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The editor of this series of articles has given me the opportunity to discuss some of the points raised in the editorials by Drs Coutinho, Collins and Coates, Vlahov, and Des Jarlais.¹⁻⁴ As a title, I have appropriated the punch line to Coutinho's anecdote about Clemenceau's offer to set up French brothels for US troops in Europe. I interpret the anecdote as showing us the jaundiced European viewpoint on the incredible tendency of moral and public health issues to become entangled in the United States. These issues are tangled on all sides, as I tried to point out.⁵

In his response, Coutinho¹ gives a pragmatic assessment of the results of the Amsterdam needle exchange program. (Interestingly in light of recent US studies, the Amsterdam program was originally designed to prevent hepatitis infections.) Coutinho notes that the researchers found no evidence for a protective effect on blood-borne infections, except perhaps at the start of the program, and also no adverse effects on drug use. He reports the Dutch conclusion that needle exchange alone was not sufficient to lower the incidence of infection.

Reading Coutinho's conclusions, I have to admit that I had the "don't show this to the President" reflex myself at the end of the piece. Or, at least, don't show this to those congressional representatives cited by Collins and Coates whose minds are made up independently of the facts. The don't-show-them-this reflex is, it seems to me, where the problem arises for the researcher in the policy process. The little angel on the research shoulder says, "Look, here's a sober assessment of the pathbreaking Amsterdam needle exchange program." The less angelic figure on the policy shoulder says, "Shut up! Don't give them that!"

I would never advocate that research should be divorced from the policy process, and I agree absolutely with Collins and Coates² that public health issues are simultaneously questions of science and values. It is necessary for us all to recognize the double nature of important public health questions. I also agree with them that the scientist must be aware of when he or she is speaking as scientist and when he or she is speaking as an advocate. The problem is that the 2 processes have different rules (and also different norms and different ethical standards) and will therefore tend to come in conflict. And then what? The answer depends on a complex calculation balancing the short-run benefits and risks of a political win or loss with the long-run credibility of the research process.

An Expert Witness

As I noted, although the situations are not parallel, a similar problem arises with expert witness issues in epidemiology.⁵ In a recent precedent-setting maneuver in the silicon breast implant controversy, Judge Sam C. Pointer Jr removed the issue of the validity of the scientific evidence from the adversary process, setting up a special panel to provide the federal judiciary with "unbiased scientific evidence on the relationship between silicone breast implants and connective-tissue diseases and autoimmune dysfunction."⁶ The precedent for the current discussion lies in the degree of polarization: the silicon implant issue may be just as polarized as the needle exchange issue. I am not suggesting that there is a direct analogue of Judge Pointer's solution, only that it is important to recognize that at a certain level of polarization you have to take the fact-finding out of the adversary system.

Vlahov provides an authoritative summary of the epidemiologic research associated with needle exchanges, noting in particular the possible effects of alternative sources for sterile syringes on the Canadian studies.3 Vlahov's message is that measuring the effects of needle exchange on HIV incidence is complicated, and I agree with him about that. He also notes that needle exchange programs are now serving both as links to drug treatment programs and as platforms for the delivery of clinical services to drug users, and I agree with him about that, too. Our own experience in collaborating with hepatitis B vaccination and overdose prevention initiatives led by the Santa Cruz Needle Exchange Program⁷ has convinced me that needle exchanges can make a very important contribution to public health delivery systems for drug users.

I also agree with several of the respondents that a randomized trial is unlikely in the United States-not because such a trial would be unethical but because seroconversion rates are too low. However, given the lack of bad outcomes associated with needle exchanges, I do not believe that "more research" is the main issue in the United States. In this context, Des Jarlais makes a useful distinction between first-generation and secondgeneration questions.⁴ The first-generation questions about increased drug use and reduction of HIV transmission have, he suggests, been answered. His summary of the answer to the transmission question is that "as part of a larger HIV prevention program, syringe exchange usually, but not always, leads to low rates of HIV transmission among injection drug users." This is nicely qualified and hard to argue with, and it could probably be shown to the president. I agree with the proposition that the issue is closed, at least to the extent that I do not think there is much to be gained from further large studies in the United States.

Des Jarlais is right that in the United States it is time to address the secondary questions, including, as he suggests, investigating the variable effectiveness of needle exchange programs, their integration in the public health system, and their use against hepatitis infections. However, I think that in other large parts of the world it is probably very important to address the primary question: does needle exchange reduce HIV infection? I am a little saddened that none of the respondents discussed this issue in detail. (Only Coutinho, speaking from the less-polarized European context, wonders whether in countries with emerging drug epidemics, like China and the countries of the former Soviet Union, needle exchange programs would accelerate the transition from smoking to injecting heroin.)

Conclusion

Research in many of the countries with developing epidemics is difficult and relies to a considerable extent on donor-country funding; in addition, these countries have their own moral-political constructions of the drug use issue, which may not agree with the American construction. However, I suggest that countries adopting needle exchange interventions will need to know what effect needle exchange is having on seroconversion and that US researchers can help with this. I also suggest that a creative approach will be required, perhaps using HIV detection in syringes as in the New Haven needle exchange evaluation,⁸ or using the "less-sensitive ELISA [enzyme-linked immunosorbent assay]" approach to seroconversion studies.⁹ Given the size of the problem, intervention is clearly urgent. This is where we need to keep the empirical foot in the door. Needle exchange is one of the few interventions available, and a context-specific approach to its use seems to be the responsible way to proceed.

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