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HIV NURSING

CARING FOR PEOPLE AFFECTED BY HIV

Blood-borne pathogens

Editorial

Features

Book Review

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Aims and Scope

HIV Nursing has been developed as a forum for those at the forefront of caring for people affected by HIV. The journal is supported by a highly respected Editorial Board drawn from a wide range of nursing specialties. This is further strengthened by an Advisory Panel who will be making regular contributions to the journal.

HIV Nursing is intended to provide a medium for communication on issues relating to HIV care, which will be run by the care professionals for those involved in the day-to-day matters affecting the lives of patients.

HIV Nursing is a peer-reviewed journal

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Editorial Office

Editorial Director: Fatima Patel

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Blood-borne pathogens:
Further opportunities for 'gold standard' nursing care

Juliet Bennett

Independent HIV Specialist Nurse Advisor

We kick off 2015 with a look at blood-borne pathogens and related issues. I hope this issue provides you with some food for thought and some inspiration. Please do write to us with your feedback on any of the articles published.

In the field of HIV, in our prevention and health promotion work, we have learnt a considerable amount about what works and what doesn't. This health promotion role is a highly relevant one for us as nurses with our individualised, holistic and empathetic approach to care, together with detailed knowledge of risk behaviour and risk reduction. We have had to be non-judgemental and highly creative in our approaches, yet historically some harm-reduction interventions have failed to engage people and we need to reflect on and learn from these experiences.

In one interesting, recently presented study of people who injected drugs, interviewees frequently adopted safer injecting practices, but were found to be more motivated by a desire to have a quick, pleasurable 'hit' rather than by concerns about blood-borne pathogen transmission. In common with other qualitative research, most respondents in this study saw infection as ubiquitous and an 'occupational hazard' [1]. On its own, an awareness of the potential of dangers of infection doesn't seem to be enough to change people's behaviours. Perhaps then, as the authors suggest, past strategies have over-emphasised infection and risk? If we pay more attention to the pleasures and pragmatics of using drugs, and do away with the negative use of language, which focuses on things that people should not do, we might increase our chances of reaching those as yet unexposed to harm-reduction messages, or those who have previously proved 'hard to reach'.

One area of increasing risk of blood-borne pathogen transmission that is only just being recognised is that of the increase in the use of performance and image-enhancing drugs such as anabolic steroids, including in teenagers. Public Health England reports that recent research suggests that levels of HIV and hepatitis infection among men using drugs for this purpose have increased significantly since the 1990s [2]. NICE has subsequently updated its guidance on the provision of needle and syringe programmes accordingly [3].

Here again is an opportunity to apply what we have learnt and to adapt and strengthen our interventions accordingly. We will need to recognise that members of this 'new' group are unlikely to view themselves as 'drug addicts'; in fact they see themselves as fit and healthy people who take pride in their appearance. Services will need to be innovative in reaching this group – in offering easy access to confidential testing for HIV and hepatitis and vaccination against hepatitis B, as well as providing sterile injecting equipment in accessible settings.

In this edition James Meek, Claire McCausland and Debbie Brittain provide us with a very informative overview of syphilis diagnosis and management. They talk of prevalence as endemic in Manchester, Brighton and London, with outbreak 'pockets' of infection seen across the whole of the UK in recent years. Reading this article might lead us on to consider not only the impact of changing dynamics of sexual relationships, but to again revise the 'what and how' of delivery of prevention messages. The need for innovative, well-informed public health initiatives is clear and reiterated.

Joe Phillips' enlightening article *Examining the impact on HIV and hepatitis C co-infection in the era of 'ChemSex'* reinforces the importance of understanding individual motivations behind behaviours. Acknowledging the pleasure of sex, and its importance to people, and identifying motivations for safer practices could be reflected in harm-reduction messaging for all blood-borne pathogens. Supporting people to address these issues and exploring alternative opportunities to engage with the affected community, he says, is essential to successful health promotion.

Ricky Gellissen reports on the relatively new data confirming the benefits of direct-acting antivirals (DAA) in the treatment for chronic HCV and predicts the impact of these for the year ahead, in terms of the management of both acute and chronic infection and upon patient choices and decisions on treatment. Cost-efficacy, access and individualised care within limited resources are, as always, the challenge. Effective communication and collaborative working between nurses working in the field of hepatology and HIV will be essential for the sharing of knowledge and skills for improving the patient experience and outcomes.

One area where considerable work and innovation is taking place, in terms of harm reduction and blood-borne pathogen prevention, is in prisons. Fiona Rose and Sara Lamond review the work in Scottish prisons in testing for and treating

hepatitis C. The article gives us a great example of what nurses do best; facilitating joined-up working, training and educating others, assisting in the development and delivery of effective policy, procedures and pathways.

What comes across in all these articles is that blood-borne pathogens are not 'socially neutral' diseases – risk-taking behaviour, as well as the well-intended interventions of healthcare professionals, can be highly influenced by myths and assumptions. As with HIV, ignorance about how infections are transmitted and/or prejudice against the groups most affected, together with stigma and discrimination, will inevitably hinder efforts to tackle transmission and provide good-quality healthcare. Of course it is an oversimplification to suggest that stigma and discrimination are easily tackled but some concrete actions can make a difference.

One approach with potential to tackle stigma is through those affected bravely coming forward to tell their story. Publishing such accounts of lived experience, I believe, are important because they ground us in reality. They can help to engage those who perhaps have adopted an 'ostrich approach' to transmission risk. Such accounts can also reach those healthcare professionals who have moved 'onwards and upwards', perhaps to management roles, or whose working day interactions with patients are limited to frenetic clinics with strict appointment times and environments not conducive to getting to know the person behind the hospital number. Sarah Haigh's account of her own experience of receiving an HIV diagnosis in her 50s does, I think, do just this.

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Trials and tribulations of hepatitis C treatment in Lothian prisons

Fiona Rose and Sara Lamond

Regional Infectious Diseases Unit, Western General Hospital, Edinburgh

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Abstract

Hepatitis C virus (HCV) is a blood-borne virus that can cause both acute and chronic infection. In Scotland, it is well known that the main transmission route of HCV is through drug use and a study into prevalence of HCV in Her Majesty's Prisons (HMPs) in Scotland showed that 53% of intravenous drug users (IVDU) tested were antibody positive [1]. The aim of HCV treatment is to reduce the risk of progression to cirrhosis, lessen the risk of hepatocellular carcinoma, reduce/clear infectivity and improve the quality of life [2]. Involving non-medical prescribers in the treatment of hepatitis C in prisons has contributed to a more seamless and timely patient pathway, avoiding delays from the onset of symptoms to the issuing of an appropriate medication if indicated.

Key words: hepatitis C, drug users, substance abuse, prisons, protease inhibitors

In Lothian, Her Majesty's Prisons (HMPs) are responsible for approximately 1,600 inmates. Most are male, but HMP Edinburgh houses approximately 120 females. These inmates are a mixture of remand, short- and long-term prisoners.

It is well known that the main transmission route of hepatitis C virus (HCV) in Scotland is through drug use and a study into prevalence of HCV in HMPs Scotland showed that 53% of intravenous drug users (IVDU) tested were antibody positive [1]. Many patients in a prison environment arrive there due to crime being committed to fund their drug use [1]. Prison can provide a period of stability and it should be a logical step to address healthcare needs at this time.

Having a non-medical prescriber involved in all aspects of the care of patients with HCV, from testing and assessment to treatment, has ensured that care provision is holistic and patient-focused, catering to the differing needs of the patients. This article will explore and answer some of the challenges of being a non-medical prescriber within a secure environment.

Hepatitis C virus

HCV is a blood-borne virus that can cause both acute and chronic infection. Approximately 80% of people acutely infected with HCV are asymptomatic, so early diagnosis of the virus is rare. Individuals chronically infected with HCV can go on to develop cirrhosis and hepatocellular carcinoma [3].

Hepatitis C treatment

The aim of HCV treatment is to reduce the risk of progression to cirrhosis, lessen the risk of hepatocellular carcinoma, reduce/clear infectivity and improve the quality of life [2]. Examining the efficacy of HCV treatment is a difficult task due to the differing treatments available, co-infections and the differing needs and responses of individuals, as well as challenges of gaining concordance with the medication regimen.

The role of the non-medical prescriber with regards to HCV treatment in prisons is to provide advice and information in such a way that patients understand the nature of their treatment and make a rational and informed choice about it. Feedback from patients has shown that many people feel well before they commence HCV treatment; however, once therapy is started they experience numerous side effects and generally feel worse than before. At this stage success is jeopardised if patients stop taking their treatment. The majority of patients with HCV do not have symptoms and one of the biggest barriers to treatment is the subjective adverse effects of the treatment.

The side effects of HCV treatment are many and include pancytopenia, flulike symptoms, weight loss, insomnia, skin rash, low mood and irritability [2]. Non-medical prescribers are able to prescribe medications to help with some of these symptoms but not all.

Pegylated interferon and ribavirin have been the standard treatment for HCV for some years. There are many potential side effects with this medication and care needs to be tailored to the individual.

In 2011, the protease inhibitor (PI) drugs, boceprevir and telaprevir, were licensed. These brought new and complex issues regarding treatment regimens, side effects and drug–drug interactions.

The recent UK licensing of sofosbuvir for the treatment of HCV in Scotland (with several other drugs pending regulatory processes) is being recognised as an exciting advance in the management of HCV

Past challenges

Prior to Phase II of the *Hepatitis C Action Plan for Scotland*'s launch in 2008 [4], treatment of HMP patients with HCV occurred in a hospital environment causing inconvenience, discomfort and embarrassment to patients, and this discouraged many from seeking treatment. The cost to the prison service of transporting prisoners to appointments, the security involved and the administrative headache of organising clinic visits limited the number of patients treated. Patient safety was potentially compromised as communication between the prison service staff and NHS staff could be difficult, with different systems of prescribing and record-keeping.

Prescriptions were electronically generated and supplied by the hospital; however, once the prescribed medication arrived at the prison it was necessary for a prison doctor to prescribe this on to the HMP drug administration chart (similar to those used in inpatient situations) before any medication could be issued to the patient. On occasion this led to long delays in patients receiving their prescribed medications and potentially jeopardised treatment outcomes. There were poor links between prisons and the various hepatitis C specialist treatment centres across Scotland. With patients regularly being transferred or released early, losing patients to follow-up without completion of treatment was not uncommon.

In May 2008, Phase II of the Scottish Action Plan acknowledged that hepatitis C is a complex problem and that existing services needed to change in order to successfully tackle the disease and it was recognised that investment was key. Along with Phase II, the Scottish Government provided funding to enable delivery of the action plan and to support change in the delivery of care needed to better tackle hepatitis C. In 2009 this brought the opportunity for two dedicated blood-borne virus (BBV) Clinical Nurse Specialist (CNS) posts to be funded; working between the two Lothian prisons and the Regional Infectious Diseases Unit (RIDU).

Current practice and challenges

Patient safety

Warning tabs to appear on the electronic records of patients taking PIs were established to inform all healthcare staff of the medication patients are prescribed and to enable them to be aware of drug–drug interactions as well as potential adverse reactions that can be caused by these medications. Fluorescent stickers warning staff of the above and providing information about the University of Liverpool website on drug interactions (www.hep-druginteractions.org) ensures all staff involved in a patient's care are aware of drug–drug interactions. This information also assists pharmacy staff to check drug interactions and dispense medication for these patients in a safe and timely manner.

Prior to the prescribing of PIs, toxicology testing is carried out to ensure patients are not taking any medication that is not prescribed and that may have a potential drug–drug interaction. Patients are told that this is for their safety and that medication cannot be prescribed if there is a risk of a drug–drug interaction. Working with the patients and being open and honest about the medications prescribing helps to open communication lines and establish a good relationship. Patients are informed of the potential side effects of treatment and efforts are made to ensure all other health professionals and prison staff are aware by clear documentation.

It is essential that the medication is taken at 12-hourly intervals with food, and some medications need to be taken with a snack containing high amounts of fat to ensure optimum levels of efficacy. In prison, accessing 'extra' snacks can pose a problem, but dietary request sheets with a letter explaining this requirement and suggestions of high-fat snacks are given to the prison kitchen when a patient commences treatment. This works well and combined with dietary information providing the fat content of various foods given to the patients in prison, they are generally able to meet the dietary requirements.

Adherence to medication

Patient adherence to medication is considered when prescribing HCV medications in HMPs. The medications will only work if taken as per prescription. The CNS spends a great deal of time reiterating this point and trying to ensure that patients are fully aware of the potential consequences of non-adherence – poor response to treatment and the potential development of resistance – rendering treatment ineffective. Adherence work is carried out by the BBV CNS team and involves direct communication with patients. Many of those in HMPs have poor literacy skills and it is often easier to discuss treatment rather than provide reading material. There is also the issue of confidentiality if written information is provided to patients and then mislaid.

The team's experience of adherence to medication by patients in HMPs is generally very good and patients have a large network of support readily available to them both from the HMP nursing staff (including addiction and mental health specialists) and the BBV CNS team.

The BBV CNS team works closely with the mental health team within HMPs and sometimes prescribes

antidepressants to try to combat the low mood and irritability experienced as a result of HCV treatment. Support and regular contact from the mental health team are crucial in assisting patients through the treatment. Monitoring of moods, the use of medication and its efficacy are imperative to determine the individual's response and the need for ongoing review and adjustment of medications.

Administrative issues

Hepatitis C medication and other specialist medication for related side effects, such as neutropenia and anaemia, are prescribed, after discussion with the multidisciplinary team, electronically on the hospital system. Improved communication and the ability to view and edit prison medical records remotely from the hospital has greatly improved patient safety. Medications are transcribed onto the prison medication charts by the CNS; additional medication is prescribed by the CNS and ordered through the prison pharmacy. This has eased the potential difficulty that was envisaged with communication and documentation regarding PIs and their numerous drug–drug interactions and potential side effects and has improved the patient journey.

Prisoners are constantly on the move, being transferred or released, and their health needs are ever changing. Pharmacy staff in HMPs deal with hundreds of prescriptions on a daily basis; their job is enormous and extremely important as prescriptions not being issued on time can not only jeopardise health but also create tension amongst prisoners that can escalate quickly and potentially endanger prisoners and staff.

Due to the prison value of some medications, special protocols and signed agreements with the patients are required before these are prescribed and dispensed. Zopiclone is one such medication; prior to prescribing, the patient is expected to sign an agreement confirming they understand how often the medication will be prescribed, its duration and reasons why it may be discontinued. A Standard Operating Procedure (SOP) was developed by the BBV CNS team and HMP healthcare staff stipulating the dose, frequency and duration of this medication. Using a SOP provides a framework within which zopiclone can be prescribed, and as this has recently been classed as a Class C Schedule 4 controlled drug, it is even more evident that an awareness of its potential misuse is essential.

Role of the nurse prescriber in HMPs

As a result of the HMP BBV liaison posts, the numbers of patients tested, assessed and ultimately treated for HCV in Lothian HMPs have increased from four to 34 in the past 5 years (Figure 1).

The BBV team provides two to three clinical sessions weekly within the prison health centre, as well as additional advice, support and education. In tandem with the BBV CNSs, a team of community BBV specialists work with the HMP healthcare staff to increase the numbers of prisoners accessing BBV testing and HBV immunisation.

Prescribing independently has contributed to a more seamless and timely patient pathway, avoiding delays from the onset of symptoms to the issuing of an appropriate medication if indicated. The patient/nurse relationship also benefits and can encourage a professional relationship of trust. The team works with patients with multiple physical, psychological and social problems. It is therefore essential to work in close collaboration with the multidisciplinary team, both in and out of the prison. Many prescribing decisions are only made after consultation with some or all of this team which includes CNSs, medical specialists, social workers, psychiatrists, pharmacists and addiction specialists. It involves a team approach from writing the prescription, to ordering the medication, receiving it and ensuring safe and correct transport and storage – clear identification and common understanding of individual roles and responsibilities along with frequent communication between the prescribing partners is essential for a safe, effective delivery [5].

Challenges faced by non-medical prescribers

In order to prescribe safely and effectively, the additional challenges associated with prison life must be taken into consideration. Within HMPs medications are frequently misused, which presents problems within the prison and to the individual [6]. Many medications are used as a commodity and for trade or bribery.

Some medication is administered with supervision; however, this can be 'bypassed' and medications can be hidden in pockets and orifices or even regurgitated to be dealt on to others later.

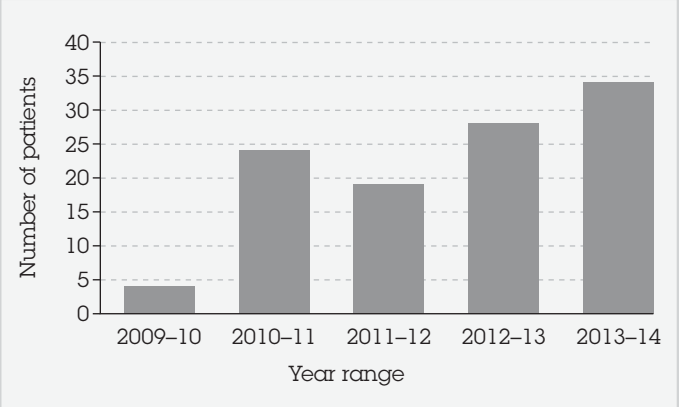

Figure 1: *Number of patients receiving hepatitis C virus treatment at Lothian HMPs (Edinburgh and Addiewell).*

As a profession and as individuals, nurses are very aware of equality and the need to ensure that the standard of care remains the same whether the individual is being treated in the community or in a secure environment. However, as mentioned previously, nurses also need to be aware of the complexities of prescribing in this environment and the challenging individuals we often encounter, which can pose problems when trying to ensure equality of care. It is important to consider what is meant when talking about equality and to understand that this does not necessarily mean providing identical medications to each individual on HCV treatment suffering from side effects. As a nurse prescriber within a secure environment, one of the biggest challenges is recognising the fine line between listening, assessing, and prescribing appropriately to alleviate side effects of treatment and the risk of being manipulated into prescribing a prison commodity with a high resale value. Prescription medication may have a higher value than in the community, and bullying is not unusual, although the number reporting this is perhaps lower than might be thought [7].

It is important that we keep abreast of what drugs are 'in vogue' and at risk of being abused, as this is a constantly changing picture, particularly within a secure environment [8]. By remaining aware of these issues it is more likely that attempts to manipulate prescribing behaviour are identified at an early stage. It is necessary to be aware of the risks of medication being diverted when prescribing; however, this should not discourage nurse prescribers from seeking to alleviate the side effects of what can be a very difficult treatment. An open and frank discussion with the patients that includes informing them that medicines can cause harm if misused and advising them that prison rules and medication checks will be in place prior to prescribing is often useful.

In order to prescribe safely, non-medical prescribers need to ensure a patient-centred approach, with each patient treated as an individual but always with the same level of compassion and care.

Future challenges

The recent UK licensing of sofosbuvir for the treatment of HCV (with several other drugs pending regulatory processes) is being recognised as an exciting advance in the management of HCV.

The new medications for HCV have many advantages over existing treatments: they are easier to take, potentially involve no injections, necessitate a shorter course, are more effective, and have fewer drug interactions and side effects. This is all great news for those living with HCV; however, it will make the role of the prescriber more complex as it may be necessary to be more selective as to who is treated. Due to the significant cost of the drugs, the team may need to monitor concordance more closely and resort to practices such as direct observed therapy. Within HMPs a minimum length of prison stay covering the duration of treatment may become a requirement prior to commencing therapy.

Due to fewer side effects, it is anticipated that the prescribing of 'extras', such as sleeping medication and antidepressants, will reduce; however, this is often seen as a 'norm' by HMP patients and many may refuse treatment if they do not receive such medication. Thus the role of nurse and prescriber will need to become more defined and our ability to assess individuals' needs rather than their expectations will need to be more acute.

Currently, medication-recording charts are used for the prescribing and administration of medications. It is hoped that there will be a move to using electronic prescribing which will reduce the amount of paperwork and the risk of lost drug charts. It will ensure that drug records can be accessed from outside the HMP and potentially adjusted if required and on discussion with the HMP healthcare team. Should patients be abruptly transferred to another prison, continuity of care would be assured with no concerns of lost or misplaced prescriptions. This will also bring HMP more in line with the practices that occur in the wider HCV treatment communities.

Conclusion

There is a growing body of literature that suggests prison-based treatment is not only feasible and effective, but also provides a window of opportunity in which to treat these patients [9–14].

The HCV service has provided HMP patients with the opportunity to be treated effectively in an environment that is familiar to them without the additional security arrangements necessary when leaving prison to attend a hospital appointment. An increase in the assessment and treatment of people with HCV within the prison population has been observed since this service commenced – last year HMP Lothian was responsible for treating 34 patients for HCV. The benefits of treating the prison population are huge – it both reduces the pool of infected individuals within HMPs and can assist in reducing the reservoir of disease in the larger community as and when prisoners are released [13,15].

A concern which all prescribers have is that of safety of the patient with regards to potential prescribing mistakes. The BBV CNS team are not involved in day-to-day healthcare provision within HMP, and this can provide the advantage of being able to concentrate solely on the individual's HCV care rather than being involved in other HMP issues that may cause complications. Having this protected time with them allows the non-medical prescriber to explore their needs, fears and thoughts

regarding their health and treatment in greater detail. This provides a good a background for their care provision and an inroad to deal with potential difficulties and issues in the future.

Being a nurse prescriber in a prison can be fraught with difficulties but overall has undoubtedly contributed to a more seamless care pathway allowing patients to access hepatitis C care and ensuring that those requiring or requesting treatment are assessed and treated with minimum delay and optimum safety.

Key points

- The aim of hepatitis C virus (HCV) treatment is to reduce the risk of progression to cirrhosis, lessen the risk of hepatocellular carcinoma, reduce/clear infectivity and improve the quality of life.
- Prison can provide a period of stability in patients' lives and it should be a logical step to address healthcare needs at this time.
- HCV treatment can have many side effects – this can require further prescription of medication to control these.
- It is important to be aware of the risks of medication being diverted when prescribing; however, this should not discourage us from seeking to alleviate side effects.
- Prescribing independently has contributed to a more seamless and timely patient pathway, avoiding delays from the onset of symptoms to the issuing of an appropriate medication if indicated.

Useful resources

- University of Liverpool hepatitis drug interactions website (www.hep-druginteractions.org)
- *Safer Prescribing in Prisons: Guidance for Clinicians* [6].

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Correspondence: Fiona Rose
Fiona.Rose@nhslothian.scot.nhs.uk or,
Sara Lamond
Sara.Lamond@nhslothian.scot.nhs.uk

Examining the impact on HIV and hepatitis C co-infection in the era of 'ChemSex'

Joe Phillips

Nurse Practitioner, 56 Dean Street/Dean Street Express

This article examines the rising incidence of HIV and hepatitis C infections amongst MSM (men who have sex with men) patients, and how the use of recreational drugs in the 'era of ChemSex' is contributing to the rise of co-infection within this group.

At 56 Dean Street we see a large number of HIV and hepatitis C co-infected patients who use recreational drugs in a sexual context. I asked colleagues what they thought defined the 'era of ChemSex' and the following points, amongst many, were suggested:

- HIV
- Hepatitis C
- PrEP
- Advances in HIV treatments
- New HCV treatments
- Pornography
- GPS apps and online dating
- The gay community
- Injecting drug use
- Condom fatigue
- Sex education
- Community campaigning
- Young people
- Stigma

Some of these will be explored further below as we unpick the connections they have to HIV and hepatitis C co-infection.

Gay men and recreational drug use have always been intrinsically linked. In a study exploring themes of substance use Buffin *et al*. found that gay men use more recreational drugs than their heterosexual counterparts, there are higher levels of dependency both physically and psycho-socially, and that drug use amongst this group is linked to riskier sexual behaviour [1]. ChemSex can be described as the sexualised use of recreational drugs, such as crystal methamphetamine, mephedrone and GBL (2), used mainly by MSM due to their effects in increasing sexual stamina and libido. Further information about these drugs, and their desired effects, can be found in the article by Stuart [2]. It is ChemSex amongst MSM patients, and the associated risk of HIV/hepatitis C co-infection in this group, that will be the main focus of this article.

How ChemSex impacts on HIV infection

A survey by colleagues at 56 Dean Street in 2013 found that 55% of MSM GUM attendees agreed that they would do things sexually when under the influence of drugs that they wouldn't do when sober. These 'things' are evidently putting them at higher risk of HIV infection; 34% of participants interviewed stated they were more likely to have unprotected anal sex while under the influence of drugs [3]. They also reported multiple sexual partners and longer sex sessions, further increasing their risk of HIV transmission. Moreover, there is also the concern that consistent recreational drug use by HIV-positive individuals may result in failure to adhere to their antiretroviral regimen, which could in turn lead to a detectable viral load and the potential increased chance of onward HIV transmission if this happens [4].

How ChemSex impacts on hepatitis C infection

Acute hepatitis C is on the increase amongst HIV-positive gay men [5,6] and one of the main risk factors for hepatitis C transmission in this group is the increasing rate of injecting drug use (both crystal meth and mephedrone can be mixed with water and injected intravenously) and the sharing of needles and injecting paraphernalia [7]. Anecdotally, I see many men attending our clinics with abscesses and phlebitis secondary to poor injecting techniques. Many also report never injecting themselves due to inexperience and often rely on sexual partners to inject. When questioned many say they think clean needles were used and may not be aware of the associated risk of reusing paraphernalia such as spoons and barrels. There is also concern over harder sexual practices such as fisting, often facilitated by the use of drugs, which may break mucosal barriers, cause trauma and lead to blood being passed between partners, thus increasing infection risk [7].

The risk factors described above are not new to health professionals working within the field of blood-borne viruses nor, for the most part, are they misunderstood by patients who are at risk of them. Many of the HIV-negative patients I see understand the concept of an undetectable viral load and will question HIV-positive partners about this if choosing to have condomless sex. And, although I do see a

considerable amount of poor injecting, most men understand the risks associated with sharing injecting equipment. What might be considered a less understood risk here, however, is the sexual transmission risk of hepatitis C. Studies amongst heterosexuals have shown that sexual transmission of the virus is very low [8] and traditionally hepatitis C did not sit in the realm of sexual health tests unless there was an additional risk – mainly injecting drug use in a non-sexualised setting. More recent research, however, has shown that levels of hepatitis C viraemia in seminal fluid, although usually lower than in blood, may be higher in HIV-positive individuals with an acute hepatitis C infection [9]. This can be understood in comparison to the high levels of infectivity in newly infected HIV-positive individuals who are more likely to exhibit onward transmission of HIV while seroconverting. Add to this the increased chance of trauma when having sex for longer, using sex toys and fisting, and having an increased number of sexual partners, then the sexual transmission of hepatitis C becomes a real risk.

A further factor which may be significantly contributing to the increase in HIV and hepatitis C co-infection is the lack of knowledge and information, and even the stigma associated with hepatitis C disease within this group. Many gay men I see will confidently 'sero-sort' (choose potential sexual partners based on HIV status), but many admit that hepatitis C status isn't being discussed when choosing sexual partners. Sero-sorting for HIV can be seen to reduce stigma associated with HIV as it gives men (both HIV positive and negative) the opportunity to bring HIV into the discussion when negotiating sex and enables individuals to be comfortable and confident in discussing their status [10]. The absence of hepatitis C in this discourse, however, may be due in part to stigma associated with this particular virus: 'It only affects heroin or crack users,' for example, or 'I don't inject drugs so it won't happen to me.' This is echoed by Owen who suggests that hepatitis C is the 'elephant in the room' when HIV-positive MSM are sero-sorting for sex and that the absence of such discussions is, in turn, adding to the onward transmission of the virus [10]. These misconceptions, the lack of knowledge about hepatitis C as well as the fear of rejection, stigma and isolation if someone does disclose their hepatitis C status to sexual partners, can all potentially contribute to increased rates of HIV and hepatitis C in MSM chem users. The gay community has, for many years, been a strong voice in the fight against HIV, and nurses have stood alongside community organisations when advocating for the rights of people living with HIV. It could be argued that hepatitis C is not 'owned' by the gay community, as HIV is, and that raised awareness and community mobilisation, as well as more open discussions around hepatitis C, are needed to increase testing and to reduce the spread of infection.

It is also important to discuss how, even though there have been medical advances in the treatment of both hepatitis C and HIV which aim to reduce the numbers of infections of these viruses, they also need to be considered in the context of increasing rates of infection. As we have seen from the recent early results of the PROUD study [11], PrEP will be an extremely effective and necessary tool in the prevention of HIV and is much needed at a time when we are seeing dramatically increasing rates of HIV (particularly in young MSM) in the UK. The other side of the debate, however, argues that the use of PrEP may result in less condom use which could in turn lead to an increase in other sexually transmitted infections including hepatitis C (as we have seen is a distinct possibility).

Advances in hepatitis C treatments are progressing quickly [12,13]. It seems like every month there is news of a second-generation direct-acting antiviral with an unpronounceable name that will cure hepatitis C in all of our patients. This is great news, especially as many of the trials for these new drugs found that co-infection with HIV did not have a bearing on treatment success. The counter-argument to this debate is around whether the ease of treatment will increase the rates of re-infection, particularly amongst higher-risk individuals, including HIV-positive MSM ChemSex users, and don't even begin to talk about access to treatment and the potential cost of the drugs.

These issues, to which there are no definitive answers, further add to what we understand by the 'era of ChemSex'. Ultimately, as nurses we want what is best for the patient sitting in front of us. We want him to have access to PrEP if that is the best way to prevent him becoming HIV positive, and we want him to be treated for hepatitis C no matter how many times he has it. For me however, it is ultimately about education and support, working with individuals to address their risk of hepatitis C (re)infection and onward transmission, and to highlight the motivations behind drug use and high-risk sexual behaviour – either dealing with these issues ourselves or using the knowledge and experience of our colleagues in psychology and substance misuse, as well as those in third-sector voluntary organisations, to provide holistic care for our patients. The 'era of ChemSex' and associated sexual risk is further highlighting the importance of multidisciplinary working, something which, as nurses, we are skilled at facilitating.

The 'era of ChemSex' must also be understood in the context of changing attitudes and conceptions towards sex in general. Sex is more readily available and makes up a massive part of the cultural and social networks within which we are all embedded. Sex is everywhere. We have sex from a very young age, we have more and more partners and many people do not enter into a monogamous sexual relationship. The sexual

landscape has changed dramatically due to social media, celebrity, pornography, apps and online dating (amongst many other things), and it is impossible to understand ChemSex and the associated sexual health problems that sit beside it without understanding this 'bigger picture'. Many of these issues also have an effect on individuals' perceptions of themselves, their self-confidence and also their ability to negotiate the kind of sex they want to have. Dating and finding intimacy with sexual partners can be a challenge and many men report that chem use increases their self-confidence, enables them to have more sexual partners, and helps them connect with other men and 'fit in' to new social networks.

What can we do?

One of the main questions that comes to my mind when attempting to tackle some of the issues raised here is what, as nurses, can we do about this growing problem affecting a large number of our patients both HIV positive and negative? Asking the right questions is the best starting point. Nurses love to investigate and having the confidence to take one's investigations towards HIV/hepatitis C risk and ask questions about recreational drug use will open a dialogue with patients which will, in turn, give us an indication of the best possible plan of care for each individual [14].

'Do you ever use drugs for sex?'

'Do you ever slam any drugs?'

'Ever fist or use toys?'

'What do you know about hep C?'

As well as the usual:

'Who are you having sex with?'

'Do they have any diagnosed infections?'

'What kind of sex are you having?'

The information gathered from these discussions can be used to test appropriately for both HIV and hepatitis C, and provide information about transmission risks, as well as encourage individuals to discuss hepatitis C status with their sexual partners.

This idea is also echoed in the recommendations of 'The Chemsex Study,' a document produced by Sigma research and the London School of Hygiene and Tropical Medicine which explores current trends in ChemSex amongst gay men in South London [15]. It explores motivations for having ChemSex, which include issues around self-esteem and acceptance, the social networks within which ChemSex takes place, and the perceived risks associated with this type of drug use from both a physical consequence (e.g. overdose or withdrawal) and a sexual health point of view. The study supports the idea of tailored services for this group of patients which are able to address not only their sexual health needs but also to provide substance misuse and psychological support when needed. This study is based in South London, an area with a large population of gay men, and a large recreational drug scene, but anecdotally we know there is a growing problem in many areas of the UK particularly in bigger cities such as Manchester, Brighton and Leeds. As well as the lack of community mobilisation around hepatitis C amongst MSM mentioned above, at present there is no national strategy to tackle the growing problem of HIV and hepatitis C co-infection (as well as hepatitis C mono-infection) in gay men in the UK and there is no concurrent national strategy to tackle ChemSex. Further research is needed across the board to highlight the growing problem and link the use of chems during sex to increased rates of HIV and hepatitis C, and hopefully feed into the development of a unified approach to tackling the issue.

As mentioned above, the problems individuals face when at risk of HIV/hepatitis C co-infection in the context of ChemSex are embedded in wider social and cultural networks as well as linked to individual psychological and emotional wellbeing. The wellbeing of our patients is something, as nurses, we continually strive to improve and at our clinic we are currently developing the 'Dean Street Wellbeing Programme' for our MSM patients which includes education, support and advice about ChemSex as well as information about sex, HIV/hepatitis C and mental health [16]. We are also developing a range of community events which include 'spoken word' evenings and panel discussions as well as signposting people to other activities and events which don't include partying, sex or drugs, and will hopefully enable individuals to explore alternative social networks.

Conclusion

Although there is evidently more scope for research into the direct link between ChemSex and HIV/hepatitis C co-infection, we know that the behaviours which occur when under the influence of these particular drugs are high risk for transmission of both these viruses. We have seen how, as nurses, we are in an excellent position to ask the right questions, highlight the risks to individuals as well as test appropriately. Finally, understanding individual motivations behind using chems for sex, supporting them to address these issues within a multidisciplinary context, as well as highlighting alternative opportunities to engage with peers in the gay community are vital as we tackle HIV/hepatitis C co-infection in the 'era of ChemSex.'

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Correspondence: Joe Phillips
joe.phillips@chelwest.nhs.uk

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Issue 15.2 (September)
Copy deadline:
End of July 2015

Syphilis: diagnosis and management

James Meek, Claire McCausland and Debbie Brittain

Lecturers, University of Central Lancashire

Epidemiology

Syphilis is a bacterial, sexually transmitted infection caused by the spirochaete *Treponema pallidum* (Figure 1). It can be transmitted through unprotected oral, anal and vaginal sexual intercourse as well as by vertical transmission during pregnancy or via a blood transfusion. The incidence of syphilis fell significantly after the Second World War with the introduction of penicillin; however, diagnoses have increased since 1997 within the developed world [1]. Public Health England (PHE) data from 2013 [2] reports 3,249 diagnoses of syphilis, with the vast majority of cases seen in men who have sex with men (MSM); the number of infections has continued to gradually increase over the last 5 years (see Table 1). Most MSM diagnosed with syphilis are aged between 25 and 44 years and 40% of MSM are HIV positive at the time of their syphilis diagnosis [2]. Syphilis is endemic in Manchester, Brighton and London; however, pockets of infection have been seen across the whole of the UK. An outbreak is being investigated in semi-rural north-west Wales amongst 49 males, of whom 37 identified themselves as MSM; four of this latter group are also co-infected with HIV. One-third of the men diagnosed admitted using mobile-positioning dating technology, suggesting that they had met sexual partners locally. Further outbreaks have been seen in the East of England, Yorkshire and Humberside, and Lanarkshire and Tayside in Scotland [3].

Table 1: Syphilis infections in England, 2009–2013 (Public Health England [2])

Year	All males	Heterosexual males	MSM	Females	Total
2009	2,507	483	1,697	345	2,854
2010	2,357	472	1,624	293	2,654
2011	2,645	478	2,049	292	2,939
2012	2,716	473	2,144	265	2,981
2013	2,970	491	2,393	279	3,249

Classification of clinical features and presentation

Syphilis is classified as either acquired or congenital infection; both classifications can then be subdivided into early (<2 years from infection to diagnosis) and late (>2 years from infection to diagnosis) syphilis with further subcategories (see Table 2). Congenital syphilis is rare in the UK. Primary syphilis is characterised with a single chancre (ulcer) and regional lymphadenopathy. The chancre (see Figure 2) is indurated, painless, typically 1–2 cm in diameter, and in the ano-genital region; however, this may be painful if a secondary infection is present, purulent or extra-genital (affecting the nipples, lips and oral cavity). Scarring is often present after the ulcer heals, usually within 6 weeks of contracting the infection.

Figure 1: *A spirochaete* Treponema pallidum *(image courtesy CDC).*

Secondary syphilis presents with a rash affecting the body and often the palms and soles (see Figure 3) which can be macular, papular or macular–papular. It may or may not be itchy and accompanied by a fever and headaches. Mucosal patches may appear inside the mouth with typical snail tracks in the buccal region. Asymptomatic syphilis infection with positive treponemal serology is described as latent syphilis. Latent syphilis can be subdivided into early and late stages also. Early latent infection is classified as up to 2 years, during which time there is a possibility of the secondary stage returning; late latent is classified as over 2 years since contracting the infection [1,4].

Tertiary syphilis is uncommon in the developed world but could present in three ways: gummatous syphilis, neurosyphilis and cardiovascular syphilis. Depending on findings, a chest X-ray and lumbar puncture may be required. Previous studies in the pre-penicillin era discuss how 60–70% of people living with syphilis probably did not experience any major issues as a consequence of the infection [5].

Testing and diagnosis

A detailed sexual history should be elicited from anyone with a suggestion of syphilis, either presenting symptoms or as a contact of infection [6]. Syphilis can be diagnosed in several ways; the

Table 2: Syphilis classifications and subdivisions [1,4]

Infection	Classification	Subdivision	Time after exposure
Acquired	Early: (<2 years from infection to diagnosis)	Primary Secondary Early latent	– Up to 90 days – 6 weeks to 6 months – Up to 2 years
Acquired	Late: (>2 years from infection to diagnosis)	Late latent: (more than 2 years from infection and asymptomatic) Tertiary syphilis: (may present as gummatous syphilis, neurosyphilis or cardiovascular syphilis)	– 2 to 40 years after infection – 2 to 40 years after infection
Congenital	Early: Late:	Diagnosed in first 2 years of life Presenting after 2 years	

history and clinical presentation will influence the method of testing used.

- Dark field (or dark ground) microscopy can be used if a chancre is present and is reliable for genital ulcers; however, it is not suitable for examining oral lesions. These preliminary results can be useful whilst awaiting serology [4]. Some sexual health services might find it difficult to train staff due to a limited number of cases seen within the service, which consequently impacts upon practitioners' ability to maintain their clinical competence in this skill [7]. Some services may have direct fluorescent microscopy available instead as an alternative technique to dark field.
- Polymerase chain reaction (PCR) swabs can be used from chancres at genital and extra-genital sites; this method of testing may not be available within all services, although it can be useful for detecting early syphilis when serology is not yet detecting antibodies [1].

Serological sampling is recommended and should be the routine test performed. This should always be offered in addition to microscopy or swabs. There are two types of serological sampling approach available in the UK:

Specific treponemal antibody tests:

- Enzyme immunoassay (EIA), which uses various antigens
- Specific immunoglobulin (IgM) EIA
- *Treponema pallidum* particle agglutination (TPPA) test or *Treponema pallidum* haemagglutination (TPHA) test

Cardiolipin-based (reaginic) tests:

- Venereal disease research laboratory (VDRL) test
- Rapid plasma reagin (RPR) test

IgM is usually the first serological test to become positive, normally within 2 weeks of infection. EIA and TPHA/TPPA will be detected for the rest of the patient's life. VDRL/RPR titres increase sharply in early infection; however, they may reduce after 2 years of infection and may become undetectable even without treatment. VDRL/RPR titre levels are used to monitor response to treatment, which is recognised as successful when a four-fold decrease in titres is noted [1,2].

Treatment and management

Recommended treatments for early syphilis include: benzathine benzylpenicillin, 2.4 mega-units intramuscularly; procaine benzylpenicillin, 0.6 mega-units intramuscularly daily for 10 days; or doxycycline, 100 mg orally BD for 14 days. Alternative treatments require discussion with specialists in Genito-urinary Medicine (GUM). Macrolide resistance is common in the UK and therefore the use of azithromycin should now be avoided [1]. The current BASHH guidelines, published in 2008, are currently being updated, which may alter practice in the future [4].

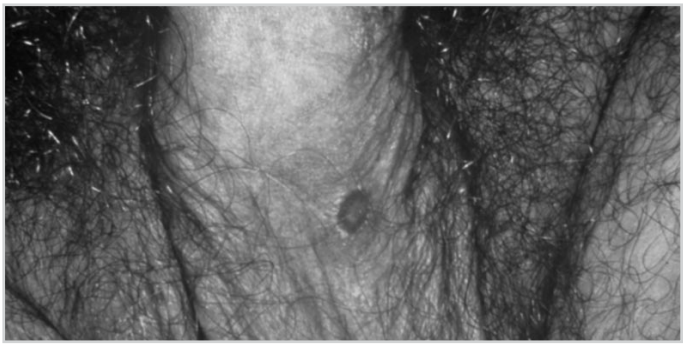

Figure 2: *A syphilis chancre on the penis (image courtesy CDC).*

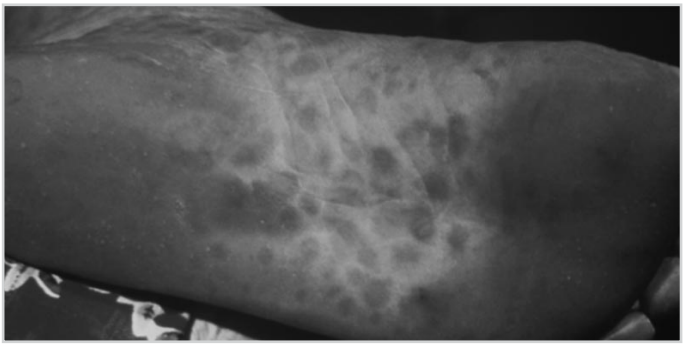

Figure 3: *A secondary syphilis rash affecting the soles of the feet (image courtesy CDC).*

Effective partner notification is essential and the look-back period varies depending on the stage of infection:

- 90 days prior to onset of symptoms for primary syphilis
- 2 years for secondary and early latent syphilis
- Depending on history for late syphilis, potentially up to 40 years

Consistent condom use should be promoted and sexual health education is vital to reduce the risks of re-infection and/or contracting further sexually transmitted infections.

Case study:

John, aged 27, has been living with HIV for the past 4 years. He has a CD4 count of 602 cells/mm^3 and an undetectable viral load. He takes a combination of efavirenz, emtricitabine and tenofovir (Atripla). John attends GUM clinic for a sexual health screen after complaining of a singular painless sore to his glans penis for 2 weeks. He reports unprotected insertive anal intercourse with his semi-regular male partner, 5 weeks ago. Dark field microscopy shows treponemes (Figure 1) and a further PCR swab is sent to the laboratory for confirmation, alongside blood sampling. He is prescribed benzathine benzylpenicillin, 2.4 mega-units intramuscularly, for primary syphilis and followed up in the HIV clinic.

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Correspondence: James Meek
jmeek@uclan.ac.uk

New treatments for HIV and hepatitis C co-infection and the impact in nursing practice

Ricky Gellissen

Clinical Nurse Specialist, Imperial College Healthcare NHS Trust

There have been significant developments in how chronic hepatitis C (HCV) can be treated in the last few years, since the advent of direct-acting antivirals (DAAs) (Figure 1).

The current BHIVA guidelines on the management of hepatitis viruses in adults infected with HIV were published in January 2014 [1]. At this time there were two DAAs for chronic hepatitis C (HCV) genotype 1 patients that had received both European Medicines Agency (EMA) and National Institute for Health and Care Excellence (NICE) approval: telaprevir [2] and boceprevir [3]. Since then, new data have been presented confirming the benefits of individual DAAs with pegylated interferon (PEG) and ribavirin (RBV); and DAAs in combination, in interferon-sparing regimens, with or without ribavirin, for the treatment of chronic HCV. There are now several of these DAAs that have received EMA approval, with other drugs in the pipeline, which are likely to be licensed in 2015. BHIVA provided a consensus statement on the guidelines on the management of hepatitis viruses in adults infected with HIV in September 2014 [1], addressing the impact of these developments on the management of both acute and chronic HCV/HIV co-infection, and upon patient choices and decisions on treatment. A further update to the guidelines is due in early 2015, though this might be delayed pending the outcome of the submissions for recommendations before NICE on the newer agents.

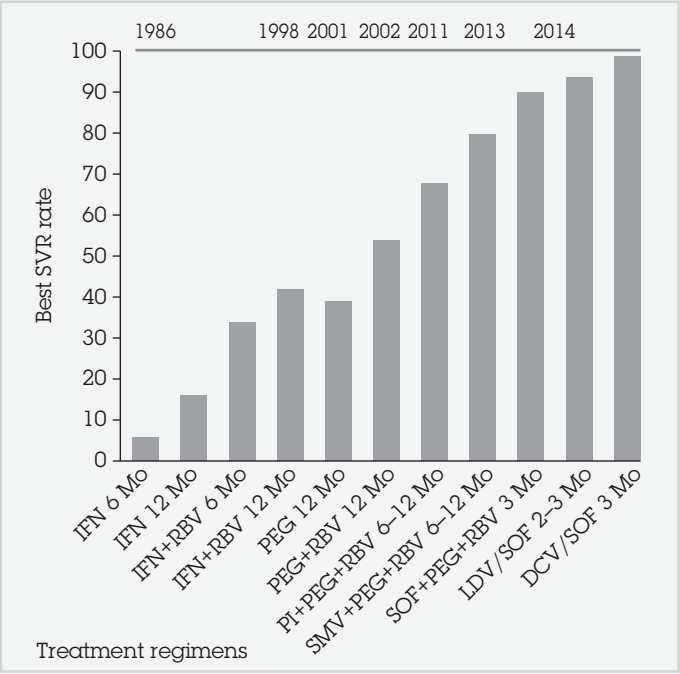

Figure 1: *A timeline for HCV therapy.*

Preparation, planning and good provider–patient communication have been cornerstones of successful treatment and the general principles of adherence [4–6]. Discussing possible side effects, including potential drug and food interactions, prior to a person beginning a new treatment regimen, and concentrating efforts to plan for and to manage side effects at times when a new drug or regimen is being started (and thus medication side effects are most likely to occur), promotes adherence [7,8]. Therapeutic education by a specialised nurse has been demonstrated to increase the response of patients with hepatitis C to therapy, particularly in difficult-to-treat patients [9]. Simplification of treatments, with fewer or milder adverse effects, shorter duration of treatment and good efficacy has always been the 'Holy Grail' of HCV therapy.

Treatment-experienced patients who have undergone a PEG/RBV regimen of up to 48 weeks will probably see the new treatment as a significant improvement. Aside from the potentially more favourable side-effect profile should a PEG- or RBV-sparing regimen be used, the fact that even PEG/RBV-containing therapies will have the shorter treatment duration of 12 to 24 weeks will be seen as advantageous. It must be borne in mind that unlike healthcare staff and many treatment-experienced patients, treatment-naïve patients will not have the same reference point with which to compare past to current treatment options. The fact that there may be fewer adverse effects than with the previous standard of care is unlikely to be a motivating or encouraging factor for these individuals. They will need to be informed and supported in just the same way as patients who received the older treatment regimens. In a bid to highlight the improvements in treatment and the reduction in adverse effects it can be easy to inadvertently under-represent the potential impact of adverse effects of HCV therapy.

Within the preliminary work of the nursing assessment and giving information on treatment success rates, potential adverse effects, symptom control and drug–drug interactions etc., there may now need to be a greater focus on managing patient expectations.

As BHIVA states, the availability of drugs and national or local directives may restrict the choice of options [1].

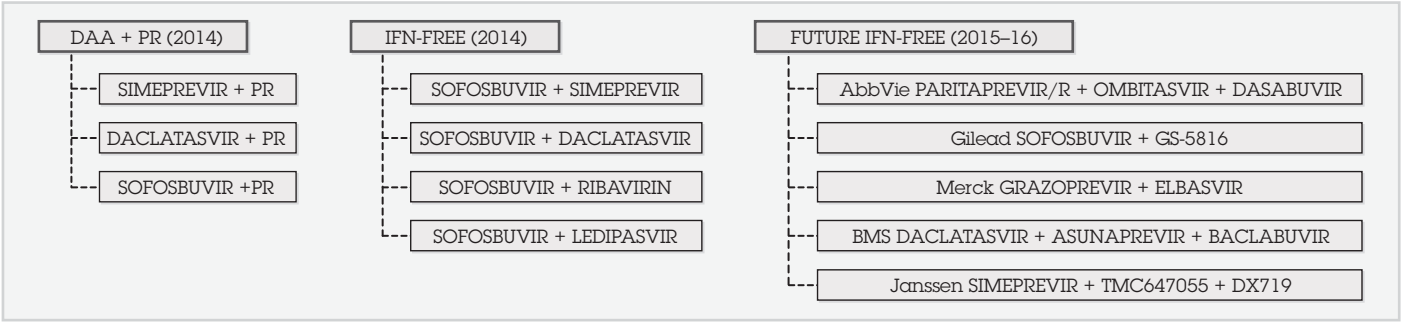

Figure 2: *DAA treatment options.*

The wider general media tend to promote news items that 'sell' and so often omit the finer details of the process involved between a scientific discovery and patient access to new medicines. Although there were four DAAs licensed in Europe in 2014 [10–13] (see Figure 2) we are yet to receive a decision on access to any of these agents from NICE. While BHIVA recommends that DAAs should form the backbone of all treatment options, irrespective of genotype, fibrosis stage or past treatment status [1], combinations with PEG/RBV still have a significant role to play. The cost of the newer therapies is likely be an important factor in the decision for recommendations by NICE. There is a difference, which may be considerable, between list prices for pharmaceuticals and local contract prices. Currently, the list price of a 24-week course of PEG/RBV at full dose, excluding VAT, would be £4.5–5K, depending on product and patient weight. (PEG and RBV are available from two different companies and RBV dosage is usually calculated based on patient weight.) Of the DAAs that are already NICE recommended, boceprevir, which may involve 24 weeks of triple therapy regardless of any additional weeks with just PEG/RBV, would cost a further £16,800 for 24 weeks' treatment, whereas telaprevir would cost £22,398 for the 12 weeks' triple therapy component of treatment. Simeprevir, which is one of the newest DAAs, has been competitively priced and would equally cost £22,398 for the 12 weeks of triple therapy. Unfortunately, simeprevir has drug–drug interactions that make it contraindicated for any HIV antiretroviral therapy involving non-nucleoside reverse transcriptase inhibitors (NNRTIs) or any boosted protease inhibitor (PI). Patients on HIV antiretroviral therapy would require switching to, and stabilising on, a boosted PI- and NNRTI-sparing regimen, such as raltegravir and Truvada, prior to commencing simeprevir. Sofosbuvir would cost £34,982.94 for 12 weeks in whatever combination it was given. The co-formulated sofosbuvir, 400mg, and ledipasvir, 90mg, that is marketed as Harvoni would cost £38,979.99 for one tablet daily for 12 weeks.

With the high cost of the newer agents, ineligibility for interferon and ribavirin therapy is likely to be a determining factor, rather than patient preference, for access to PEG-sparing regimens.

Equally, the inclusion criteria for using more than one DAA will be strict if the recent Expanded Access Programme funded by NHS England [14] is any indication. It may be deemed prudent by NICE to offer wider access to DAAs to those with more significant liver disease for the immediate future, with broader access perhaps being granted in a later wave in years to come.

Historically, a trend has developed among liver specialists of 'warehousing' the more 'difficult-to-treat' patients in anticipation of the availability of more effective hepatitis C treatments in the future [15]. Among the HIV/HCV co-infected patients will be those who have been 'warehoused' until better treatment became available, such as those with decompensated cirrhosis or who are pre-/post-liver transplant.

BHIVA recommends that cirrhotic patients with chronic viral hepatitis and HIV infection should be managed jointly with hepatologists or gastroenterologists with knowledge of end-stage liver disease, preferably within a specialist co-infection clinic [1]. Common practice in the UK is that the management and monitoring of patients undergoing antiviral therapy for HCV has come under the remit of a specialist nurse. However, there are few dedicated HIV/hepatitis co-infection specialist nursing posts, with care for the HIV/HCV co-infected being managed by nurses specifically working in one specialty, be that HIV, infectious diseases, hepatology or gastroenterology. Because of 'warehousing' there is limited experience on managing HIV/HCV co-infected cirrhotic patients. Collaborative work and shared placements between the different related specialty nurses may prove beneficial in transferring appropriate skills to all the relevant areas where HIV/HCV co-infected patients undergo HCV antiviral therapy to better manage this patient group.

When PEG/RBV was the standard treatment, patients would be prepared for 48 weeks of treatment, with the potential of reducing this to 24 weeks if a rapid virological response was achieved (in the non-cirrhotic patient). The more recently licensed DAAs will require a shorter course of treatment as standard, from 8 to 24 weeks [12]. There is therefore a potential to increase the throughput of patients even if the same frequency

of monitoring visits is maintained. If treatments offered are either PEG- or RBV-sparing then the frequency of visits may be altered, as the haematinic effects, such as anaemia, neutropenia or thrombocytopenia, will be reduced. According to the National Institutes of Health, patient adherence is critical to the success of treatment of hepatitis C and physicians should discuss the importance of adherence with patients before embarking on therapy, and regularly assess and take steps to help their patients maximise their adherence [16]. There may be an increased willingness to consider treatment by those for whom a 48-week course of treatment was too onerous. Adherence levels are known to be low in chronic disease such as diabetes, asthma and hypertension, with only 50% of patients remaining adherent over time [17,18]. It is also known that adherence levels change over time. Those who might have experienced difficulty in long-term adherence over 48 weeks may find the prospect of between 12 and 24 weeks of treatment much more tolerable and achievable. Considering that many HIV/HCV co-infected patients on HCV treatment are also on HIV antiretroviral treatment, there are additional challenges due to the interactions between HIV and HCV therapies and further research is probably required on co-infection population-specific issues [19].

With reduced treatment times and a lower side-effect profile during treatment, it may be possible to treat patients who have had difficulties in committing to a long period of treatment in a hospital outpatient setting. This may now increase the opportunities for development of satellite clinics and shared care in the community. Models of shared care with community outreach with prison services, homeless persons, and drug and alcohol services, are further areas for exploration and development. There is evidence to suggest that illicit drug users would accept referrals for assessment, treatment and monitoring at a multidisciplinary health centre where they also accessed a weekly HCV peer-support group [20]. Anecdotally, the Liver and Antiviral Centre at Imperial College Healthcare NHS Trust already provides a weekly clinic at North Westminster Drug and Alcohol Service (Central North West London NHS Foundation Trust) where patients receive treatment for their HCV as a satellite service, reducing hospital appointments, which will include any HIV/HCV co-infected patients accessing this service. Additionally HCV oral swab testing is offered at St Mungo's Broadway homeless hostel, followed by full venous blood-borne virus testing for those who have reactive oral swabs. There are plans to expand further within Central and North West London NHS Foundation Trust and the feasibility of extending into local prison services is currently being explored.

Acute HCV: when to treat?

As stated in the latest BHIVA consensus statement [1], the options for treatment of acute HCV should be discussed with all patients and should cover the benefits of immediate versus deferred therapy. DAAs are not licensed for use in acute HCV and so currently the only available treatment outside a clinical trial would be PEG/RBV for a minimum of 24 weeks. However, if a patient's estimated duration of HCV infection has been greater than 24 weeks then they would technically now be classified as having a chronic infection and would be eligible for products licensed for chronic HCV, including the new DAAs (if the newer drugs meet NICE recommendations).

One of the rationales for early access to HCV treatment during the acute phase has been the higher treatment success rate for acute HCV when compared to chronic HCV, in HIV/HCV co-infection. Some patients might wish to wait for access to DAAs because the treatment period will be briefer with a lower side-effect profile, and clinical trial data have still suggested a high success rate. Fierer presented preliminary data at the *20th Conference on Retroviruses and Opportunistic Infections* (CROI) on the use of DAAs in acute HCV suggesting a reduction in total duration is possible to 12 weeks [21].

A further rationale for treatment during the acute phase of HCV has been from a public health perspective. Over the past decade a global epidemic of acute hepatitis C has been observed amongst HIV-infected men who have sex with men (MSM). The route of transmission seems to be permucosal and has an association with sex and drug-taking behavioural factors [22]. HCV/HIV co-infected patients have higher HCV viral loads and so treatment can reduce the HCV viral load and reduce the risk of onward transmission, thus also reducing the potential 'pool' of transmission within the MSM community.

Re-infection

Targeted interventions to prevent both initial HCV infection and the potential of re-infection in HIV-infected MSM will need to be considered if the DAAs make treatment shorter, more effective and more tolerable. Re-infection is a major issue for consideration both in injecting drug users and MSM. The rate of HCV re-infection in both groups for those who have previously cleared HCV infection, either spontaneously or through treatment, is significantly high. According to the EuroSIDA study of HIV-infected patients, 20% of MSM and injecting drug users who are cured of HCV will be re-infected subsequently [23,24]. As recently as 2012, in England, only around 3% of those with long-term HCV infection were starting treatment each year [25]. The NHS is not meeting demand for treating those naïve to HCV therapies. With the cost

implication of the new DAAs likely to limit access to treatment for some, how often can the NHS afford to offer re-treatment? This issue was recently explored at the *Five Nations Conference on HIV and Hepatitis* in December 2014, a joint initiative involving partner organisations from France, Germany, Italy, Spain and the United Kingdom, where the motion debated was 'Re-infections should not be retreated' [26,27].

Anecdotally, nurses have reported receiving a number of queries from patients about access to the 'new treatments' and to PEG-sparing therapy. Both patients and some of the 'front line' clinic and ward staff seem unaware of the timescale for access to newer therapies or the fact that although PEG-sparing therapies may be licensed, they are unlikely to be readily available. At the time of writing, according to *The Guardian*, in the final draft guidance on sofosbuvir from NICE, NHS England was to be allowed to postpone implementation for four months, until the end of July instead of the beginning of April [28]. Mark Thursz, Professor of Hepatology at Imperial College London and Chair of the Hepatitis C Coalition, described the delay as unprecedented. Charles Gore, chief executive of the Hepatitis C Trust, was reported to be very concerned about the delay and worried about the precedent it could set. 'It feels to me as if a whole new criterion has been invented by the back door,' he said [28].

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Correspondence: Ricky Gellisen
ricky.gellissen@imperial.nhs.uk

A positive diagnosis of HIV for the over 50s

Sarah Haigh

Retired Manager and Nurse, NHS

Have you ever had certain moments in time when you can remember exactly where you were, even the clothes you or someone close to you wore when something profound happened to you?

I still bear the scar from my earliest recollection when at the age of two I got bitten by my pet cat. I screamed the place down as the cat turned on me when I tried to stuff her head first into our budgie's cage. I recall the bird not being too pleased either, but he did survive the ordeal unscathed.

I remember so clearly the day my husband texted me on my mobile phone at work with the dreaded words 'They think I have got HIV.' The cold feeling that engulfed the pit of my stomach as my head shouted 'No it's not real, it can't be.' After all, we'd been in a monogamous married relationship for 33 years. Or had we? It still makes me shudder. 'Can you meet me outside our GP surgery?' his text continued. I muttered some words to my secretary and drove the 13 miles to the GP surgery, all the time my head kept screaming 'It's not real, it can't be true.' Surely I would have known?

How could this happen at our ages? We were both heading rapidly towards our sixties and lived in a small Scottish community, miles from the cities of Edinburgh and Glasgow once known as the HIV Mecca.

He didn't need to tell me when he entered the car. The image is still vivid. I see him walking towards me, in his faded navy jeans, his navy woollen jacket, his navy jumper, a black and white bandana type scarf fastened round his neck and his brown ankle boots. I looked at his face and I knew. He uttered the confirmation and then told me my GP needed to test me. I muttered something about my recent weight loss, already linking this to HIV, climbed out of my car and entered the surgery with a heavy heart and numbed mind.

HIV didn't exist when we first met in 1970. You wore a condom to prevent an unplanned pregnancy, not to stop the spread of HIV. Even other sexually transmitted diseases were not given a high profile of transmission then. I can only ever remember syphilis and gonorrhoea being the sexually transmitted diseases of the era. We had been together as a couple since 1971, never once straying to others for comfort, or so I thought. The very rock and foundation of our life together had just been shattered and my head screamed at my husband 'How could you do this to us?' But my mouth remained silent. His heart was as heavy as mine; fear, disbelief and shame engrained on his face.

I had put my fatigue and weight loss for the past nine months down to my job in the NHS, which demanded long working hours. Early to work and late home, and very few days when I actually had a scheduled lunch break. Often it was a snatched bite to eat between meetings and on to the next one. A GP colleague, who shared my office that summer, was so concerned she took my blood, between discussing work items, sending it off to test for possible thyroid or kidney function issues. All the tests came back negative. My own GP gave me the results. We worked with each other every day as fellow board members. He put it down to being a post-menopausal woman and had suggested some hormone replacement therapy. After all why would they think I would have HIV?

I'd fought hard to reach the dizzy heights of a senior manager in the NHS, having broken through the glass ceiling as a woman in a male-dominated world in the year 1999, at the age of 46. Ten years of studying finally paid off when my master's degree in Business Administration opened the door to the boardroom as I joined the executive management team within a health authority in England. As their Lead Nurse Advisor, I quickly became accustomed to working at this executive level and soon became a director at a neighbouring acute trust. My days on the shop floor as a nurse, and tramping round the community as a district nurse, proved an invaluable foundation for this executive work.

It all became so clear to me that day when I walked into the surgery. My GP, a work colleague, my friend, tried to put on his professional face, consoling me by stating that just because my husband had HIV it didn't mean I had it. But I knew. My weight loss and tiredness since the February now made sense. I was into size 6 clothes from my perfect 10. Staff kept asking me if I was OK when the tiredness caught up with me in an afternoon at work. My cheek bones became prominent as the skin sank into my sockets and my boobs virtually vanished. My thinning hair had been put down to being a menopausal woman, although I was concerned when I pulled handfuls out in the shower. But now I knew the causal factor.

My husband had requested a GP visit at home that February when, after two weeks, I'd been too ill to lift my legs off the sofa. On arrival, he examined the swollen glands in my neck, palpated my stomach, explored my mouth commenting on the ulcers in my cheeks, tested the rash on my trunk and arms for meningitis, took my temperature commenting that it was high, and confirmed my blood pressure

as being normal. He asked about my diet and I explained that I couldn't tolerate food. Even my beloved Yorkshire Tea had been given the 'heave ho' for the more tolerant tap water; its metallic flavour left a bitter taste in my mouth. After a thorough examination, he put it down to possibly being glandular fever. He didn't take a blood sample, stating that if I wasn't feeling any better in a week or two, I should go back to the surgery for more tests. I'm a nurse, and once on my feet, a week later, there was no further thought of going back to the surgery.

I wept buckets as my 'friend' and GP confirmed my HIV. He wrapped his arms about me and tears flowed down his cheek as I sobbed. I thought I was going to die. After all I'd seen the images of the 80s.

Two days later, I sat in front of my HIV specialist consultant, who weeks before had been sitting in front of me as his manager. His eyes filled with tears as I poured my heart out to him. I remember watching his clean white ruby striped shirt splatter with my black mascara filled tears. 'I need to screen you for a range of sexually transmitted diseases,' he stated, 'chlamydia, syphilis, gonorrhoea and hepatitis etc.' he softly uttered, and I shuddered in disbelief, the shock hitting me. I'd never thought of all these other STIs being linked to HIV.

'Can you do a small urine sample before you have your smear?' he uttered, showing me to his private en suite toilet. I was conscious of trying to hit the small opening of the bottle with my urine flow, and being a nurse, tried to do a midstream specimen. I mused when I thought of how many times I had asked patients to wee into a small bottle, finally realising how difficult it was. Moments later I opened the door, slightly embarrassed that he had heard me urinating into his toilet. It was difficult to stop once I started. The joys of childbirth!

The HIV specialist nurse entered the room at this stage. Do you mind if Chris does a smear test? He asked. Oh god how degrading, I thought. Here was one of my staff now going to see my private bits and know I have HIV as well as god knows what. I had come prepared for the possibility of having to show 'down below', having washed and shaved that morning just in case. I dutifully nodded.

Chris pulled the screen round the bed in the corner, gently navigating me towards it. She was sweet, I thought, as she tried to alleviate my concerns. 'Just remove your trousers and pants,' she said, handing me a gown and towel. 'Place this over you and I'll come once you are ready.' Two seconds later I confirmed my readiness and she entered through the pulled screens. I was conscious there were just the two of us as the male consultant had left the room.

She apologised for the coldness of the speculum and gel and gently lifted the towel asking for legs apart before entering the equipment. All the time she chattered asking about periods and any discharges I may have noticed, apologising for having taken the sample and made me bleed. She explained I may spot with blood, handing me a thin sanitary towel for my pants. It felt cold and uncomfortable when she scraped and I was relieved when it was over. She left the curtained area requesting that I get dressed again.

Afterwards she took my blood pressure and weight, asking about my feelings and did I need to talk to someone, but it was too soon to talk to anyone. I didn't want any of my 1,000 staff to find out about this and told her so. She placed her hand on my arm reassuring me of the utmost confidentiality. I felt my fear relaxing with this reassurance. After all, I managed all the staff in this health centre. It was bad enough having to be seen sitting in the waiting room without being seen to need some treatment.

Within the week, I was reassured that chlamydia was the only other sexually transmitted disease I had. Thank goodness, no gonorrhoea or syphilis. Back in the health centre again the HIV specialist nurse handed me some tablets to take for the chlamydia. This was not easy as I had a phobia about medication. My head told me though that I had very little choice on taking these meds. I didn't want to talk this time, having returned to my professional distance as a manager with staff.

The consultant offered me the opportunity to see the specialist nurse for my blood tests and routine screening. She was lovely but I didn't want her to explore all my inner fears. It would show my vulnerability, so I declined – grateful to be able to stay with him. I'd wallowed in self-pity for nearly two weeks, but I'm a great believer in fate and I heard myself telling him 'I'm going to use this as a "gift".' It was time to return to my positive attitude; after all, I now had a diagnosis proving my positivity.

Now some four years later, having retired from my beloved NHS after 40 loyal years, I am an HIV activist. Having attended the International AIDs Conference, Washington, D.C. in 2012, my 'inner nurse' revived, having listened to and met the most inspiring individuals with HIV. Hell bent on raising the profile and plight of so many 'victims' of HIV my 'caring nature' was spurred into action.

So far I have presented at local forums to schoolchildren, managers, clinicians and others living with HIV, lectured to master's degree students, attended meetings as a patient in Madrid, Milan, Brussels and across the UK, assisted in the design of patient surveys and questionnaires, written and advised on policy. My gift of HIV has made me a better person. I have joined a select group of the most amazingly special people in the world. The men, women, children and youths living with HIV, who do not judge, do not discriminate, but who accept me for who and what I am. What I am is a woman living with HIV.

Correspondence via: Juliet Bennett
jvjbennett@yahoo.com

Book review

HIV in the United Kingdom: 2014 Report An overview of the key information

James Meek and Claire McCausland
Lecturers, University of Central Lancashire
Preston, UK

The HIV in the United Kingdom Report is an annual document published by Public Health England (PHE) which looks in detail at HIV data from the previous year. It is the second year that PHE has published the report, as previously this was undertaken by the Health Protection Agency.

According to the 2014 report data, it is estimated that there were 107,800 people living with HIV (PLWH) in the UK in 2013; this demonstrates an overall prevalence rate of 2.8 per 1,000 people, with men being the most affected at 3.7 per 1,000 and women at 1.9 per 1,000. However, these data only include people aged 15 to 59 years. In 2013 there were 6,000 new cases of HIV diagnosed and 320 reported cases of AIDS. Of those diagnosed, 42% presented late with a CD4 count of less than 350 cells/mm^3. Five hundred and thirty PLWH died, most of whom presented with late diagnoses. Of the 6,000 new diagnoses, 1,520 were females and 4,480 were males with 3,250 of the cases being men who have sex with men (see Table 1). The number of new diagnoses has continued to decrease gradually since its peak in 2005 when there were 7,890 new cases.

In 2004 1-in-14 new cases of HIV were in persons aged over 50; there has been a substantial growth in the figures within this age group over the last 9 years, with current data demonstrating 1-in-4 new diagnoses being within this group. Within the over 50s, new diagnoses resulting from heterosexual transmission account for 1-in-5 cases. The number of PLWH who are accessing HIV care and prescribed antiretroviral therapy (ART) has increased to 90% in 2013 in comparison to 69% in 2004. Those who are aged over 50 years are more likely to be prescribed ART (96%) than those aged 15 to 24 years (79%).

The rates of new infections in people who inject drugs (PWID) remained low with 130 new cases diagnosed; this number has decreased since an all-time high of 200 people in 2006. The median age of new diagnosis within this group has increased from 33 years in 2004 to 47 years in 2013, with nearly two-thirds of those diagnosed being born in the UK.

Those unaware that they have a concurrent sexually transmitted infection (STI) are more likely to transmit HIV if they have condomless sex. Of the people who were diagnosed in England, 15% were diagnosed with a concurrent STI – chlamydia, gonorrhoea or syphilis. MSM diagnosed with HIV accounted for 40% of the cases of syphilis in England.

Finally, over one million HIV tests have been performed in STI clinics, which is a 5% increase on the previous year, and nearly 700,000 pregnant women were tested within antenatal services in England.

Table 1: HIV diagnoses in 2013.

HIV diagnoses	Number
Heterosexual males	1,230
Men who have sex with men (MSM)	3,250
Female	1,520
Total:	6,000

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Correspondence: James Meek
jmeek@uclan.ac.uk, or
Claire McCausland
cmccausland@uclan.ac.uk