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Annotation: HIV Risk and Injection Drug Users—Evidence for Behavioral Change

Several groups of researchers have observed that many injection drug users report that they have reduced or ceased high-risk behaviors such as sharing injection equipment.¹⁻³ External validation of these self-reported behavioral changes is difficult to achieve, however, and at the individual level no association between risk reduction behavior and seroconversion has been reported. Other studies at the community level^{4,5} have demonstrated an ecological link between self-reported risk reduction and the stabilization of human immunodeficiency virus (HIV) seroprevalence among injecting drug users. Now a ground-breaking study by Des Jarlais and colleagues⁶ in this issue provides us with evidence at the individual level that deliberate acquired immunodeficiency virus (AIDS) risk reduction behavior has a protective effect on HIV seroconversion among injection drug users. Their findings validate self-reported risk reduction behavior and illustrate the impact that an expansion of risk reduction intervention programs would have for AIDS prevention.

These investigators used an historical cohort design to study HIV seroconversion in Bangkok, Thailand, among 173 active injection drug users who previously had tested negative for HIV and subsequently were interviewed and retested. Ten percent of the sample had seroconverted. Two factors were protective against seroconversion: cessation of sharing injection equipment and having a regular sex partner.

Proponents of behavioral risk reduction interventions have had to contend with two skeptical criticisms. The first was that injection drug users are unable or unwilling to change their risk behaviors. When researchers began to observe that injection drug users were reporting changes in behavior intended to reduce risk, the second criticism was advanced: because injection drug users may lie

about behavioral change and because their self-reports of success in changing behavior were not validated, such self-reports are not believable. Dr Des Jarlais and his colleagues provide credible evidence that these criticisms do not hold in Bangkok and may well be inaccurate elsewhere. Injection drug users will change their behavior to reduce their risk of HIV infection and will accurately report that behavior. This validation of self-reported behavioral change with seroconversion data makes a significant contribution to the study of HIV risk reduction.

HIV transmission and related disease clearly require a vigorous public health response. Although additional longitudinal cohort studies are necessary to evaluate behavioral interventions, Dr Des Jarlais and his colleagues have demonstrated that the intentional cessation of sharing injection equipment protects against HIV infection among individuals who continue to inject drugs. Behavioral risk reduction protects lives. In the absence of effective medical interventions and vaccines, it is absolutely essential that HIV risk reduction programs among injection drug users be expanded and maintained.

This article dispels the popular myth that there is no hope of motivating a reduction in risk behavior among injection drug users. It would be a mistake, however, to assume that all interventions will be equally effective or that behavioral change is easy to motivate, sustain, measure, or evaluate. Governmental agencies have the responsibility to provide funding, and service providers have the responsibility to develop and to implement cost-effective intervention programs. The research community has its own responsibility to develop evaluation strategies that clarify which factors play a significant role in initiating positive change. Longitudinal

studies are needed to assess the extent to which interventions are successful in sustaining as well as inducing risk reduction behavior. For these purposes, funding for behavioral intervention research at the National Institutes of Health and elsewhere must be increased.⁷ □

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Editor's Note. See related article by Des Jarlais et al. (p 452) in this issue.