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▶ Hepatitis C infection among recent initiates to injecting in England 2000–2008: Is a national hepatitis C action plan making a difference?

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Hope V., Parry V., Marongui A. et al. Request reprint Journal of Viral Hepatitis: 2011, online in advance of print.

Trends in hepatitis C infection among recent initiates to drug injecting in England between 2004 (when a national action plan was launched) and 2008 indicate the importance of reinvigorating and improving the coverage of harm reduction measures such as needle exchange and substitute prescribing.

Summary Around 80% of hepatitis C virus (HCV) infections in England are among injecting drug users. The *Hepatitis C Action Plan for England* launched in 2004 includes targets to reduce hepatitis C prevalence in recent initiates (those starting injecting in the preceding three years), and to increase hepatitis C voluntary confidential testing. The strategy recommended that all those attending specialist drug treatment services should routinely be offered hepatitis C testing to increase the proportion of injectors aware of their infection through improved uptake of voluntary confidential testing.

The plan's impact is examined using surveillance data from the 3463 people who had first injected in the preceding three years when they responded to an annual survey of injecting drug users in contact with specialist drug services across England from 2000 to 2008. Participants provided an oral fluid sample which was tested for anti-HCV (antibodies to hepatitis C indicative of infection) and completed a short questionnaire including questions about hepatitis C voluntary confidential testing and the result of their latest test. Just under half had ever been imprisoned and the same proportion said they were currently receiving prescribed medication for their drug use. Half said they had at some time received used needles and syringes and 86% had used a needle exchange. The number of recent initiates recruited into the survey decreased from 672 in 2000 to 320 in 2008 and from 23% of the total sample of injectors to 12%.

Main findings

Across all the years, 18% of the new injectors had tests indicative of hepatitis C infection. In 2004, the figure was 20% and stayed at around this level for the next four years, ending at 22% in 2008. Other than being lower in 2000 at 11%, there was no statistically significant change over time. Prevalence increased with age and was higher among those who had ever been imprisoned, used a needle exchange, or had a hepatitis C voluntary confidential test.

An estimate was made of the proportion of new injectors newly infected each year. Across all nine years the estimate was 13 in every 100, having increased from 8 in every 100 in 2000 to 13 in 2001 and 16 in 2008.

Across all the years, 42% of the new injectors had ever had a hepatitis C voluntary confidential test. In 2004 this uptake proportion was 45% having increased from 26% in 2000, and it again rose significantly to 62% in 2008. Uptake was higher among women, those ever imprisoned or who had ever having used a needle exchange, those who had been prescribed drugs for detoxification or as a substitute medication, and those whose fluid sample indicated hepatitis C infection.

Taking other factors in to account, at 33% the proportion of hepatitis C positive injectors aware of their infection was twice as high in 2006–2008 as in earlier years. Awareness was higher among injectors who had ever been prescribed drugs for detoxification or as a substitute medication and those who said they had at some time received used needles and syringes.

The authors' conclusions

The *Hepatitis C Action Plan for England* has probably helped increase uptake of hepatitis C voluntary confidential testing among recent injectors and the proportion of those diagnosed with hepatitis C infection. However, hepatitis C prevalence has been relatively stable among recent injectors since 2004, the year the plan was launched, suggesting that up to this point it had not yet had a positive impact on the rate of acquisition of new hepatitis C infections among recent injectors. All the recent injectors sampled in 2008 would have started injecting more than a year after the plan's launch, yet hepatitis C prevalence and estimated incidence were the same as in 2004. Access to opiate substitute prescribing in England has improved in recent years through the expansion of drug treatment service provision; drug users in treatment in England doubled between 1998 and 2008. However, maintenance doses may not always be adequate to prevent illicit drug use and injecting. The extent of needle exchange provision varies greatly across the UK. Coverage overall is probably insufficient to effectively control hepatitis C transmission. The action plan's impact on recent injectors has been limited so far, probably because of patchy local implementation. These findings support the pivotal importance of reinvigorating and improving the coverage (proportion of injectors and/or injecting incidents reached by these services) of harm reduction measures such as needle exchange and substitute prescribing in order to prevent hepatitis C transmission.

FINDINGS Since the featured article was published figures for Britain for 2009 have been released. These gave no reason to alter the verdict that the 2004 national strategy in England (or the other national strategies) has yet to have any discernable positive impact on the rate of acquisition of new hepatitis C infections among recent injectors,

though it may have promoted testing and awareness of infection. In 2009 the proportion of new (up to three years) injectors with an oral fluid test indicative of hepatitis C infection remained at 22%. According to the Health Protection Agency, this and other figures suggest that "transmission of hepatitis C among younger [injecting drug users] and recent initiates is probably higher than it was a decade ago". On the plus side, the proportion of new injectors tested for hepatitis C continued to rise from 61% in 2008 to 68% in 2009 while the proportion of those testing positive who knew they were infected remained at about a third.

Moving beyond new injectors to all injectors tested for hepatitis C at drug services does not alter the picture of an epidemic which has yet to be checked by recent national strategies. Since injectors form all but a few per cent of all those infected, the same is true of hepatitis C infections in general, which in Scotland rose to 2081 in 2009 and in England to 8605, 2418 more than in 2004, trends which must reflect more widespread testing as well as sustained rates of infections.

The implication is that the reduction in the sharing of injecting equipment seen among drug injectors surveyed at drug services has been insufficient to dent the spread of the highly transmissible hepatitis C virus. It has been estimated that to get to the point where less than 1 in 10 injectors in London are infected with hepatitis C would require the average injector to cut their sharing of used syringes from 16 times a month to one or two times, and that the impact of even this kind of achievement would be jeopardised unless sharing reductions extended to very recently initiated injectors.

Such a scenario is currently well beyond the capacity of available services. Exchange services in Britain and elsewhere are commonly patchily provided, under-funded and hampered by formal or informal restrictions on their abilities to 'flood the market' with hygienic injecting equipment, the level of activity which seems required to adequately curb the spread of hepatitis C. Arguably with at least one hand tied behind their backs, they have generally been unable to demonstrate an impact on the spread of hepatitis C even if they have been able to show an impact on the spread of HIV and on the extent to which their users risk infection through unsafe injecting practices (1 2 3). This lack of evidence may appreciably be due to the lack of investigations of whether exchanges have affected spread of the virus, but also reflects their lack of effectiveness as currently resourced and operated.

In the mid-2000s, in England access to sterile injecting equipment from needle exchanges fell well short (on average just one syringe per exchange user every two days) of the level needed to permit use of a fresh needle each time, and only a minority provided some other equipment such as sterile water. At about the same time in Scotland, syringe supplies from exchanges were even more limited – at best an average of one per user every three days, though since then distribution may have modestly increased.

When the entire population of injectors is considered whether or not they attend exchanges, the shortfall is bound to be greater still. For example, in 2000/1 exchanges in Brighton and Liverpool supplied enough equipment for just over 1 in 4 injections in their areas and in London 1 in 5, if anything less than a national estimate for England for 1997.

Such considerations have prompted calls for the coverage of these services to at least be maintained and ideally dramatically expanded. In 2009 UK government drug policy advisers argued that planners need to take steps to increase access and availability to sterile injecting equipment and to increase the proportion of injectors who receive 100% coverage of sterile injecting equipment in relation to their injecting frequency, a call echoed by Britain's National Institute for Health and Clinical Excellence. However, both recognised that exchanges on their own will not be able to sufficiently stem the tide, arguing for their expansion to be allied with increased recruitment to substitute prescribing programmes and other interventions such as extended and improved treatment of hepatitis C infection. There has indeed been a substantial expansion in substitute prescribing programmes for opiate addiction and these and treatment in general are associated with reductions in infection risk behaviour. Still these developments and the shortfalls in other harm reduction services have left gates wide enough for the robust and easily transmitted hepatitis C virus to pass through via remaining unsafe injecting. A particular concern is the persisting low average doses of methadone prescribed in Britain (1 2 3), leaving scope for patients to top up with heroin. Relative lack of impact on cocaine use also limits the extent to which opiate substitute prescribing can prevent the spread of infection.

Given funding constraints and the current policy emphasis on recovery from addiction and abstinence rather than harm reduction, it may be unrealistic to expect a further major contribution to stemming the hepatitis C epidemic from services intended to ameliorate the damage from continued injecting. What would help is if their workload could be reduced because (aided or not by treatment) drug users themselves turn away from injecting, by far the most important route for infection. From population estimates and trends in the treatment caseload, it seems this may be happening, an estimated 137,000 injecting drug users in England in 2004–05 falling to 117,000 in 2006–07.

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

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