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Commentary: Targeting HIV interventions to the most at risk—hindsight is 20/20

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At a time when resources for HIV/AIDS prevention in most countries are stretched painfully thin, the paper by Wood et al. helps address the quintessential question of how to target those most at risk. In the late 1990s, reports of the Vancouver HIV outbreak among injection drug users (IDUs) documented one of the highest HIV incidence rates in the western hemisphere, peaking at nearly 20 per 100 person years. The causal and non-causal factors surrounding this outbreak have been the subject of much debate. In a city that was home to the highest volume fixed-site syringe exchange programme (SEP) and where HIV prevalence had remained low and stable since 1988, what went wrong?

Nearly a decade later, it is clear that the causes of the Vancouver HIV outbreak go far beyond what epidemiologists traditionally consider to be risk factors. A constellation of contextual factors included a shift from an IDU population that was heroin dependent to one that increasingly binged on cocaine, marginal single room occupancy hotels that served as an incubator for shooting galleries, and funding cutbacks of the mobile SEP services that limited access to syringes to IDUs at night when they were sought after the most. Although the Vancouver SEP was exchanging more than 2 million syringes...
per year, in the context of an IDU population that is injecting cocaine several times a day, it was estimated that at least 10 million syringes would have been needed to achieve the stated public health goal of a sterile syringe for every injection.6

What could have been done to prevent the outbreak? The paper by Wood et al. provides some clues, beyond appropriate calls for expanded access to sterile syringes, drug abuse treatment, and voluntary HIV testing and counselling. Wood and colleagues showed that IDUs who enrolled in the Vancouver cohort at baseline, who perceived that they were at a higher risk of becoming infected with HIV and predicted their fateful outcome, were more than twice as likely to subsequently undergo HIV seroconversion during follow-up, even after adjustment for confounders. Despite concerns about socially desirable responding, Wood and colleagues show that these IDUs reported their risk honestly to a health provider who could play a key role in referring them to additional interventions. The question then becomes: what would we have offered them?

In considering this question, it is worthwhile to consider what we know about the context of HIV risk behaviours among the 5.9% of persons who reported being at a high risk of acquiring HIV infection, among whom the subsequent HIV incidence rate was 26 per 100 person years. We can logically assume the following: (i) these IDUs were sufficiently knowledgeable about the ways in which HIV is transmitted to perceive their own elevated risk at study enrollment, and (ii) despite their knowledge, they subsequently continued to engage in risk behaviours that put them at risk of becoming infected. In light of the latter observation, it would have been especially useful to have asked respondents to what extent HIV was a concern to them. If a high perceived risk of acquiring HIV was coupled with a similar level of concern about becoming infected, one could justify the use of intensified individual-level interventions (e.g. motivational interviewing) to increase the adoption of safer behaviours.

On the other hand, if a high perceived risk of HIV infection was not accompanied by a similar high level of concern about becoming infected, this would suggest that individual-level interventions would be of limited value. Not unlike other settings, previous data collected from Vancouver suggested that it is not uncommon for IDUs to place any concerns about HIV far lower on their priority list than more immediate concerns, such as fear of the police or concerns about homelessness.7 Thus, one might emphasize the need for structural level interventions so that accessibility and use of sterile injection equipment and condoms is less of a decision making process for an individual than it is a social norm.

Examples of structural interventions in this setting could have included free access and disposal of sterile syringes to IDUs at multiple venues: syringe exchange, pharmacies, drug treatment programmes, and syringe vending machines. Given the high HIV incidence and prevalence among IDUs, programmes emphasizing ‘prevention for positives’ would have helped to reduce ongoing risk behaviours among IDUs that were already infected. Indeed, 40% of HIV-infected IDUs in Vancouver who were aware of their serostatus reported distributive syringe sharing (i.e. passing on their used syringes to others).2

In recent years, Vancouver has in fact adopted a number of structural interventions to prevent ongoing transmission of blood borne pathogens among IDUs. These include the establishment of a safe injection facility, whereby IDUs can obtain and dispose of sterile injection equipment in a medically supervised setting.8 Like several European countries, a heroin maintenance trial is being launched in Vancouver and two other Canadian HIV epicenters, which will determine whether medically prescribed heroin is a feasible and acceptable alternative to methadone maintenance in the Canadian context.9 Although hindsight is 20/20, other cities can continue to learn from the Vancouver outbreak to ensure that risk environments are intervened upon before they become a recipe for an epidemic.

References