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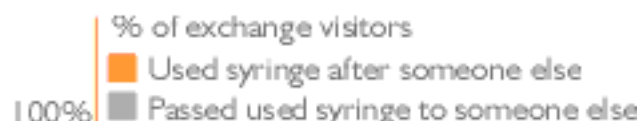
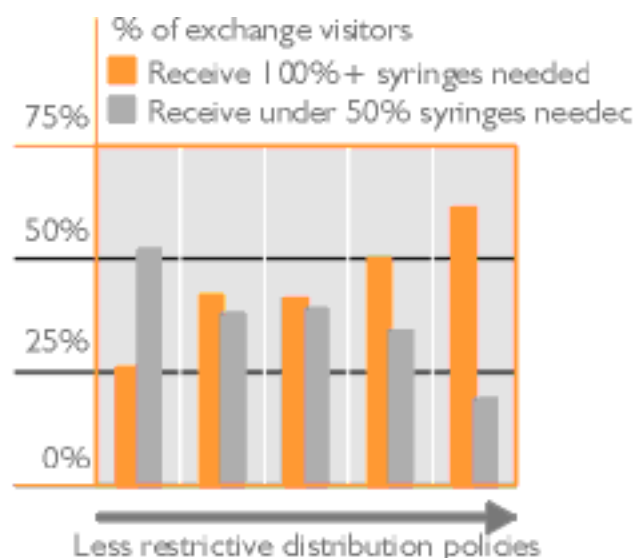
Needle exchange coverage key to reducing infection risk

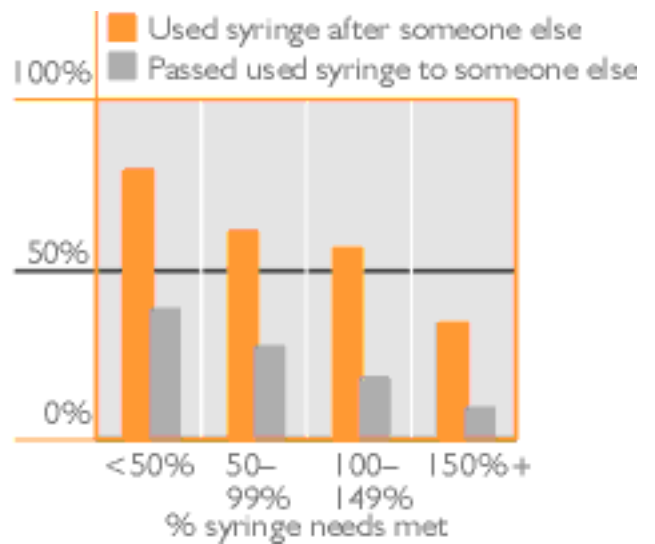
Findings' [in-depth review](#)¹ of needle exchange and hepatitis C highlighted the importance of coverage – the extent to which exchanges approach the ideal of making a sterile set of equipment available for every injection. Two reports^{2 3} from researchers in California have confirmed that liberal exchange policies improve coverage which in turn reduces visitors' risks of contracting or spreading blood-borne diseases.

Both derive from a study of 24 of the 25 exchanges operating in the state in 2001. Each service's policies and activity levels were explored in interviews with their directors, while 1577 injectors recruited between 2001 and 2003 as they were leaving the exchanges were asked about their use of the service and their infection risk behaviours.

The number of syringes each injector had available to them over the past month was estimated on the basis of their visits during that time and how many syringes for their own use⁴ they picked up last time. This was divided by the number of times they injected during the month to construct an index of the adequacy of their supplies. On average exchange visitors (who mainly injected heroin and stimulants) needed nearly 90 syringes/needles in the past month to be able to use a fresh set each time.

The [first report](#)² showed that the less restrictive was the distribution policy of their exchange, the greater were the chances of reaching this level. Most restrictive was strict one-for-one exchange of new syringes for old with a cap on the quantity issued per visit. Compared to these services, exchanges which simply provided as much as was needed were five times more likely to achieve adequate coverage. Not far behind were services which implemented uncapped one-for-one exchange supplemented by a few extra sets. Further behind were those which did this but capped quantities, then came the strict one-for-one exchanges, bottomed out by the two which also capped quantities.





An analysis which statistically evened out caseload differences confirmed that uncapped needs-based distribution was associated with the highest proportion of visitors (61%) receiving adequate supplies and the lowest receiving less than half their needs (19%). Corresponding figures for the next best option (uncapped one-for-one plus extras) were 50% and 34%. Bottom was capped, strict one-for-one exchange, which left most visitors with less than half their needs met. In exchanges which fell short of needs-based distribution, giving extras on top of one-for-one or not imposing caps made significant improvements to coverage. Visitors who received adequate supplies were significantly more likely to supply sterile syringes to other injectors who did not visit the exchange.

A [second report](#)³ linked coverage to the proportion of injectors who in the past month had risked spreading infection by injecting with a syringe already used by someone else, or by letting someone else inject with their used syringe. On both measures, the more adequately the individual's needs had been met by the exchange, the less likely they were to have incurred these risks. For example, when less than half their needs had been met, 38% had re-used after someone else. This proportion progressively reduced as coverage improved to just 9% of injectors who had received at least 50% more than they needed.

Adequate coverage was also associated with fewer injectors re-using their own equipment (which heightens the risk of damage at the injecting site) and fewer sharing implements used to heat drug solutions. On all these variables there were some statistically significant differences between coverage levels. More adequately supplied injectors were also more likely to always safely dispose of used syringes by returning them to the exchange, though this fell short of statistical significance once other factors had been taken in to account.

These results were relatively clear cut, possibly because so few injectors made up for shortfalls by purchasing syringes from pharmacies, which at the time could be supplied only on prescription.

Another important finding was that injectors in treatment were twice as likely to be adequately supplied as those who were not. As in other studies,^{1 5} this probably reflects a synergistic impact, with exchanges facilitating treatment entry and treatment stabilising lives and reducing injection frequency, making it easier for exchanges to meet

patients' remaining needs.

The implications of these findings can already be found in [guidelines](#) endorsed by the National Needle Exchange Forum for England and Wales.⁷ These advise allowing injectors "to take all the injecting equipment they need for themselves and the people they inject with" without capping supplies or routinely tying distribution to returns.

There is some way to go to meet this standard. In 2004/5 a [survey](#) found that exchanges in England rarely operated a strict one-for-one policy, but also that amounts returned were commonly taken in to account in deciding how much to supply.⁸ A minority had fixed quantity caps. More common was a variable cap, often depending partly on returns. Around 30-40% had no upper limit. The result was wide variation in how much each exchange gave to the average client. Overall this was one syringe every two days, meaning that many customers must have been under-supplied. At the same time in [Scotland](#) (where there are legal caps on the quantity which can be supplied at a single visit) the picture was similar, though there the average distributed per client was less.⁹ Policies on how much to distribute per visit are not the sole reason for shortfalls; opening hours and other accessibility issues also play a role.

The featured study concerned itself with only one element of [coverage](#) – adequacy of supply of exchange users – not with the extent to which all injectors in the area were adequately supplied.⁶ 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 5,¹⁰ if anything less than a [national estimate for England](#) in 1997.¹¹

Thanks for their comments on this entry in draft to Ricky Bluthenthal of the RAND Corporation and Helen Wilks, co-chair of the National Needle Exchange Forum. Commentators bear no responsibility for the text including the interpretations and any remaining errors.

1 Ashton M. [Hepatitis C and needle exchange: part 4 • the active ingredients](#). Drug and Alcohol Findings: 2004, 11, p. 25–30.

2 **FEATURED STUDY** Bluthenthal R.N. et al. [Examination of the association between syringe exchange program \(SEP\) dispensation policy and SEP client-level syringe coverage among injection drug users](#). Addiction: 2007, 102(4), p. 638–646.

3 **FEATURED STUDY** Bluthenthal R.N. et al. [Higher syringe coverage is associated with lower odds of HIV risk and does not increase unsafe syringe disposal among syringe exchange program clients](#). Drug and Alcohol Dependence: 2007, 89, p. 214–222.

4 As opposed to those they intended to pass on to someone else.

5 Van Den Berg C. et al. [Full participation in harm reduction programmes is associated with decreased risk for human immunodeficiency virus and hepatitis C virus: evidence from the Amsterdam Cohort Studies among drug users](#). Addiction: 2007, 102, p. 1454–1462.

6 Burrows D. [Rethinking coverage of needle exchange programs](#). Substance Use & Misuse: 2006, 41(6–7), p. 1045–1048.

7 UK Harm Reduction Alliance, National Needle Exchange Forum, Exchange Supplies. [Reducing Injecting Related Harm: consensus statement on best practice](#). London: UKHRA, 2006.

8 Abdulrahim D. et al. [The NTA's 2005 survey of needle exchanges in England](#). National Treatment Agency for

Substance Misuse, 2007.

9 Griesbach D. et al. [Needle exchange provision in Scotland: a report of the National Needle Exchange Survey](#). Scottish Executive, 2006.

This reports (p.24) that 3,553,911 syringes were distributed to 31,955 (14,229 + 17,726) clients which equates to about 1 every 3 days, but many services were unable to estimate the number of clients, suggesting that this is an over-estimate.

10 Hickman M. et al. [Injecting drug use in Brighton, Liverpool, and London: best estimates of prevalence and coverage of public health indicators](#). Journal of Epidemiology and Community Health: 2004, 58, p. 766–771.

11 Parsons J. et al. [Over a decade of syringe exchange: results from 1997 UK survey](#). Addiction: 2002, 97, p. 845–850.

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