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Increasing HIV prevention and care for injecting drug users



In *The Lancet* today, Bradley Mathers and colleagues¹ make a heroic effort—in fact, a systematic review—to document the coverage (services provided per individual in need of services) for HIV prevention and care for injecting drug users (IDUs) throughout the world. Whilst the problems in obtaining data and in assessing the quality of data that could be obtained were formidable, two conclusions can be safely drawn. First, there is great variation in coverage of HIV-related services for IDUs across different countries; and second, in much of the world, coverage is clearly inadequate.

There is considerable evidence that HIV-prevention programmes for IDUs, particularly combined programming, in which multiple programmes are provided, can be very effective in reducing injecting-related HIV transmission.^{2,3} This evidence suggests that the primary global need is not for new interventions to change the behaviour of IDUs, but for effective interventions to change the behaviour of policy makers to make policies and programmes consistent with the evidence base for HIV prevention and care for IDUs. Over the past 25 years, several useful theories have been developed for changing the health behaviour of IDUs and others at high risk for HIV. It may be time to apply those theories to changing the behaviour of policy makers.

The first set of theories are diffusion of innovations and social learning/modelling theories. These theories articulate how new behaviours spread through social systems and how individuals in these systems influence each other to either adopt (or resist) new behaviours.^{4,5} These theories have been applied in IDU interventions developed by many different researchers and have the major advantage of often producing self-

sustaining behavioural changes in the IDU community. Applying these theories to changing the behaviour of national policy makers raises interesting questions. Is the policy-making system relatively open or relatively closed to innovations? Is the policy-making system highly centralised (one decision centre) or decentralised (multiple decision centres)? Who might become the early adopters and serve as models or opinion leaders for others in the system? The answers to such questions would provide guidance about initiating system change.

The second theory is contingency management. This theory comes from basic behaviourism theory.^{6,7} If you want to increase the frequency with which an individual performs a specific behaviour, provide a reward when

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Needle-exchange programme

Care package, including new syringes, given by syringe-exchange worker at NJCRI (New Jersey Community Research Initiative) in Newark, New Jersey, USA.

the individual completes the desired behaviour. Syringe-exchange programmes in which a drug user is given a new sterile syringe for bringing in a used and potentially contaminated syringe might be the most common example of contingency management to reduce HIV transmission. Within behaviour theory, one-for-one reinforcement is typically not the most effective schedule for behavioural change. For syringe exchange, the maximum reductions in risk behaviour seem to occur when drug users are provided with sufficient numbers of syringes to meet their own needs, and they obtain extra syringes which can then be given to peers, leading to additional social reinforcement. Syringe-exchange programmes typically have many services in addition to basic exchange,⁸ which serve as additional reinforcers. Who would provide what sort of reward to political leaders for implementing HIV services for IDUs? The reward of averting large numbers of HIV infections in IDUs is certainly important, but is not consistent with a primary principle of contingency management: that rewards should be given immediately after performance of the desired behaviour. International donors, however, could require that evidence-based services for IDUs be included in national plans to address HIV for a country to receive any HIV prevention and treatment resources. The Global Fund for AIDS, Tuberculosis and Malaria has adopted this approach, although, as shown by Mathers and colleagues, there is a need for better follow-through to ensure that appropriate resources are actually provided to IDUs, particularly for antiretroviral therapy.

The third theory is psychological framing of decisions. Framing refers to setting the psychological context within which a decision will be made.^{9,10} The same person might make different decisions depending on how a question is framed. AIDS reframed the act of sharing syringes for IDUs. Before AIDS, sharing was an act of assistance and solidarity; after AIDS, sharing syringes became an act in which a fatal disease could be transmitted.

Many policy makers frame HIV prevention for IDUs in terms of what appears to encourage or condone drug use, and then oppose harm-reduction programmes. Within this frame, data showing that such programmes do not lead to increased drug use have had little effect in reducing opposition.

It might be more effective to frame HIV prevention for IDUs in terms of the health of the community as a whole,

and that public health is fundamental to the economic wellbeing of a society. For example, the economic costs of the epidemic of severe acute respiratory syndrome in China were instrumental in convincing the Government there that it needed to address AIDS.¹¹

What are we learning? Literally millions of dollars and euros have been spent on collecting data and evaluating interventions to change the HIV-related behaviours of IDUs. It is time to establish a mechanism for collecting and systematically analysing data on efforts to change policies to increase implementation of HIV programmes for IDUs.

HIV continues to spread among IDUs in many different countries, and the need for scaling up prevention and treatment is urgent. Although theory-based policy-implementation interventions need to be adapted to local situations, we suggest that contingency management and framing the issue in community health-economic terms might be the most useful for immediate policy change. Long-term sustained efforts to protect the health of individuals who use both licit and illicit drugs might require that policy makers acquire a basic scientific understanding of drug use and addiction, and frame policies toward drug users within a public health and human rights perspective.¹²

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Gardasil: from bench, to bedside, to blunder

The 2006 approval of Merck's human papillomavirus (HPV) vaccine (Gardasil) by the US Food and Drug Administration (FDA) exemplified the potential of bench-to-bedside research. This vaccine against the virus that causes cervical cancer received immediate recommendation by the Advisory Committee on Immunization Practices at the US Centers for Disease Control and Prevention (CDC)¹ for routine use in girls aged 11 and 12 years, along with catch-up vaccination for girls and women aged 13-26 years. The vaccine was incorporated into the CDC's Vaccines for Children Program at the same time. Some public health professionals speculated that the vaccine's rapid FDA approval and lightning-fast inclusion in CDC programmes would be followed by a colossal failure in the delivery system.² Specifically, although the vaccine's greatest potential clearly lies in the benefits it could confer on girls who face a high risk of cervical cancer, public health experts anticipated that the vaccine would mostly go to girls at low risk of the disease.

The groups of girls more and less likely to benefit from HPV vaccination can be readily distinguished in the USA. Those who are poor and have restricted access to regular Pap testing (and the follow-up assessments and treatments that it triggers) are at high risk of invasive cervical cancer. Those who are more affluent and have access to regular Pap testing are at low risk of the disease because the test, when properly done, is highly effective.³ Cervical cancer burden differs greatly between these two groups. In the fairly poor state of Mississippi (median annual household income US\$36 674), the age-adjusted cervical cancer mortality rate is 3.6 per 100 000. In Rhode Island, which is a wealthy state (median \$55 980), the cervical cancer mortality rate is 50% lower (1.8 per 100 000). Were the vaccine to mostly go to girls in states such as Rhode Island rather than those in Mississippi, such a pattern would not only fail to match

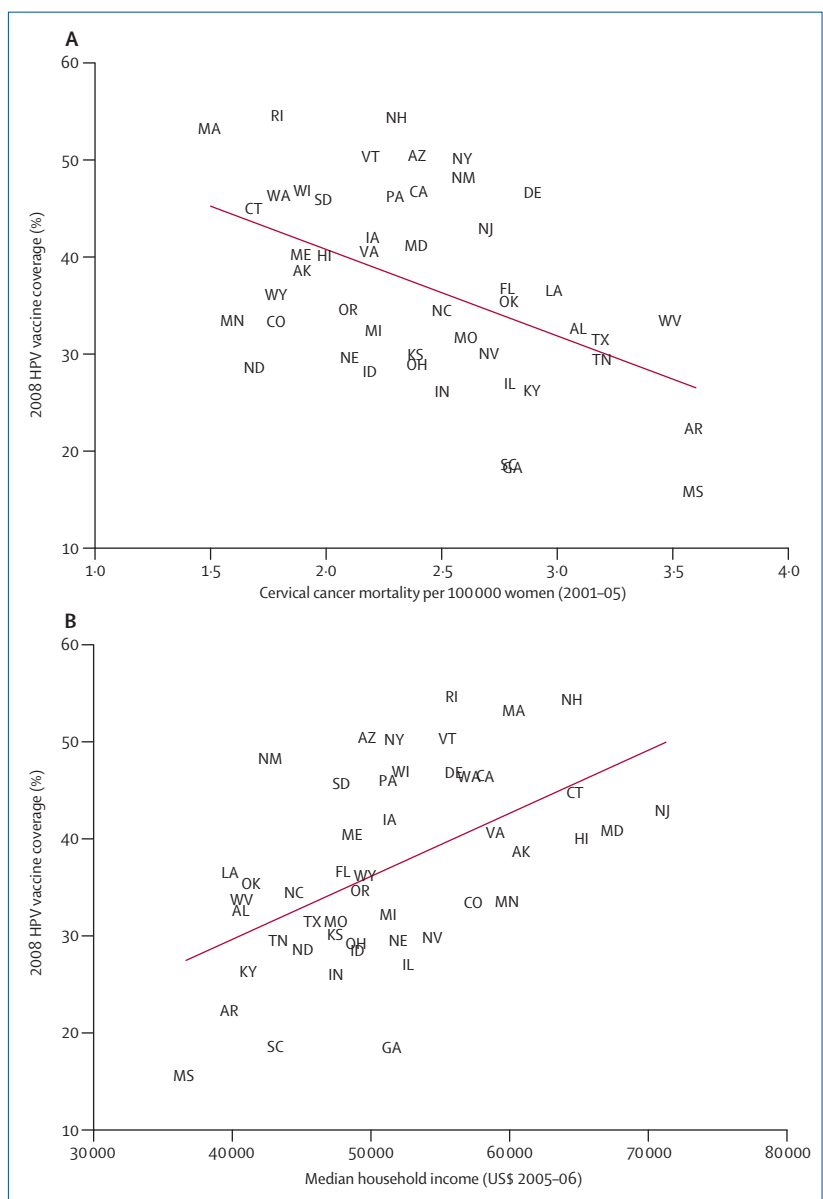


Figure 1: Correlations between Gardasil coverage rates in girls aged 13-17 years and cervical cancer mortality rates (A) and median income levels (B) in US states
Data are from references 5, 6, and 7. Ordinary least squares regression lines are shown for each correlation. No data are available for Montana or Utah. HPV= human papillomavirus.