitis C, incarceration, sex work, and injecting drugs. The CRP provides specific feedback on various aspects of research projects, ensuring our work remains grounded in and respectful of the experiences and concerns of those most directly affected. The panel was in hiatus during 2020 but has returned in 2021.
Hepatitis B and hepatitis C prevention

Hepatitis C and sexualised drug use among gay and bisexual men

This study collected online survey data from GBM, comparing drug-use and sexual practices and HCV knowledge among those reporting group sex and sexualised drug use and those who do not. Men who participated in sexualised drug use were more likely to have engaged in sexually adventurous practices, to have injected drugs, to be living with HIV and to have greater HCV knowledge. They were also more likely to perceive themselves at risk of acquiring HCV and to know that their sexual activities put them at risk. Our research suggests a need to shift HCV prevention messaging for GBM from a focus on HIV status only to the broader sexualised drug use context and on how to minimise harms.

Perceptions and concerns of hepatitis C reinfection following prison-wide treatment scale-up: Counterpublic health amid hepatitis C treatment as prevention efforts in the prison setting

In this study men in prison who had completed DAA treatment were interviewed about their injecting risk practices, perceptions of strategies for HCV prevention within the prison setting, experiences of HCV treatment (as a strategy for prevention), and perceptions of reinfection following cure. HCV ‘cure’ was viewed as elusive in the absence of increased access to prevention strategies (e.g., opioid agonist therapy and prison needle syringe programs), with many participants perceiving that ‘cure’ was only temporary within an environment of policy restrictions.

Knowledge and beliefs about hepatitis B virus infection and associated factors among Chinese migrants in Australia

This study surveyed first generation Chinese immigrants from mainland China and their immediate descendants residing in Sydney and Melbourne. The median HBV stigma score was 50 (range = 21 to 78, with higher scores indicating greater levels of stigma), indicating that there was a moderate level of HBV-related stigma among the participants. The greatest stigma around HBV was found to be in relation to employment. Those with higher English proficiency, post-secondary education, lower levels of HBV-related stigma and those who had contact with people living with chronic Hepatitis B appeared to have greater HBV knowledge.

Destabilising the ‘problem’ of chemsex

Our study interviewed gay and bisexual men in four Australian cities to better understand their crystal methamphetamine use when combined with sex. Our findings suggest there is a wide range of practices: some men used crystal only when engaged in sex, yet for others their crystal use shifted from using primarily for socialising to occasions in which sex was subsequently or always intended to take place. Importantly, not all gay and bisexual men who use crystal in sexual settings reported problematic use.

Drug use and injecting by participants in Gay Community Periodic Surveys

Over the 10-year period 2011-2020, the proportion of gay and bisexual men who injected drugs in the six months prior to survey participation has been stable nationally (6% on average). The injection of non-prescribed drugs for recreational purposes remains relatively rare among gay men although it was more common than in the general population. HIV-positive men are more likely to report injecting drug use than HIV-negative men. (Meth)amphetamines and steroids are the substances most commonly injected by gay men.
Testing, diagnosis and lived experience of hepatitis B and hepatitis C

Stigma Indicators Monitoring Project

This national study aims to monitor experiences of stigma among priority populations affected by hepatitis B and hepatitis C. Being able to quantify the expression of stigma towards these groups is an important step in informing evidence-based strategies to eliminate its negative effects. In 2020, 30% of participants of a sample of the Australian public indicated that they would behave negatively towards other people because of their hepatitis C status; 72% indicated that they would behave negatively towards other people because of their injecting drug use, including 19% who indicated that they would ‘often’ or ‘always’ do so.

Stigmatising attitudes towards people who inject drugs, and people living with BBVs or sexually transmissible infections in a representative sample of the Australian population

This study examined socio-demographic characteristics of the general Australian population that were associated with holding stigmatising attitudes towards people who inject drugs, people living with hepatitis C, people living with HIV, or people living with sexually transmissible infections. Results indicated that personally knowing someone from a target group was associated with holding less stigmatising attitudes towards that particular group, while voting for a conservative political party was associated with more stigmatising attitudes towards each target group. Age, education, income and country of birth all influenced levels of stigmatising attitudes reported.

Impact of stigma and discrimination experienced by priority populations affected by STIs and BBVs in the ACT

This study examined the impact of stigma and discrimination experienced by priority populations affected by STIs and BBVs in the ACT, with the aim of understanding the healthcare experiences of priority populations. Findings reveal that stigma remains persistent in healthcare services and that previous experiences of discrimination may result in reluctance to continue to access these services.

Ageing among people with HIV, chronic hepatitis B and hepatitis C in the ACT

This study explored the complex and changing needs of people ageing with chronic hepatitis B, hepatitis C or HIV living in the ACT. The findings suggest that certain features should be incorporated into policies to address the specific needs of each group: fear of stigma and discrimination; lack of control over disclosure of personal identity or lifestyle; social isolation; access to aged care services at an earlier age; and training and education on the needs of people living with hepatitis B, hepatitis C or HIV for the aged care workforce, service providers, and community.

Stories of family life in the context of HIV, hepatitis B or hepatitis C

This is the first qualitative interview study to describe the experiences of families in Australia affected by HIV, hepatitis B or hepatitis C. Key findings include: disclosure to family included experiences of shock, blame and rejection, as well as families rallying to provide emotional, practical or financial support. Some families felt compelled to reach out and educate friends and acquaintances to try and destigmatise BBV, while others kept the diagnosis strictly secret.
Hepatitis C, stigma and treatment-as-prevention in prison

This research focuses on initial, pre-treatment interviews with prisoner participants from the SToP-C study, the first real-world trial of HCV ‘treatment-as-prevention’ in prison. Participant accounts described a complex picture, with reports ranging from those suggesting the ‘normalisation’ of HCV to those detailing the potential effects of HCV-stigma, including additional disciplinary attention from officers and/or the rejection from peer networks by fellow prisoners.

Assessing the impact of COVID-19 on harm reduction services

This study comprised an on-line survey conducted among staff members of a number of different AOD and harm reduction services, along with qualitative interviews with both harm reduction service providers and users. Staff generally felt supported by their service during the numerous workplace changes that had been implemented in response to the pandemic. Service users described minimal impacts of COVID-19 on their lives. Almost all participants reported adopting measures to comply with public health advice.

Future Directions: Hepatitis B stigma among the Vietnamese and Chinese communities living in Australia

This project will utilise the CSRH ‘stigma indicator’ to monitor the expression of stigma and discrimination from the Vietnamese and Chinese communities towards people living with HBV and investigate other contextual variables related to these experiences. It is anticipated that data collection will start in June 2021.

Treatment, service engagement and care for hepatitis B and hepatitis C

The role of social capital in facilitating hepatitis C treatment scale-up in prison

This qualitative study sought to understand the role of social capital within the SToP-C trial, the world’s first trial of HCV treatment-as-prevention in the prison setting. Our findings suggest that social capital fostered HCV treatment uptake within the trial. ‘Bonding’ social capital encouraged treatment uptake and alleviated concerns of side effects, while ‘bridging’ social capital supported prison-wide treatment uptake, and ‘linking’ social capital fostered trust in study personnel (including nurses and correctional officers), thereby enhancing treatment engagement.

Perceptions and concerns of hepatitis C reinfection following prison-wide treatment scale-up

This research draws on qualitative interviews completed with SToP-C participants following prison-wide DAA treatment scale-up. Participants identified a number of challenges of meaningful HCV ‘cure’ in the absence of increased access to prevention strategies (e.g., opioid agonist therapy and prison needle syringe programs), along with concerns that ‘cure’ was only temporary whilst incarcerated. HCV DAA treatment is provided under the guise of ‘cure is easy’, but fails to address the ongoing risk factors experienced by people who inject drugs in prisons.
Visualising the elimination of hepatitis C

Treating disease elimination targets and their visualisations as performative, we take the case of hepatitis C elimination to interrogate how futuring practices in public health govern the present and make effects. This disease elimination future relies heavily on instrumental rationalities and logics of the present, including the privileging of biomedical technoscientific knowledge, implementation science and global health governance, to the exclusion of other matters of concern, flattening out complexity to perform its certain achievability.

Applying a diffusion of innovations framework to the scale-up of direct-acting antiviral therapies for hepatitis C virus infection

Applying a diffusion of innovations framework, the aim of this study was to identify structural factors impacting practitioner experiences of managing HCV treatment. Two primary themes were explored: contextual factors for the diffusion of DAA therapies, including attempts by participants to shift clinic culture and respond to siloed health structures, and adopter factors. Some participants chose to ‘rock the boat’ by circumventing clinic protocol and HCV guidelines to treat more clients, effectively shifting adopter categories to become greater advocates in HCV care. While a role for GPs as the ‘new adopters’ in HCV management was discussed, many participants expressed uncertainty as to how much GPs should become involved in the diffusion of DAA therapies more widely.

Barriers and facilitators to engaging in hepatitis C management among general practitioners and alcohol and other drugs (AOD) specialists

This qualitative study investigated barriers and facilitators for HCV management among general practitioners who prescribe opioid agonist therapy and AOD specialists. Participants expressed professional fulfillment in managing HCV care and many benefited from specialist mentorship. Most participants expressed frustration with ongoing implementation barriers, notably, a lack of onsite phlebotomy services and liver disease staging equipment. Poor venous access among persons who inject drugs was elucidated as a major barrier to treatment initiation. Some participants did not receive clinic manager support to engage in HCV care.

Needle and syringe programs as hepatitis C treatment sites

This research explores the role of needle and syringe programs in providing hepatitis C treatment to people who inject drugs through an exploration of Positively Hep, a peer-referral, incentive-based project in Sydney, Australia. Within the first 26 months of operation, Positively Hep has provided education about hepatitis C and DAA treatments to 326 individuals, and has tested 145 people, 44% (n=64) of whom have tested positive. Of these individuals, 21 (33%) have begun treatment, and 18 (28%) have successfully completed treatment.
The Community Reference Panel (CRP) was convened in 2016 to allow researchers to consult with people who have lived experiences of hepatitis B, hepatitis C, HIV, incarceration, sex work, and injecting drugs. In 2017, the panel expanded to include people with disability in the areas of physical, intellectual and mental health. The purpose of this panel is to provide specific guidance and feedback on various aspects of research projects. This feedback is essential to ensuring that CSRH research is grounded in and respectful of the experiences and concerns of community members. Being a member of the panel allows for individuals to have a voice and share experiences or highlight issues concerning the target groups. Although funding of the CRP was suspended during the 2020 COVID-19 pandemic, panel consultations have recommenced in 2021. The three coordinators for the CRP: Melinda Walker, Kim Beadman, and Mitchell Beadman. Melinda is enrolled in a Bachelor of Social Work (Honours) and Kim has recently graduated with a Bachelor of Psychological Sciences and Criminology, both at UNSW. Mitchell is currently studying at UNSW. We have a passion for social justice and equality for all people in the community, particularly Aboriginal and Torres Strait Islander people, people from culturally and linguistically diverse backgrounds, as well as people with disability.
Hepatitis C and sexualised drug use

While injecting drug use remains the primary route of hepatitis C (HCV) transmission in Australia, there is increasing evidence of HCV transmission among gay and bisexual men (GBM) in the absence of drug injecting. Research amongst gay and bisexual men suggests that sexually adventurous practices, including group sex often involves drug use. Drug use in the context of sexually adventurous activities is associated with increased risk of transmission of HIV, HCV and other STIs. This suggests a need to identify sexually adventurous and injecting practices specific to contexts where group sex and drug use are co-occurring, practices that may increase HCV transmission and the possibility of reinfection. The study collected online survey data from 193 GBM and compared drug use practices, sexual practices, HCV knowledge, HCV disclosure and perceptions of HCV risk among GBM reporting group sex and drug use (sexualised drug use) and those who do not. Men who participated in sexualised drug use were more likely to have engaged in sexually adventurous practices, to have injected drugs, to be living with HIV and to have greater HCV knowledge. They were also more likely to perceive themselves at risk of acquiring HCV and to know that their sexual activities put them at risk. They had lower expectations of HCV disclosure and were less concerned about the HCV status of their partners. This research suggests a need to shift HCV prevention messaging for GBM from a focus on HIV status only to the broader sexualised drug use context and on how to minimise harms. Prevention messages should include information about harm reduction practices related to injecting, while emphasizing the importance of HCV testing, treatment and possibilities of reinfection particularly among those GBM who engage in sexualised drug use.


Perceptions and concerns of hepatitis C reinfection following prison-wide treatment scale-up

Hepatitis C infection is highly prevalent within the prison setting. DAA therapies have changed the HCV treatment landscape, offering simple treatment (with minimal side-effects) and high efficacy. These advances have enabled the first real-world study of HCV treatment as prevention (TasP), the Surveillance and Treatment of Prisoners with hepatitis C (SToP-C) study.

Twenty-three men who had completed DAA treatment within the SToP-C study participated in semi-structured interviews. Topics explored included ongoing risk practices, perceptions of strategies for HCV prevention within the prison setting, experiences of HCV treatment (as a strategy for prevention), and perceptions of reinfection following cure.
Data analysis was informed by a counterpublic health lens, exploring the unique health needs of a marginalised population (i.e. people who inject drugs) that is counter to the norm. This approach enabled understanding of perceptions of risks of reinfection among people treated for HCV within the prison setting.

HCV ‘cure’ was viewed as elusive in the absence of increased access to prevention strategies (e.g., opioid agonist therapy and prison needle syringe programs), with many participants perceiving that ‘cure’ was only temporary within an environment of policy restrictions. Participants who continued to inject drugs in prison following HCV treatment reported feeling an expectation to maintain their ‘cure’ status, though feared an inability to successfully do so in the absence of harm reduction strategies.

Health promotion campaigns widely touted HCV DAA treatments under the guise of ‘cure is easy’, but people experiencing HCV ‘cure’, particularly those in prison, may become overwhelmed by expectations (rather perceived or actual) to maintain their ‘cure’ status. Health messaging must encompass availability of re-treatment for reinfection and should be tailored to ensure patient-centred care. Health interventions in prison must address the whole person and the circumstances in which they live, not just the illness.


Knowledge, attitudes and practices related to hepatitis C among gay and bisexual men in the era of direct-acting antivirals

Despite subsidised access to the new class of DAA drugs for the treatment of HCV, current research indicates that the incidence of HCV is increasing among HIV-positive gay and bisexual men in Europe, the United States and Australia, with sexual transmission noted as the primary route of infection. Most HIV positive men living with HIV in Australia are already engaged in clinical care – as are an increasing number of HIV-negative men – therefore there is the potential for reducing onward HCV infections among this group through proactive testing and treatment. However, to achieve the individual and population benefits of the new DAAs, social factors that improve uptake of HCV testing and treatment also need to be identified and understood. To design appropriate strategies to increase testing, diagnosis and treatment, and to prevent HCV transmission among HIV-positive gay and bisexual men, it is important to understand their knowledge, attitudes and health care experiences in relation to HCV, including engagement in sexual or drug risk behaviours that may facilitate transmission of the virus.

This study explored knowledge, attitudes and practices related to HCV among 194 gay and bisexual men collected through an online survey in Australia with assistance from relevant community organisations. Overall, respondents had high levels of HCV knowledge, but only 76% knew about the availability of new treatments for HCV. Men's knowledge of their own HCV testing history was questionable, with one in six unaware if they had ever been tested. Among the men who reported recent drug injecting, a third had been injected by someone else, and two-thirds had injected someone else, which suggests that there is a subculture of cross administering within particular networks of sexualised drug use.
The robust socio-cultural and clinical infrastructure that has developed among gay and bisexual men around HIV care and prevention creates the potential for HCV elimination in this group. Given that risk of HCV transmission is concentrated within particular sub-groups (men who participate in sexual subcultures characterised by adventurous sex practices, condomless sex, multiple partners, drug use and a high proportion of HIV-positive men) focus should be placed on the potential for developing strategies among this group that might increase HCV testing and treatment, and practices to reduce the risk of onward infection.


### Knowledge and beliefs about hepatitis B virus infection and associated factors among Chinese migrants in Australia

Chinese immigrants to Australia have an increased prevalence of hepatitis B virus (HBV) infection compared to the general population (MacLachlan & Cowie, 2018). Despite this, engagement with HBV screening and healthcare for chronic hepatitis B (CHB) among immigrants of Chinese background is relatively low (MacLachlan et al., 2020). This study investigated knowledge about HBV and stigma associated with HBV among this high-risk community. Socio-demographic factors that might influence HBV knowledge and the association between HBV knowledge and HBV stigma has also been explored.

During February to September 2019, first generation Chinese immigrants from mainland China and their immediate descents residing in Sydney and Melbourne were recruited via convenience and snowball sampling. Participants completed a survey in either English or Chinese. Survey items included HBV knowledge, attitudes towards people living with CHB and demographic information.

Three hundred and ninety-six participants completed the survey. The median HBV knowledge score was 53% correct, indicating that knowledge about HBV was low to middle range among participants. Participants showed the greatest level of knowledge (>90%) on 9 of the 34 questions: HBV is a viral infection, HBV can cause cirrhosis and liver cancer, HBV is preventable by vaccination, HBV can be spread by blood or during childbirth, HBV can only be identified by a blood test and cannot be cured by natural therapist. In contrast, 13.8%-63.1% of participants believed that HBV transmission could occur through casual contact and contaminated food which proved to be incorrect.

The median HBV stigma score was 50 (range = 21 to 78, with higher scores indicating greater levels of stigma), indicating that there was a moderate level of HBV-related stigma among the participants. The greatest stigma around HBV was found to be in relation to employment. Those with higher English proficiency, post-secondary education, lower levels of HBV-related stigma and those who had contact with people living with CHB appeared to have greater HBV knowledge.

Findings of this study can be used to inform future education to improve HBV knowledge and decrease stigma in the Chinese community. Additionally, the relationships between HBV knowledge and particular sociodemographic variables, knowing someone living with HBV and
stigma associated with HBV provides key information to assist in the development of targeted health promotion to increase HBV knowledge and change stigmatising attitudes towards HBV among the Chinese community in Australia.


**Diversity in settings, relations and practices revealed in Australian gay and bisexual men's crystal methamphetamine use**

In Australia, the crystalline form of methamphetamine (crystal methamphetamine; hereafter “crystal”) is associated with sexual activity among a minority of gay and bisexual men. While the term “chemsex” is increasingly used to refer to the intentional and simultaneous use of drugs to facilitate, enhance, and/or prolong sex, the way in which these practices have been framed contributes to the rise of a narrow set of understandings defined by the circumstances and behaviours presumed of drug-enhanced sexual activity. Our reading of the literature suggests that its definition relies on three key intersecting elements: it is facilitated by online technologies; drugs are used intentionally for sexual purposes; and chemsex practices are necessarily risk-inducing.

*The Crystal, Pleasures and Sex between Men* study conducted 88 interviews with gay and bisexual men in four Australian cities to better understand their crystal methamphetamine use when combined with sex. We analysed their responses to trace their experiences across various settings and relations to determine how accurately these three elements reflect the wider experiences and understandings of crystal-enhanced sex. Our findings suggest that there was a wide range of practices among gay and bisexual men who use crystal methamphetamine in combination with sex in Australia. Some men used crystal only when engaged in sexual; for others, their crystal use shifted from using primarily for socialising to occasions in which sex was subsequently or always intended to take place. Likewise, some men used crystal alone while online, and others adopted different ways and purposes for using depending on where they were, whom they were with, and what they intended doing. This variety of experiences points to the lack of any singular intention in using crystal for sex, or as an always pre-determined aspect of gay and bisexual men's online-facilitated interactions. Finally, not all gay and bisexual men who use crystal in sexual settings reported problematic use.

At the same time, chemsex has become a politically salient category capable of spurring policy and programmatic responses. However, it is then often operationalised as the only way to approach drug-enhanced sexual activity and to understand the character and motivation of all men who participate in it. Rather than approaching chemsex as a singular object or narrow set of practices, we seek to destabilise the term so that a greater diversity and contingency of practice is captured. This critical approach to understanding chemsex retains the term's discursive and practical value in public health in providing a framing of drug-enhanced sexual practices but moves beyond stabilised definitions of contexts and behaviours to recognise that chemsex is always mediated by other relations, settings and practices.
Drug use and injection by participants in the Gay Community Periodic Surveys

The GCPS include questions about the not mutually exclusive use of a range of drugs. Table 1 and Figure 1 show the use of selected drugs by men nationally (including every participating state and territory) in the six months prior to the survey. Findings illustrate changes in commonly used recreational drugs among gay men across the country.

Of a particular note, the GCPS recruitment process had been subject to the COVID 19 restriction changes in 2020. But despite the COVID19 influences, most trends in recreational drug use in the last three years remain stable, after adjustment for recruitment sources and age-standardisation.

Table 1 and Figure 1 show that:

- Amyl nitrite (‘poppers’) is the most commonly reported drug used by participants in the GCPS. Amyl nitrite is an inhaled drug which is popular among gay men as both a euphoric and muscle relaxant; it is used as both a ‘party’ drug for dancing and in sexual settings. Use of ‘poppers’ is reported by 41% of men, on average, in the GCPS and the use of ‘popper’ has increased during the ten-year period (37% in 2011 to 44% in 2020, although a stable trend during 2018-2020).
- Cannabis is the second most commonly reported drug used by participants in the GCPS (by 30% of men on average) and its use has also remained stable since 2011.
- Proportions reporting the use of ecstasy (19% in 2011 to 16% in 2020,) and that of speed (10% in 2011 to 5% in 2020, rates more than halved) have both declined during the ten-year period but remained stable during 2018-2020.
- Cocaine use has increased since 2011, from 11% to 19% in 2020 but remained stable during 2018-2020.
- Crystal meth consumption has remained stable since 2011 (11% on average during the 10-year period). The use of crystal methamphetamine particularly in the context of sexual encounters and poly drug use (with or without injection) among gay men identifying problematic use suggests appropriate harm reduction and treatment services for these men are required.
- Since 2010, GHB/GBH use has also slightly increased, from 7% in 2011 to 11% in 2020 (stable during 2018-2020).
- The use of erectile dysfunction medications (e.g., Viagra and Cialis), particularly among older age groups of gay and bisexual men, have increased over the last 10 years (22% in 2011 to 31% in 2020) but has not changed since 2018.

Injection of non-prescribed drugs for recreational purposes remains relatively rare among gay men although it is more common than in the general population. Over the 10-year period, the proportion of men who injected drugs in the six months prior to survey has been stable.
nationally (6% on average). HIV-positive men are more likely to report injecting drug use than HIV-negative men. (Meth)amphetamines and steroids are the substances most commonly injected by gay men.

Table 2 (unadjusted) shows that, on average, 71% had ever been tested for hepatitis C. Over time, the rates have decreased but remained stable in the last three years. Of these, 2.6% reported having chronic hepatitis C during 2017-2020 (a stable trend). Since 2018, proportions vaccinated against hepatitis A has been about 75% and that against hepatitis B has been about 79%. Despite the impact of COVID19, both vaccination rates show an upward trend.

**Table 1: Men who reported any use of selected recreational drugs in the six months prior to the survey: GCPS, 2011-2020 (all states or territories)**

<table>
<thead>
<tr>
<th>Drug</th>
<th>2011 %</th>
<th>2012 %</th>
<th>2013 %</th>
<th>2014 %</th>
<th>2015 %</th>
<th>2016 %</th>
<th>2017 %</th>
<th>2018 %</th>
<th>2019 %</th>
<th>2020 %</th>
<th>Overall trend</th>
<th>Trend in last 3 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amyl nitrite</td>
<td>37.1</td>
<td>37.1</td>
<td>38.5</td>
<td>38.3</td>
<td>40.6</td>
<td>39.1</td>
<td>42.3</td>
<td>43.3</td>
<td>44.7</td>
<td>44.2</td>
<td>↑</td>
<td>ns</td>
</tr>
<tr>
<td>Cannabis</td>
<td>29.4</td>
<td>29.8</td>
<td>30.4</td>
<td>33.1</td>
<td>28.4</td>
<td>28.9</td>
<td>31.5</td>
<td>29.9</td>
<td>28.9</td>
<td>32.1</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>18.6</td>
<td>17.1</td>
<td>18.6</td>
<td>17.3</td>
<td>15.0</td>
<td>14.8</td>
<td>16.6</td>
<td>15.8</td>
<td>15.6</td>
<td>16.4</td>
<td>↓</td>
<td>ns</td>
</tr>
<tr>
<td>Cocaine</td>
<td>10.9</td>
<td>10.7</td>
<td>13.0</td>
<td>11.3</td>
<td>12.3</td>
<td>12.2</td>
<td>14.1</td>
<td>16.4</td>
<td>15.4</td>
<td>18.9</td>
<td>↑</td>
<td>ns</td>
</tr>
<tr>
<td>Crystal meth-amphetamine</td>
<td>9.1</td>
<td>11.2</td>
<td>11.2</td>
<td>13.0</td>
<td>13.2</td>
<td>12.4</td>
<td>11.2</td>
<td>11.0</td>
<td>9.5</td>
<td>12.9</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Speed</td>
<td>10.2</td>
<td>11.0</td>
<td>10.2</td>
<td>7.5</td>
<td>6.6</td>
<td>6.0</td>
<td>7.0</td>
<td>5.4</td>
<td>5.1</td>
<td>5.1</td>
<td>↓</td>
<td>ns</td>
</tr>
<tr>
<td>GHB/GBH</td>
<td>6.5</td>
<td>6.7</td>
<td>7.8</td>
<td>6.6</td>
<td>7.7</td>
<td>7.1</td>
<td>9.8</td>
<td>9.0</td>
<td>8.8</td>
<td>11.3</td>
<td>↑</td>
<td>ns</td>
</tr>
<tr>
<td>Erectile dysfunction medication (e.g. Viagra, Cialis)</td>
<td>22.2</td>
<td>23.9</td>
<td>23.0</td>
<td>23.8</td>
<td>25.5</td>
<td>26.6</td>
<td>27.5</td>
<td>29.4</td>
<td>29.6</td>
<td>30.8</td>
<td>↑</td>
<td>ns</td>
</tr>
<tr>
<td>Any drug injection</td>
<td>5.0</td>
<td>6.1</td>
<td>5.1</td>
<td>6.8</td>
<td>7.0</td>
<td>7.0</td>
<td>4.6</td>
<td>6.0</td>
<td>5.1</td>
<td>6.3</td>
<td>ns</td>
<td>ns</td>
</tr>
</tbody>
</table>

**Table 2: Access to hepatitis testing and vaccination: GCPS, 2020 (all states or territories, unadjusted data)**

<table>
<thead>
<tr>
<th>Test</th>
<th>2013 %</th>
<th>2014 %</th>
<th>2015 %</th>
<th>2016 %</th>
<th>2017 %</th>
<th>2018 %</th>
<th>2019 %</th>
<th>2020 %</th>
<th>Overall trend</th>
<th>Trend in last 3 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever tested for hep C</td>
<td>73.6</td>
<td>70.8</td>
<td>70.5</td>
<td>70.1</td>
<td>70.2</td>
<td>70.4</td>
<td>72.3</td>
<td>69.1</td>
<td>↓</td>
<td>ns</td>
</tr>
<tr>
<td>Hep C (chronic infection)</td>
<td>2.4</td>
<td>2.2</td>
<td>3.0</td>
<td>2.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Hep A vaccination (ever)</td>
<td>72.5</td>
<td>76.7</td>
<td>75.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Hep B vaccination (ever)</td>
<td>77.3</td>
<td>80.7</td>
<td>79.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-</td>
<td>↑</td>
<td></td>
</tr>
</tbody>
</table>

*among those ever tested for hep C
Figure 1: Men who reported any use of selected recreational drugs in the six months prior to the survey: GCPS, 2011-2020 (all states or territories)
Stigma Indicators Monitoring Project

The aim of this national study is to monitor experiences of stigma among priority population groups identified by the five national strategies addressing blood borne viruses and sexually transmissible infections, including men who have sex with men, people who inject drugs, people living with HIV, people living with hepatitis B and hepatitis C, and people who engage in sex work. The project further aims to monitor the expression of stigma by the general public and health care workers towards these priority groups.

In 2017-18, a mirrored Stigma Indicator was administered to a representative sample of the adult Australian population via the Australian Survey of Social Attitudes (AuSSA; n=1,001). In 2020, the mirrored Indicator was also included in an online survey of the Australian general public recruited via social media advertising (n=2,010). Due to differences in recruitment methods and participant characteristics, differences between the two surveys should be interpreted cautiously. Notably, participants in the 2020 online survey were much more likely than AuSSA participants to report personally knowing someone living with hepatitis C (42% vs. 9%) or someone who injects drugs (70% vs. 12%).

In 2020, 30% of participants indicated that they would behave negatively towards other people because of their hepatitis C status, compared with 50% of the AuSSA sample.

Figure 2. Stigma toward people because of their hepatitis C status: Australian general public.

| Would you behave negatively towards other people because of their hepatitis C status? |
|---------------------------------|---|---|---|---|---|
| 2020 online survey (n=2,010)    | 70 | 18 | 9 | 2 |
| AuSSA (n=1,001)                 | 50 | 29 | 15| 4 |
| 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |

- Never
- Rarely
- Sometimes
- Often
- Always
In both surveys, members of the Australian general public were more likely to report that they would behave negatively towards other people because of their injecting drug use than because of their hepatitis C status. In 2020, 72% of participants indicated that they would behave negatively towards other people because of their injecting drug use, including 19% who indicated that they would ‘often’ or ‘always’ do so. These proportions were lower than among AuSSA respondents, 86% of whom indicated they would behave negatively towards other people because of their injecting drug use, including 28% who indicated this would ‘often’ or ‘always’ be the case.

**Figure 3. Stigma toward people because of their injecting drug use: Australian general public**

![Graph showing stigma towards injecting drug use](image)

Being able to quantify the expression of stigma towards these groups is an important step in informing evidence-based strategies to eliminate its negative effects. Similarly, quantifying the experience of stigma from the point of view of priority groups is an important mechanism to track progress against the national strategies’ aims. We have recently piloted brief stigma intervention projects with samples of the Australian general public and health care workers. Results regarding the effectiveness of these interventions will be published later in 2021. Future work will continue to monitor the experience and expression of stigma in relation to priority groups, which will enable more meaningful comparisons of data over time.


## Stigmatising attitudes towards people who inject drugs, and people living with blood borne viruses or sexually transmissible infections

This study examined socio-demographic characteristics of the general Australian population that were associated with holding stigmatising attitudes towards people who inject drugs (PWID), people living with hepatitis C (PLHCV), people living with HIV (PLHIV), or people living with sexually transmissible infections (PLSTI). Questions were included in the Australian Survey of Social Attitudes (total sample= 1,001). Attitudes towards each of the target groups
were measured by 5-item scales. Bivariate analyses and multiple regression analyses were conducted to identify socio-demographic characteristics that were associated with stigmatising attitudes towards each group.

Results indicated that personally knowing someone from a target group was associated with holding fewer stigmatising attitudes towards that particular group, while voting for a conservative political party was associated with more stigmatising attitudes towards each target group. Personal contact with PWID was not independently associated with attitudes towards PWID, however, an interaction effect between contact and political voting history was evident. Knowing someone who injects drugs was associated with less stigmatising attitudes towards PWID among those who voted for the Australian Greens or Labor party at the previous federal election, but not among those who voted more conservatively (i.e., for the Coalition). In addition, more stigmatising attitudes towards PWID were reported by participants who had completed lower levels of formal education and those who were not married, and more stigmatising attitudes towards PLHIV and PLSTI were reported by older participants and those with lower household incomes. Participants who were born overseas reported more stigmatising attitudes towards PLHIV than those born in Australia. Results also highlight differences between participants’ attitudes towards a stigmatised behaviour (i.e., injecting drug use) and their attitudes towards stigmatised conditions (i.e., blood borne viruses and sexually transmissible infections). This may be due to perceptions that injecting drug use is a personal choice, which is under the control of PWID. When people hold these views, they are more likely to discriminate based on the behaviour.

Identifying characteristics that are associated with stigmatising attitudes may have global implications for informing stigma reduction interventions, particularly in relation to utilising different approaches to reducing stigma with different socio-demographic groups within the Australian general population. The potential for intersecting and layered stigma must be considered. Any attempts to reduce stigmatising attitudes within the general population must account for overlaps between different stigmatising behaviours and conditions and the simultaneous manifestations of these, to promote positive health outcomes for affected communities.


**Impact of stigma and discrimination experienced by priority populations affected by STIs and BBVs in the ACT**

The past decade has witnessed developments in the treatments of sexually transmitted infections (STIs) and blood borne viruses (BBVs), most notably the recent advances in antiviral treatment for HCV and biomedical interventions for HIV, such as pre-exposure prophylaxis (PrEP). Given the preventable and treatable nature of many BBVs and STIs, emphasis has been placed on the promotion of positive healthcare seeking behaviour and ensuring healthcare services are accessible and targeted to the communities they service. Experiencing stigma in health care services can undermine positive health outcomes for people living with BBVs
and STIs. To significantly improve health outcomes, it is important to explore factors that may act as barriers to testing, diagnosis and accessing treatment and care amongst these groups, particularly the stigma and discrimination experienced among priority marginalised populations.

This study was funded by ACT Health to examine the impact of stigma and discrimination experienced by priority populations affected by STIs and BBVs in the ACT as identified by the national strategies, with the aim of understanding the healthcare experiences of the following priority populations: Aboriginal and Torres Strait Islanders, people who inject drugs, gay men and other men who have sex with men, culturally and linguistically diverse people and refugees, sex workers, people in custodial settings and young people. Consultations were undertaken with 27 stakeholders and 46 community members from the ACT.

Findings reveal that stigma remains persistent in healthcare services and that previous experiences of discrimination or fear of mistreatment may result in reluctance of people from these affected communities to continue to access these services. However, some marginalised groups are more informed and better able to navigate health systems particularly those targeted for their group. People affected by or at risk of blood borne viruses and sexually transmitted infections need to be effectively engaged with community healthcare services to improve testing, treatment and care. On-going staff training and education is important to ensure healthcare environments are welcoming and inclusive. The perceived fragmented structure of health services was reported to be a major barrier by participants with a demand for stronger partnerships, pathways and collaboration between health services. Specialist services and those health services that employed peers with lived experience were highly valued by staff and clients. Optimising services to make clients feel safer, reducing stigmatising attitudes and offering holistic trauma informed care can change these clients from priority groups may interact with healthcare services.


Ageing among people with HIV or Chronic HBV/HCV in the ACT

This is a government-commissioned health policy research. The main objective was to explore the complex and changing needs of people ageing with chronic HBV, HCV or HIV in ACT.

People living with or affected by HBV, HCV or HIV represent a distinct cohort associated with specialised health needs within Australia's rapidly ageing population. The increasing life expectancy of this population warrants specific attention to the effects of co-morbidities and co-pharmacies that may contribute to or compound premature ageing, highlighting limitations to the effectiveness of mono-disease treatment.

Multi-layered stigma, which is further compounded by pre-existing or emerging social and economic disadvantages, a lack of adequate social support, and a disproportionate burden of mental health conditions, creates substantial structural barriers for these people, especially when they access various health and community service systems and transit between them.

Not only in ACT but also nationally and in several countries like Australia, there is an increasing cohort of people aged 50 years and above living with chronic HBV, HCV or HIV. The complex
relationship between bio-physical, behavioural and lifestyle, and social and structural factors reinforces the need for a multifaceted approach incorporating care, treatment, and support of people aged 50 years and above living with or affected by these chronic viral infections.

To ensure that services are accessible, appropriate, and affordable, the following aspects should be incorporated into existing and future policies to address the specific needs of these groups, including:

- Fear of stigma and discrimination
- Lack of control over disclosure of personal identity or specific lifestyle
- Social isolation
- Access to aged care services at an earlier age
- Training and education on the needs of people living with HBV, HCV or HIV for the aged care workforce, service providers, and community.

To better serve these people living with chronic HBV, HCV or HIV, the project team, working through a partnership approach, has identified the following priorities targeting those aged 50 years and above (before they approach the age of 65 years old):

- opportunities for policy and action-plan development, establishment of new services, and linking affected people to existing services
- provision of home-based aged care services for priority populations and in various priority settings, building individual and community resilience with the aim of preserving individuals’ routine daily-life activities and basic functions
- optimising existing nurse-led health service navigation models to better tailor service referral pathways, and
- optimising peer-led service navigation models led by key community organisations where trained peers from these priority populations are expected to contribute to the aged care community workforce and embrace inclusivity and equity in service provision and delivery.


My health, our family: documenting stories of family life in the context of HIV, hepatitis B or hepatitis C

The clinical management of blood borne viruses has changed rapidly in recent years. Yet social stigma remains a persistent issue. Families which include people with mixed viral status (also known as ‘serodiscordance’) play a critical role in supporting those who have been diagnosed with HIV, hepatitis B and/or hepatitis C. However, little is known about the role and experiences of families in the prevention, management and treatment of these viruses. We conducted the first qualitative interview study to describe the experiences of families in Australia affected by HIV, hepatitis B or hepatitis C. 61 people shared with us their stories of living with a blood borne virus or supporting a diagnosed family member. We also interviewed 20 key informants working in the health and social policy, care and advocacy sectors. We published several papers which describe what we learned from these interviews, and more are on the way. But key findings
include those stories of disclosure to family included experiences of shock, blame and rejection, as well as families rallying to provide emotional, practical or financial support. Some families felt compelled to reach out and educate friends and acquaintances to try and destigmatise these blood borne viruses, while others kept the diagnosis strictly secret. Family support was both desired and often expected when facing a crisis, so when support was not forthcoming, it was seen as hurtful and unforgivable. Despite the unlikely probability of transmission in casual, everyday interactions, fears about ‘contagion’ surfaced in some of our interviews. This occurred across cultural backgrounds and across all three viruses. In contrast, in many interviews, transmission risk was dismissed as a consideration and narratives of love, solidarity and science were instead prioritised and mobilised to counter traditional notions of risk.


Hepatitis C, stigma and treatment-as-prevention in prison

The advent of DAAs is dramatically reshaping the HCV treatment landscape and prisons are set to play a central role in elimination efforts. While there is a substantial literature addressing the centrality of stigma to experiences of living with HCV in the community, including as a barrier to treatment, scant attention has been paid to documenting how HCV-stigma figures within the distinct sociality of prison life. This article focuses on initial, pretreatment interviews with prisoner participants (n = 32) from the first, real-world trial of HCV ‘treatment-as-prevention’ in prison: Australia’s Surveillance and Treatment of Prisoners with Hepatitis C (SToP-C) study. Drawing on recent developments in stigma theory alongside Goffman’s original insights, we posit HCV-stigma as a relational, contingent and political process, materialised across the network of power relations in prison. Participant accounts describe a complex picture, with reports ranging from those suggesting the ‘normalisation’ of HCV to those detailing the potential effects of HCV-stigma, including additional disciplinary attention from officers and/or the rejection from peer networks by fellow prisoners. While acknowledging the limiting effects HCV-stigma may yet have on treatment-as-prevention efforts, we speculate that with committed political leadership, operational investment, sufficient prisoner engagement, interventions such as SToP-C may also afford opportunities for such effects to be challenged, disrupted, and even left behind.


Assessing the impact of COVID-19 on harm reduction services

Given that COVID is likely to have the most adverse impact on vulnerable and marginalised groups like PWID, NSW Health commissioned CSRH to conduct research which aimed to assess the impact of COVID-19 on harm reduction services for PWID in NSW. An on-line survey was conducted among staff members of several different AOD and harm reduction services over a five-month period from 20 July 2020 to 22 December 2020. A link to the online survey was
incorporated into the emails to staff who were part of the NSP Workers Forum or AOD staff at a NADA member organisation. AOD and harm reduction staff participants were asked questions about their feeling, beliefs and knowledge around COVID-19 and its impact on both clients and their service as well as changes within their workplace because of COVID-19.

Survey component
A total of 207 participants completed the online survey, with 57% living in NSW and 72% being female. Almost half (49.3%) of the participants worked at a needle and syringe program/ harm reduction program with one-third working in the same position for more than 5 years. Almost two-thirds lived in a capital city (64.5%), worked in a service delivery role (63.2%) and were employed full time (61.4%). Of the 207 participants that completed this survey, 7.3% believed they were at a high risk of contracting COVID-19 because of where they worked, 24.1% felt they were more at risk, 31.4% somewhat at risk, 32.5% felt they there was low risk and 4.7% believed they were no more at risk of contracting COVID because of their place of employment. Only 10% of participants felt they were at risk of contracting COVID-19 from their clients.

Changes made to workplace in response to COVID-19
Most of the participants (79.1%) felt that many changes had been made in response to COVID-19. Despite this, just less than half (46.8%) felt that enough changes had been implemented in the service to help clients during this time, and more than one-third (35.8%) felt that a little more is still needed to be done to help clients. The most common change (62.8%) that had been implemented was COVID-19 screening of clients and temperature taking before entry to the service (see Figure 1 for further information). More than half (55%) of participants reported that their jobs had changed quite substantially because of COVID-19 and that were happy with decision making by management around changes in their service due to COVID-19 (55.5%). However, more than one-third of participants (38.3%) felt that staff had not been included in decisions about changes in the service and/or service provision.

Figure 4: Types of changes that have been implemented
**Perceived impact of COVID-19 for the clients**

Over one-third of participants felt that clients were no longer getting as much attention and face to face time with staff compared with before the pandemic. The most reported change in clients' practices by staff was a reduction in accessing face to face services (64.3%), followed by clients taking more needles and syringes (39.1%) and clients were drinking more alcohol (33.8%). Other changes that were often reported was an increase in use of vending machines (26.6%), increase in use of telehealth services (24.6%), clients using/injecting more drugs (18.8%) and clients taking more naloxone (17.9%).

**Feelings, fears and knowledge**

Most staff felt that their workplace made them feel safe with 84.5% agreeing or strongly agreeing that their workplace had adopted good social distancing practices. However, 61.2% felt that not everyone followed good social distancing at work. More than one-third of participants (37.5%) were afraid of contracting COVID-19 however only 22.7% were afraid of catching COVID-19 because of the setting they worked in (see figure 2 for more details. Overall participants had a good knowledge of COVID-19 and its transmission, even though most data collection occurred relatively early in the pandemic. Almost all the participants (95.5%) were aware that there were ways to help slow the spread of COVID-19 and 94.9% knew that the health effects of COVID-19 appeared to be more severe for people who already had a serious medical condition.

**Figure 5: Staffs’ fears around their workplace during COVID-19**

**Interview component**

Sixteen staff from four harm reduction services (two inner-city, one greater Sydney, and one regional) were interviewed between September and December 2020. Most were in frontline service or clinical roles, nine were women and one identified as gender-fluid, and ages ranged from 28-59. Thirty-two NSP or opioid treatment program (OTP) service users were interviewed between October 2020 and February 2021. Eleven were women and one identified as a transwoman, nearly all were receiving income support benefits and were currently or previously on OTP, a third identified as Aboriginal or Torres Strait Islander, and ages ranged from 26-72.

Staff participants reported the following COVID-19 related changes to their services:

- Changes to the physical environment, including blocking off, relocating, and managing
access, plus the loss of spaces for client socialisation, enabled service continuation but created a sense of greater alienation from clients.

- Greater service requirements and surveillance practices (including screening questions, temperature checks, mask-wearing, etc.) were viewed as necessary but also impeded rapport building with service users.
- Remote and self-service options for equipment distribution were developed or scaled up, and included:
  - In-person mobile outreach to outdoor locations, other health services, or client homes
  - Posting NSP equipment, using online or by-phone ordering systems
  - Additional vending machine services (with free or reduced cost access)
  - Fitpacks provided in other service locations, including self-service systems (i.e., wall-mounted racks in general health services).
- Remote options for service user health consultation, counselling and support were developed or scaled up, and included in-person mobile outreach and telehealth (phone and online) services.

These additional or expanded services were viewed positively, and many felt it was important that some of these innovations remained after COVID-19 restrictions had subsided. Staff commented that changes were able to be implemented rapidly because of strong knowledge and commitment to infection control principles and were effective due to good communication channels and relationships with service users. However, these changes were experienced as stressful and contributed to higher workloads and exhaustion.

Staff perceived that clients with underlying health or mental health problems were more impacted by COVID-19 restrictions, and that there was a concerning level of unmet service need in other health areas. On the other hand, those clients who already lived somewhat isolated lives were thought to be less affected. Inconsistent or reduced drug supply was reported to be widespread by staff. On the other hand, service users familiar with the relative social exclusion and isolation that can characterise long-term illicit drug use were less likely to be affected, although inconsistent or reduced drug supply was a more widespread impact. These perceptions were also reflected in service user interview findings.

Client participants report the following COVID-19 related changes in their service use and other aspects of their lives:

- All described knowledge of COVID-19 infection control strategies, and some utilisation of strategies to limit transmission risks (such as staying at home, avoiding touching surfaces, mask-wearing, etc.).
- One-third reported having been tested for COVID-19.
- Fears and perceptions of risk were varied amongst the participants, and were influenced by medical histories, experiences or perceptions of family and friends, and media use.
- Many described minimal disruptions in daily life due to an already socially isolated lifestyle; however, missing important celebrations and contact with family (especially when interstate) was difficult for many.
- For some, increased time alone presented psychological challenges, including the re-emergence of traumatic memories and deteriorating mental health.
Increases in income support and to takeaways OTP doses improved wellbeing for many.

Restrictions had derailed the plans of some respondents, and experiences of hopelessness were described as contributing to increased drug use.

Decreased illicit drug supply contributed to distress for some, but motivated others to decrease use or address other life priorities.

Most service users reported high levels of support for the changes that harm reduction services introduced (including feeling safe when attending services because of the COVID-19 measures taken) and appreciation for service expansion and innovation, including remote services.

Vaccination willingness varied among respondents and was influenced by factors including the low-level of current COVID-19 community transmission, mistrust of the vaccine development process or of the vaccines themselves, and of a sense of responsibility to family and community.

**Conclusion**

Staff generally felt supported by the service and felt that numerous changes had been implemented in their workplace. While most of the participants felt that many changes had been made in the workplace in response to COVID-19, there was still room for more to be implemented and for staff to be better consulted in these changes. Positive changes to service provision included increase telehealth (phone and web based), allowing clients to take more fitpacks, an increase in outreach in person and an increase in online counselling.

The main impact for clients as perceived by the staff, was the reduction in face-to-face contact. However, from the staffs’ reports of changes in clients accessing services and practices, it is evident that clients are still finding ways to protect and look after themselves during COVID-19. The main positive perceived impact on clients’ behaviour included, increased taking of equipment, increased use of vending machines and increased use of telehealth services. However, a perceived increase in using and/or injecting of drugs and an increased use of alcohol was also noted by staff.

Most harm reduction service users described minimal impacts of COVID-19 on their lives. Almost all participants reported adopting measures to comply with public health advice, including heightened vigilance around people in public and the importance of mask wearing and hand sanitiser use, showing that service users were of aware of and sensitive to the risks of COVID. Regarding maintaining access to harm reduction services, particularly NSP, most participants reported only minimal or minor disruptions. Participants were aware that services had also been forced to adapt quickly to new public health orders. Most reported fewer trips to the NSP but getting more equipment per visit, as staff had also noted. Some noted difficulties in obtaining methadone at public clinics, including more restrictive conditions of entry and changes to dispensing times. On-going and effective harm reduction service delivery for clients did appear to continue despite pandemic fears, restrictions, and resource redeployment.

Future Directions: Hepatitis B Stigma monitoring survey among the Vietnamese and Chinese community living in Australia

Australia has a suite of five national strategies addressing HIV, hepatitis B, hepatitis C, and STIs, each of which has a clear objective to eliminate the negative impact of stigma on people's health (Australian Government Department of Health, 2018a; 2018b; 2018c; 2018d; 2018e). In 2015, the Australian Government Department of Health provided funding to the Centre for Social Research in Health (UNSW) to develop an indicator of stigma among priority population groups identified by the national BBV/STI strategies, namely: people living with HIV, people living with hepatitis B, people living with hepatitis C, men who have sex with men, people who inject drugs, and sex workers (Broady et al., 2018). Since 2016, this indicator has been regularly administered in various surveys to monitor experiences of stigma and discrimination among these population groups (Broady et al., 2020; Cama et al., 2018). As well as monitoring experiences of stigma among these groups, the expression of stigma towards these groups by health care workers and the general public have also been monitored (Broady et al., 2020; Cama et al., 2018). In the next phase of the project, we also intend to conduct surveys of the Chinese and Vietnamese communities in relation to hepatitis B (HBV) as HBV is particularly prevalent within those communities. In 2016, China and Vietnam were the most common countries of birth for people living with chronic hepatitis B in Australia (25.5% and 11.8% respectively) (MacLachlan & Cowie, 2018). It was documented that people living with hepatitis B virus suffered from high levels of stigma and discrimination related to their HBV infection in China and Vietnam (Van et al., 2019; Dam et al., 2016). A small number of studies reported to date on HBV related stigma and discrimination among immigrants of Chinese and Vietnamese background residing in Western countries provide evidence of the existence of stigma and discrimination associated with HBV (Cotler et al., 2012; Video, et al, 2017; Dam et al., 2016). However, there is limited research conducted in Australia focused on hepatitis B amongst these communities.

The aim of this project is to understand the attitudes and knowledge of people of Chinese background and of Vietnamese background towards HBV within their community as well their access to resource and health care around HBV. These surveys will utilise the stigma indicator to monitor the expression of stigma and discrimination from the Vietnamese and Chinese community towards people living with HBV and investigate other contextual variables related to these experiences. The aim is to collect a national sample of 400 people of Chinese background and 400 people of Vietnamese background. Online survey recruitment will be conducted via social media platforms specifically designed for these communities (e.g., WeChat or via Facebook). Hard copy surveys will be distributed with assistance from state-based hepatitis organisations. It is anticipated that data collection will start in June 2021.
The role of social capital in facilitating hepatitis C treatment scale-up within a treatment-as-prevention trial in the male prison setting

HCV is a global public health concern, particularly in the prison setting where prevalence is substantially higher than in the general population. Direct-acting antivirals have changed the treatment landscape, allowing for treatment scale-up efforts potentially sufficient to achieve prevention of onward transmission (treatment-as-prevention). The Surveillance and Treatment of Prisoners with hepatitis C (SToP-C) study was the first trial to examine the efficacy of HCV treatment-as-prevention in the prison setting. Social capital is a social resource which has been found to influence health outcomes. This qualitative study sought to understand the role of social capital within an HCV treatment-as-prevention trial in the prison setting. Semi-structured in-depth interviews were undertaken with participants recruited from the SToP-C study following HCV treatment completion (with cure). Three male correctional centres in New South Wales, Australia (including two maximum-security and one minimum-security). Twenty-three men in prison participated in semi-structured interviews. Thematic analysis of transcripts was completed using a social capital framework, which enabled exploration of the ways in which bonding, bridging and linking social capital promoted or inhibited HCV treatment uptake within a treatment-as-prevention trial. Social capital fostered HCV treatment uptake within an HCV treatment-as-prevention trial in the prison setting. Bonding social capital encouraged treatment uptake and alleviated concerns of side effects, bridging social capital supported prison-wide treatment uptake, and linking social capital fostered trust in study personnel (including nurses and correctional officers), thereby enhancing treatment engagement. Social capital, including bonding, bridging and linking, can play an important role in hepatitis C treatment-as-prevention efforts within the male prison setting.


Perceptions and concerns of hepatitis C reinfection following prison-wide treatment scale-up

HCV infection is highly prevalent within the prison setting. DAA therapies have changed the HCV treatment landscape, offering simple treatment (with minimal side effects) and high efficacy. These advances have enabled the first real-world study of HCV TasP, the Surveillance and Treatment of Prisoners with hepatitis C (SToP-C) study. This paper draws on data from qualitative interviews completed with SToP-C participants following prison-wide DAA treatment scale-up. Semi-structured interviews were undertaken with 23 men in prison following HCV...
treatment completion to identify ongoing risk practices, perceptions of strategies for HCV prevention within the prison setting, experiences of HCV treatment (as prevention), and perceptions of reinfection following cure. Analysis was undertaken using a counterpublic health lens to identify risks and perceptions of reinfection among people treated for HCV within the prison setting. Participants identified several challenges of meaningful HCV ‘cure’ in the absence of increased access to prevention strategies (e.g., opioid agonist therapy and prison needle syringe programs) along with concerns that ‘cure’ was only temporary whilst incarcerated. ‘Cure’ status included self-perceptions of being “clean”, while also imposing responsibility on the individual to maintain their ‘cure’ status. HCV DAA treatment is provided somewhat under the guise of ‘cure is easy’ but fails to address the ongoing risk factors experienced by people who inject drugs in prisons, as well as other people in prison who may be at risk of blood-to-blood exposure. Health messaging regarding HCV treatment and treatment for reinfection should be tailored to ensure patient-centred care. Health interventions in prison must address the whole person and the circumstances in which they live, not just the illness.

**Futuring a world without disease: visualising the elimination of hepatitis C**

Informed by work on futurity in science and technology studies, this article traces how global disease elimination targets perform a world without disease through their translations in visual advocacy campaigns. Treating disease elimination targets and their visualisations as performative, we take the case of hepatitis C elimination to interrogate how futuring practices in public health govern the present and make effects. We focus specifically on how World Health Organization targets in the Global Health Sector Strategy on Viral Hepatitis entangle with visual resources produced by the World Hepatitis Alliance NOhep advocacy campaign. Targets and their visual representations in campaigns perform a disease elimination future which is set apart from the present, and yet urges action in-the-now. It enacts global health citizens but separates them from localised experiences of living with, and being cured of, disease. This disease elimination future relies heavily on instrumental rationalities and logics of the present, including the privileging of biomedical technoscientific knowledge, implementation science and global health governance, to the exclusion of other matters of concern, flattening out complexity to perform its certain achievability. These enactments raise political questions about how disease elimination futures might be made in a different mode.

**Applying a diffusion of innovations framework to the scale-up of direct-acting antiviral therapies for hepatitis C virus infection**

Interferon-free DAAs for HCV offer much promise to achieve World Health Organization targets by 2030. However, impediments at the practitioner and health-system level will continue to
obstruct the scale-up of DAAs worldwide unless identified and acted upon. Applying a diffusion of innovations framework, the aim of this study was to identify structural factors impacting practitioner experiences of managing HCV treatment.

In-depth, semi-structured, telephone interviews took place between September 2018 and April 2019 to investigate barriers and facilitators for engaging in HCV management and DAA therapy amongst general practitioners (GPs) who prescribe opioid agonist therapy and drug and alcohol specialists in Australia. Interviews were transcribed verbatim, de-identified, and coded, and data were analysed with iterative categorisation and thematic analysis using Everett Rogers’s diffusion of innovation framework.

Amongst 30 participants (12 GPs, 18 drug and alcohol specialists), several structural factors were reported to impede practitioner efforts to deliver optimal HCV care. Two primary themes were explored: contextual factors for the diffusion of DAA therapies, including attempts by participants to shift clinic culture and respond to siloed health structures, and adopter factors. Some participants chose to ‘rock the boat’ by circumventing clinic protocol and HCV guidelines to treat more clients, effectively shifting adopter categories to become greater advocates in HCV care. Also, while a role for GPs as the ‘new adopters’ in HCV management was discussed, many participants expressed uncertainty as to how much GPs should become involved in the diffusion of DAA therapies more widely.

Reducing the global burden of HCV infection will not be possible without the widespread delivery of HCV treatment amongst practitioners. Practitioners and health workers require leadership and resources from health authorities so that the individual and population-level benefits of DAA therapy are realised.


Barriers and facilitators to engaging in hepatitis C management and DAA therapy among general practitioners and drug and alcohol specialists

Since the advent of interferon-free DAA therapies for HCV infection, prescriber restrictions have been removed worldwide, permitting HCV management outside of hospital-based clinics. To date, there is limited knowledge of the practitioner experience with DAA treatments, particularly among those new to HCV care. The aim of this qualitative study was to investigate barriers and facilitators for HCV management among GPs who prescribe OAT and drug and alcohol specialists.

In-depth, semi-structured telephone interviews were conducted between September 2018 and April 2019. Practitioners from across Australia were purposively sampled and questioned on barriers and facilitators to HCV management in their clinic(s). Data were coded and analysed with iterative categorisation and thematical analysis.

Thirty practitioners were interviewed. Participants expressed professional fulfillment in managing HCV care and many benefited from specialist mentorship. Most participants
expressed frustration with ongoing implementation barriers, notably, a lack of onsite phlebotomy services and liver disease staging equipment. Poor venous access among persons who inject drugs was elucidated as a major barrier to treatment initiation. Some participants did not receive clinic manager support to engage in HCV care.

To achieve HCV targets set by WHO by 2030, practitioners require additional implementation support. As HCV testing remains a barrier to linkage to care, practitioners should be kept well-informed of diagnostic developments. Findings also underscore the importance of initial specialist mentorship with further evidence needed for practitioners based in rural regions.


**Needle and syringe programs as hepatitis C treatment sites**

When it comes to models of care for the management of hepatitis C among PWID, onesize-does-not-fit-all. Historic models of hepatitis C treatment have not been suitably adapted for PWID. With the availability of highly effective DAAs and the possibility to eliminate hepatitis C as a public health threat, there is an urgency to improve treatment provision and uptake among PWID. To encourage treatment uptake among PWID, there needs to be a shift to a person-centred, interdisciplinary approach to care, which reaches beyond hospital specialist clinics.

This commentary explores the role of NSPs in providing hepatitis C treatment to PWID through an exploration of Positively Hep, a peer-referral, incentive-based project in Sydney, Australia. Positively Hep uses peer-networks to engage clients and introduce them to hepatitis C education, screening, and treatment. Within the first 26 months of operation, Positively Hep has provided education about hepatitis C and DAA treatments to 326 individuals, and has tested 145 people, 44% (n=64) of whom have tested positive. Of these individuals, 21 (33%) have begun treatment, and 18 (28%) have successfully completed treatment. Offering this program within an NSP proves to be an acceptable and convenient way for PWID to receive HCV education, testing, and treatment. It is known that NSPs offer a highly valued and trusted service, thus providing a familiar ‘one-stop-shop’ for clients.

This commentary highlights the value of supportive, peer-driven, and interdisciplinary care models in contacting and engaging individuals in this high prevalence and underserved population. Positively Hep highlights the benefits of having trustworthy, timely, convenient, and client-friendly services to engage PWID and support them throughout hepatitis C treatment. This commentary is intended to prompt discussion about incorporating hepatitis C treatment into NSP service delivery, which could increase treatment uptake among PWID and support progress toward elimination targets.

References


