

Correlates of hepatitis C testing among heroin injectors in Sydney

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Introduction

Hepatitis C poses a significant public health problem in Australia. While HIV has been contained by needle and syringe programs,¹ hepatitis C prevalence continues to increase.² There were approximately 16,000 new hepatitis C infections in Australia in 2001.³ Injecting drug use, in particular heroin injection,⁴ is the primary mode of hepatitis C transmission in Australia.² Hepatitis C prevalence among injecting drug users ranges from 62%⁵ to 50%.⁴

Testing injecting drug users (IDUs) for hepatitis C is important for prevention. First, knowledge of one's hepatitis C status has been shown to have an impact on injecting behaviour.⁶ Second, pre- and post-test counselling provides an opportunity for health promotion. Counselling at the time of testing has been shown to reduce risk behaviours among those testing HIV positive.^{7,8} Third, testing links drug users to harm reduction initiatives and drug treatment as drug users are often marginalised by health care workers.^{9,10} Fourth, very high treatment response rates have been reported for those treated for hepatitis C in the acute stage of infection,^{11,12} thus increasing the importance of early diagnosis.

Despite the benefits of hepatitis C testing for heroin users, little is known about their patterns of testing. Notification data indicate that most cases are among IDUs,¹³ but uptake of testing among IDUs or variation in uptake within the groups of IDUs in Australia have not been explicated.

This study examined correlates of hepatitis C testing among heroin users, the main group at risk for hepatitis C infection.⁴ Specifically, the study assessed differences in ever and recent (preceding 12 months) testing and variations in patterns of testing across demographic and drug use characteristics associated with hepatitis C risk and infection.

Methods

Heroin users were recruited through needle and syringe programs, a methadone clinic and snowballing (word of mouth). Posters advertising the study were placed in the agencies and agency and research staff invited clients to participate in the study.

Interviewers administered a questionnaire to participants, which assessed their status, knowledge and testing for blood-borne

Abstract

Issue addressed: Hepatitis C infection is a significant public health problem with most cases occurring among injecting drug users (IDUs). Little is known about the uptake of testing. The study examined correlates of hepatitis C testing among heroin users.

Method: Current heroin users, recruited through needle and syringe programs, methadone clinics and via snowballing, were interviewed about hepatitis C testing.

Results: Four hundred heroin users were interviewed and most (91%) reported having been tested for hepatitis C. Females and those with a history of incarceration or drug treatment were more likely to have been tested, but those who had been using for two years or less were not.

Conclusions: Hepatitis C testing is common among heroin users. Groups most at risk of infection are being tested.

Key words: Hepatitis C, testing, injecting drug use.

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So what?

The majority of heroin users had been tested for hepatitis C antibodies with little difference between risk groups. Testing can provide important opportunities for risk reducing counselling, but more work is needed to ensure drug users receive appropriate pre- and post-test counselling.

viral infection (BBVI). Selection criteria were heroin use at least once a month in the past six months, aged 17 years or older and proficiency in English. Participation was voluntary and required informed consent. Participants received \$20 for travel expenses.

All analyses were conducted using SPSS for Windows (version 10.0.7). Means were reported for continuous, normally distributed data. Medians were reported for skewed continuous data. Categorical data were presented as proportions and analysed using the χ^2 test.

The University of New South Wales and relevant New South Wales Area Health Service Ethics Committees approved the study. All participants gave informed consent.

Results

Sample characteristics

Four hundred heroin users were interviewed and their characteristics appear in Table 1. Two-thirds of participants (68%) reported having injected two or more different drug classes in the preceding 12 months. Eighty-three per cent and 71% of participants had received treatment for heroin dependence ever and in the preceding 12 months, respectively.

Many (91%) participants reported having been tested for hepatitis C infection. Participants were last tested for hepatitis C a median of 20 (range 1-572) weeks prior to interview. Sixty-two per cent of participants had been tested in the six months preceding interview and 78% in the 12 months preceding interview.

Female heroin users were more likely to report having been tested for hepatitis C than males (96% vs. 90%; $\chi^2=4.96$, 1 *df*, $p<0.05$). Participants with a history of incarceration were more likely than those without to report having ever been tested for hepatitis C (95% vs. 88%; $\chi^2=6.62$, 1 *df*, $p<0.01$), as were those who had ever received drug treatment compared with those who had not (94% vs. 83%; $\chi^2=8.29$, 1 *df*, $p<0.05$). Those who had been using heroin for less than two years were less likely to report having ever been tested than those who had been using for three to five years (77% vs. 92%; $\chi^2=4.78$, 1 *df*, $p<0.05$) or six or more years (77% vs. 93%; $\chi^2=11.26$, 1 *df*, $p<0.01$). There were no differences between those who reported using a needle/syringe after another person in the previous month, or on any other variables (see Table 1).

There were no differences between those tested in the 12 months preceding interview and those who had not been tested recently (more than 12 months since testing) on any of the independent variables, including self-reported hepatitis C status.

Discussion

This study has found that most current heroin users report recent hepatitis C testing. Females in this study were more likely than males to report ever being tested, as were those with a history of incarceration and drug treatment. Heroin users who had been using heroin for two years or less were less likely to have been tested. This is a crucial group that needs to be targeted for testing as the related counselling can reduce their risk of infection. Testing history was not associated with age or risk behaviour in this study. This is consistent with HIV testing among drug users in the United States, where no association between risk taking and HIV testing was found.¹⁴ Only a small proportion of heroin users in this study reported never being tested for hepatitis C and approximately one-fifth had not done so in the preceding 12 months, with no differences across key demographic and drug use characteristics. These data suggest that the heroin users in this sample were aware of their hepatitis C risk and, for those uninfected, the need for regular testing. This information is important in terms of surveillance and suggests that the key risk groups are presenting for testing.

It is not surprising that females were more likely to have ever undergone testing compared with males, as there are likely to be a greater number of opportunities for females to be tested. In the general population, women utilise health care services more than men and this is probably the same for IDUs.¹⁵ Female

Table 1: Participants ever tested for hepatitis C.

Variable	No. surveyed	Tested for hepatitis C n (%)	% tested in last 12 months
Males	249	90 (221)	83
Females ^a	146	96 (139)	88
≤24 yrs	95	91 (85)	87
25-29 yrs	86	92 (78)	88
30-34 yrs	86	93 (80)	88
35+ yrs	116	91 (105)	80
ATSI	70	93 (63)	79
Prison history ^a	246	95 (233)	83
Main drug heroin	332	91 (279)	84
Years of heroin use ^b			
< 3	34	77 (25)	96
3-5	73	92 (67)	82
6+	274	92 (254)	85
HCV positive		58 (232)	83
Injected last month	352	92 (320)	85
Shared n & s last month	34	85 (29)	83
Shared injecting paraphernalia last month	209	92 (190)	83
Ever had drug treatment ^b	333	94 (309)	85
Drug treatment in last 12 months	283	93 (260)	86

(a) <0.05 .

(b) <0.01 .

IDUs are also likely to undergo testing during antenatal care. Similarly, prisoners are offered hepatitis C testing upon entry to prison,¹⁶ which would increase the likelihood of testing among that group, although more males than females go to prison.¹⁷

Recent research has found that although IDUs may undergo testing for hepatitis C, inadequate post- and pre-test counselling can hinder the health promotion opportunities that testing provides. Aitken and colleagues found that many of their participants had negative experiences with health care providers and found greater uptake of testing when delivered by peers.⁹ Such options should be considered.

Limitations

This study has several limitations. It is unclear how representative the sample presented here is of the broader heroin-using population. Heroin users are a hidden population, the parameters of which are not well defined, and it was not possible to calculate an overall response rate. Also the eligibility criterion of proficiency in English may have excluded some IDUs from participating. The sample was, however, similar to other samples of IDUs recruited in Sydney where heroin was the main drug injected.¹⁸ Future research could examine a broader group of injecting drug users, including those who do not access services and who may be unaware of their risk. The study also relied on self-reports of testing that were unable to be corroborated, although at-risk behaviour is influenced by the belief about one's status, not actual status.¹⁹

Finally, this research focused on heroin users, the primary risk group for hepatitis C infection. Nevertheless, the study has demonstrated that heroin users typically do undergo testing and there are few differences across the group, even for those most at risk.

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