

DRUG ALCOHOL FINDINGS *Research analysis*

This entry is our analysis of a study added to the Effectiveness Bank. The original study was not published by Findings; click [Title](#) to order a copy. Free reprints may be available from the authors – click [prepared e-mail](#). [Links](#) to other documents. [Hover over](#) for notes. [Click](#) to highlight passage referred to. [Unfold extra text](#) . The Summary conveys the findings and views expressed in the study. Below is a commentary from Drug and Alcohol Findings.

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[▶ A longitudinal study of hepatitis C virus testing and infection status notification on behaviour change in people who inject drugs.](#)



Spelman T., Morris M.D., Zang G. et al.

Journal of Epidemiology and Community Health: 2015, 69, p. 745–752

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Using data pooled from studies in three countries, researchers examined the impact of hepatitis C testing and counselling – and of testing positive versus negative – on whether people who inject drugs become more or less likely to risk infection.

SUMMARY People who inject drugs are at high risk of infection with hepatitis C, a leading cause of liver cirrhosis and cancer. Harm reduction services such as needle exchanges and methadone maintenance have been key to reducing the prevalence of hepatitis C and preventing its transmission. Using data from Canada, the USA and Australia, the featured article explored another avenue for hepatitis C control – testing for the virus, notifying the patient of the result, and providing counselling and support. It examined the potential for these procedures to change injecting-related behaviours, and compared what happens after people test positive versus negative for the virus.

Study participants had been recruited, interviewed and tested periodically between 1985 and 2011, tested negative for hepatitis C at the time of enrolment, had a history of injection drug use, and taken part in at least three interviews and two tests. Of the 829 who met these criteria, 190 of the 195 who later tested positive for hepatitis C could be individually matched to 190 from the same studies who remained negative. Matching was on the basis of the times when they were tested. Typically participants were young white men who primarily used heroin and had injected for five or six years; nearly half were not stably housed. They were surveyed about recent injecting, syringe sharing, sharing of other injecting equipment (all risk factors for transmission and acquisition of hepatitis C) and alcohol use (clinically relevant because a risk factor for liver disease). Referring back to either the past month or past three months, participants answered ‘Yes’ or ‘No’ to each of these questions.

Main findings

On no measure did receiving a positive test indicative of infection lead to significantly greater risk reductions than testing negative. Small reductions in the prevalence of recent injecting and syringe sharing were found following notification of test results, but there were no significant extra reductions after testing either positive or negative. No significant reductions were seen in the sharing of other injecting equipment in either hepatitis C-positive or hepatitis C-negative groups. A small increase in subsequent alcohol use was associated with a positive test for hepatitis C but not with a negative test, creating a statistically significant difference in impacts on drinking. This finding was due largely to trends in the those aged under 25.

The authors’ conclusions

This was the first study to use data from several countries and continents to examine risk behaviours after testing for hepatitis C among people who inject drugs. Findings offer some support for, and some challenges to, previous research. In line with other studies, syringe sharing decreased following a positive or negative test result, but contrary to other studies, alcohol use increased following a positive test result.

Alcohol use findings related to an increase in the proportion of people reporting recent drinking, not necessarily associated with an increase in the amount of alcohol consumed. Nevertheless they suggest a need for harm reduction initiatives aimed at people with (or at risk of acquiring) hepatitis C to include elements on the potential harms of drinking while infected with the virus.

Key points
From summary and commentary

This study examined the potential for hepatitis C testing and counselling and support to change risky injecting behaviours, and in particular the impacts of testing positive versus negative.

Recent injecting and syringe borrowing became slightly less common following a test for hepatitis C and notification of the results. However, recent alcohol use became more common, but only after a positive test indicative of infection.

Results suggest that notification of hepatitis C status is an important opportunity for risk-reduction counselling, and highlight the importance of addressing alcohol use as an integral part of testing and counselling.

FINDINGS COMMENTARY Harm reduction strategies aiming to prevent rather than treat infection have been the mainstay of hepatitis C control. However, there is [growing awareness](#) that substantially curbing hepatitis C demands a multi-faceted programme, including early diagnosis and treatment of hepatitis C infection as well as increased provision of sterile syringes and substitute prescribing programmes like methadone maintenance.

This study sought to investigate whether injecting behaviour would change after being notified of testing positive or negative for hepatitis C. It might be expected that compared to being told they seem free of hepatitis C, people would be significantly less likely to engage in risk behaviours after receiving a positive test. However, that was not the case in this study. Further research is needed to

receiving a positive test. however, that was not the case in this study. further research is needed to understand why younger adults in particular may be more likely to drink after being diagnosed positive for hepatitis C.

Findings add to the minimal evidence base (relative to harm reduction) on the effect of hepatitis C testing, notification and counselling on risk behaviours among injectors. Testing and notification of the results appear to provide a unique opportunity to influence individual behaviour and subsequent viral transmission, but it remains unclear what the impacts on behaviour are of a negative or positive test result, and how to optimise the harm reduction benefits of notification and counselling.

The analysis was based on whether or not people engaged in risk behaviours after being tested. Though a simple and effective way of comparing behaviours between those testing positive versus negative, it meant the analysis could not take into account the frequency with which participants engaged in these behaviours, their reasons for doing so, nor how much they had moderated their behaviour. Neither could it take into account other harm reduction techniques the injectors might have implemented, such as sharing only with people who also tested negative, or disinfecting syringes and needles.

Despite its careful analysis and the confidence that comes from findings generalisable across several countries, the featured study drew its data from four independent studies with different approaches to follow-up schedules and hepatitis C testing and test disclosure procedures. Differences between what the studies assessed and how they did so limited the ability to rule in or rule out some possible influences on outcomes, such as mental health status, uptake of treatment for hepatitis C, and access to medical care. In addition, the study did not incorporate data about the injecting networks of participants, or the number of injecting partners, so could not take into account information about how these changed after testing in ways which might increase or decrease exposure to hepatitis C.

For more about how to reduce the prevalence and incidence of hepatitis C among people who inject drugs, see this Effectiveness Bank [hot topic](#).

This draft entry is currently subject to consultation and correction by the study authors and other experts.

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