COMMENTS AND RESPONSES

Two Additional Implications of an HIV Nucleic Acid Testing Program With Automated Internet and Voicemail Systems to Deliver Results

TO THE EDITOR: Morris and colleagues' study (1) finds that nucleic acid testing (NAT) will identify many HIV infections that are not detected with HIV antibody tests. Two additional implications of the study were not discussed: a remarkably high incidence rate and a significant tendency for patients to seek testing shortly after a suspected infection.

Of the 3151 patients tested in the study, 35 had acute or early infections, infections that are less than 133 days old (95% CI, 113 to 160 days). This suggests an incidence rate (r) of 3.1% per year (CI, 2.1% to 4.3%): $r = (35/3151)/133 \times 365$. For comparison, the Centers for Disease Control and Prevention estimate that men who have sex with men (MSM) make up 4% of the U.S. male population aged 13 years or older (implying an estimate of 5 million people for 2006) (2) and that 28 700 new HIV infections occurred in the United States among MSM in 2006 (3). This implies an incidence rate of 0.6% per year among MSM.

The second implication concerns the common assumption that testing is independent of infection; that is, patients do not preferentially seek testing immediately after infection. However, if this were the case, we would have only 2.6 (CI, 0 to 7) acute infections (infections that are less than 10 days old [CI, 7 to 14 days]): $2.6 = 3151 \times (1 - \exp[-r \times 10/365])$. Because the study found 15 acute infections, a significant contributor to the effectiveness of NAT is the tendency of patients to seek testing shortly after a suspected infection.

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Potential Conflicts of Interest: None disclosed.

References

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2. Hall HI, Song R, Rhodes P, Prejean J, An Q, Lee LM, et al; HIV Incidence Surveillance Group. Estimation of HIV incidence in the United States. JAMA. 2008; 300:520-9. [PMID: 18677024]
3. CDC Fact Sheet: HIV and AIDS among gay and bisexual men. June 2010. Accessed at www.cdc.gov/nchhstp/newsroom/docs/FastFacts-MSM-FINAL508COMP.pdf on 8 September 2010.

IN RESPONSE: Dr. Armbruster highlights that the rate of incidence of HIV at San Diego HIV testing sites in our study are higher than estimates for general population of MSM in the United States and that the number of acute infections are disproportionate to the expected number. These numbers would suggest that individuals seeking HIV testing are at higher risk and may be responding to recent risk behaviors where they are concerned that they may have been exposed to HIV. During the study, we gathered some limited data in 2007 on whether testers reported any symptoms compatible with early HIV infection or thought that they had had a specific exposure. One hundred four of 218 (47.71%) individuals thought they had had a specific exposure, and 3 of 104 (2.88%) individuals had early HIV infection, compared with 2 of 114 (1.75%) individuals who did not report a specific exposure ($P = 0.67$). A smaller group reported symptoms that could be compatible with early HIV infection, and 3 of 40 (7.5%) individuals had early HIV, compared with 2 of 173 (1.16%) of those without symptoms ($P = 0.047$). These limited data would support that individuals seeking HIV testing are probably at higher risk and may be undergoing testing because they perceived themselves at risk but they were not more likely to have early HIV infection. However, those undergoing testing because of symptoms are more likely to have HIV. Offering NAT may promote HIV testing among high-risk individuals, which is a good thing. High HIV incidence among those seeking the Early Test (http://theearlytest.ucsd.edu) supports the targeting strategy of NAT screening for the highest yield.

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Sexually Transmitted Diseases Among Users of Erectile Dysfunction Drugs

TO THE EDITOR: We read Jena and colleagues' recent article on sexually transmitted diseases among users of erectile dysfunction (ED) drugs with interest (1). We would like to make readers aware of another possible marker of sexually transmitted infection (STI) risk or STI risk factors in middle-aged and older men, as well as an opportunity for STI education and prevention in this increasingly at-risk population. In a cross-sectional analysis of middle-aged to older U.S. male health professionals (2), we found that men who had had a vasectomy were more likely to have a history of STIs, most notably *Chlamydia trachomatis* and tumorigenic human papillomavirus infections, than were men who had not had a vasectomy. Although we could not investigate the temporal nature of this relationship, an interpretation of our findings is that, similar to the use of ED drugs in Jena and colleagues' study (1), having a vasectomy may serve as a marker of STI risk behavior—that is, men who choose to have a vasectomy may be more likely to engage in high-risk sexual behaviors than those who do not choose to have a vasectomy. Another provocative and equally plausible interpretation of our findings is that men who have had a vasectomy no longer rely on barrier protection (that is, condoms) in new sexual relationships, thereby putting them at risk for STIs. Both interpretations could be investigated in future studies. Regardless of the conclusion, STIs among middle-aged to older men could potentially be prevented by reinforcing STI education just before and after a vasectomy. Thus, similar to ED drugs, vasectomy may provide an opportunity for the clinical community (for example, urologists and primary care physicians) to identify older men at potentially higher risk for STIs and to counsel these men about their risks.

