Biomedical Methods for Preventing the Sexual Transmission of HIV
Sandra I. McCoy, MPH, PhD and Nancy S. Padian, MPH, PhD

Despite several decades of rigorous clinical trials, no single biomedical, behavioral, or structural HIV prevention intervention alone has proven sufficient to address the growing HIV pandemic. Instead, combination prevention packages of partially effective interventions address both the biological and behavioral factors associated with transmission as well as the structural determinants—social, economic, political, or environmental factors—that can aid or impede the success of HIV prevention programming. This article reviews the latest research regarding biomedical HIV prevention approaches, in particular, sexually transmitted infection (STI) control, male circumcision, microbicides, the prophylactic use of HIV antiretroviral drugs, and HIV vaccines.

Physical Barrier Methods

Male and Female Condoms. Male condoms, used correctly, are between 85 percent and 95 percent effective in preventing HIV. While no study has directly assessed the HIV prevention efficacy of the female condom, several clinical trials have demonstrated its capacity to bar genital secretions containing HIV, and researchers generally consider it to be as effective against HIV as the male condom.

Cervical Barriers. Though originally developed as contraceptives, cervical barriers such as the diaphragm may also protect against HIV acquisition. The only randomized controlled trial examining this question, however, found no additional protective effect from the combination of a diaphragm, lubricant gel, and condoms compared with condoms alone. These findings highlight the importance of integrating behavioral interventions with biomedical interventions. Adherence to diaphragm use was lower than expected, and participants in the diaphragm group used condoms less than participants in the condom-only group. The results may indicate that the diaphragm was effective, compensating for unprotected sex among women whose partners did not use condoms, or they may suggest that women in the condom-only group were more likely to report higher condom use than women in the diaphragm group. What we still do not know is whether the woman-controlled and discreet diaphragm is as protective as condoms.

STD Control as HIV Prevention

Sexually transmitted infections (STIs) have a well-established synergistic relationship with HIV infection. Co-infection with HIV and an STI can increase the probability of HIV transmission, acquisition, or both. Researchers have examined various STI-related HIV prevention strategies, including improved management of curable STIs, presumptive STI treatment (treatment for a presumed infection in a person or a group of people at high risk of infection), and acyclovir suppressive therapy for herpes simplex virus. Only one (in Mwanza, Tanzania) of the nine HIV-related STI treatment trials, however, found a preventative effect on HIV infection.

Trial design and behavioral issues complicate interpretation of these studies. Enhanced prevention services that were offered to control group subjects—for example, improved STI services—limited the studies’ ability to detect the effect of the intervention being studied. Adherence rates in the three acyclovir suppression trials were lower than ideal, attenuating the effect of the intervention. Finally, the Mwanza trial was implemented earlier in the HIV epidemic than the five other STI treatment trials. This means that genital herpes may have largely replaced the curable STIs that had been most prevalent at the time of treatment.
Editorial: Make HIV, Not Care, the Exception

Robert Marks, Editor

It is the best of times—and the opposite. As has been true for 25 years, the march of scientific inquiry has created opportunities for both HIV prevention and HIV care. Today, new understandings of the underlying HIV disease process, for example, the role of HIV-related inflammation to undermine organ health in otherwise “well” people with HIV, bolster the argument to treat earlier in the course of HIV disease. At the same time, continually improving medications make treatment more effective and easier to tolerate over time than older regimens. The new slogan is “test and treat,” which means testing more people earlier and more often, and treating people with HIV sooner in the course of disease. While both of these prescriptions have their controversial aspects, it is fair to say that in richer countries, technological advances have improved the quality of life of people with HIV.

Likewise, as lead article authors Sandra McCoy and Nancy Padian demonstrate, improved HIV antiviral drugs hold the promise for effective biomedical approaches to HIV prevention (including both a tenofovir-based vaginal microbicide and pre-exposure prophylactic). Further, at a time when many had despaired that a vaccine—promised since the 1980s—would ever materialize, there is a glimpse of possibility in clinical trial findings.

Just when medicine may offer the greatest hope, however, a budget crisis, which will endure for years, threatens to undermine these achievements. States and municipalities face deepening cuts in social and health-related services. Federal health insurance reform may eventually reduce skyrocketing health care costs, but the bulk of the savings will not manifest for several years. In the meantime, the crisis threatens the AIDS Drug Assistance Program, one of the dozens of innovations to have come out of the response to AIDS, and encumbers many other care and prevention opportunities.

McCoy and Padian are under no illusion that effective prevention, even efforts fueled by biomedical advances, can be independent of behavioral intervention. The authors of the second article—Matthew Hogben and Sevgi Aral—affirm this insight in their careful review of the data on “risk compensation.” Budget cuts jeopardize a range of behavioral innovations at both the local and state levels at just the time the U.S. Centers for Disease Control’s evidence-based intervention program could otherwise expand access to proven interventions.

For folks at the AIDS Health Project, the prospect of budget cuts has become real. While one can argue the wisdom of some cuts to California’s HIV and other social services, the cut that seems most plausible, while still painful, is the one that makes this issue of FOCUS our last one. As difficult as it is to write this sentence, it is hard to argue that FOCUS, even after 25 years of service, makes a more important contribution than increased HIV testing, broadly accessible AIDS drugs, and prevention counseling interventions.

The final article in this issue, by James Dilley and me, suggests that instead of eliminating some HIV-related approaches, which have been dismissed as “exceptions” to public health practice, society should embrace these approaches as innovations. At a time when resources are shrinking, we argue for judicious investment.

Page 10 of this issue is an abbreviated list of 25 years of acknowledgments. Along with Helquist and Follansbee and 1,000 authors, FOCUS has depended on a couple dozen staff and volunteers. We have also benefited immensely from an inspirational readership. Thank you for your support and engagement, and most of all, your actions on the front lines. We have been honored to serve you. At this moment of ferment, we wish each of you the best in your continued efforts to outmaneuver HIV.


Circumcision

An estimated 30 percent to 34 percent of adult men worldwide are circumcised. Male circumcision is practiced for religious, cultural, and medical reasons, and the proportion of men who are circumcised varies in different populations between less than 5 percent and more than 80 percent. The inner surface of the foreskin has a high concentration of HIV target cells. It is also only lightly keratinized, that is, toughened, so it is vulnerable to micro-tears, is exposed to secretions during sex, and provides a moist environment in which microorganisms may thrive. Uncircumcised men also have higher rates of genital ulcer disease, which is also associated with HIV transmission.

Randomized controlled trials in Africa have found that the combined overall HIV-protect-
the effective effect from male circumcision was 58 percent. In South African and Ugandan trials, there was no evidence for increases in HIV transmission-related sexual behaviors in response to the increased protection from circumcision, while in Kenya circumcision men reported more unprotected sexual intercourse than men in the control group 24 months after adult circumcision. Based on these findings, a WHO/UNAIDS consultation group recommended circumcision as an effective addition, but not as a substitute, to other HIV prevention strategies for heterosexual men in countries with general population epidemics.

Although male circumcision is highly effective for preventing female-to-male HIV transmission, a study in Uganda found that circumcision of HIV-infected men did not impede transmission to female partners. The study also suggested that resumption of sex prior to complete wound healing after circumcision may increase the risk of male-to-female transmission. The data underscore the need for intensive participant counseling regarding abstention from sex until healing is complete and for adherence to other risk-reduction behaviors. Over time, however, male circumcision may lower HIV rates in women indirectly by reducing prevalence in male partners.

Unlike studies of heterosexual sexual behavior, studies of male-male sexual behavior have found inconsistent results regarding the efficacy of circumcision to reduce HIV transmission. This is due, in part, to the fact that many men who have sex with men engage over time in both insertive and receptive roles. One cohort study of HIV-negative men who have sex with men reported no association between circumcision and HIV seroconversion, even after adjusting for behavioral factors (such as the number of partners) and the presence of anorectal STDs.

Questions remain about whether men in areas that do not traditionally practice circumcision will choose the procedure. In addition, if circumcision makes recipients feel more secure about having unprotected sex, this effect could offset the beneficial effects of circumcision. Health education, including HIV counseling and testing, could reduce this possibility.

Microbicides and Antiretroviral Prevention

Two promising prevention approaches are vaginal or rectal antimicrobial products and the prophylactic use of HIV antiretroviral compounds. Even before there were effective HIV antiviral drugs, researchers hoped to develop microbicides, chemical gels, creams, films, or suppositories that, when inserted into the vagina or rectum prior to intercourse, would prevent HIV transmission during sex. Randomized trials in the 1990s found that nonoxynol-9, which had been used as a spermicide for decades, was ineffective in preventing HIV and other STDs. Studies over the subsequent decade found no consistently effective microbicide. Research has now moved in three directions: developing longer-acting dispersal methods that may be applied hours or days before sex, composing products from several chemical compounds with different mechanisms of action, and using HIV antiretroviral compounds as the chemical compound. In fact, HIV antiretroviral medication may be the most promising avenue of biomedical prevention.

In light of their incredible success as HIV treatments, researchers are now evaluating HIV antiretroviral compounds for their HIV prevention potential. This potential can be realized in at least two ways: through pre-exposure prophylaxis (PrEP), the provision of oral or topical HIV antiretroviral treatment to HIV-negative people to reduce susceptibility to infection, and through standard antiretroviral treatment to HIV-positive people to reduce their infectiousness. There is a particularly compelling precedent for this approach: short-course zidovudine (ZDV; AZT) and, subsequently, single-dose nevirapine for pregnant, HIV-infected women, reduced mother-to-child transmission in non-breastfeeding populations by two-thirds. In addition, although its exact efficacy is uncertain and it has not been the subject of Phase II and Phase III trials, there is evidence that post-exposure prophylaxis (PEP)—a 28-day course of HIV antiretroviral drugs following HIV exposure in the previous 72 hours—reduces HIV transmission rates following needlestick exposure.

If proven safe and effective, PrEP may be more feasible and acceptable than approaches that require taking a specific action prior to sex. As this article goes to press, the iPrEx study of 2,499 transgendered women and men who have sex with men, reported that a daily dose of tenofovir and emtricitabine (Truvada) achieved a 44 percent reduction of new HIV infections compared to the placebo group. In addition, it found 73 percent reduction among participants who took the drug at least 90 percent of days. If the results are duplicated in future trials, researchers will need to examine PrEP’s long-term effects, costs, implications for antiretroviral resistance, and methods to promote...
high levels of adherence before there can be broad implementation.

Another promising trial—one of 1 percent tenoflor-vir gel—found the microbicide to be 39 percent effective in reducing a woman's risk of becoming HIV infected. In addition, the protective effect increased as use increased; women who used the gel in more than 80 percent of their sex acts had a 54 percent reduction in HIV infections. If other studies confirm these results, the gel will likely become an important tool. Since such antiretroviral treatments are specific to HIV, they may be more successful and more readily expanded than other microbicides to rectal as well as vaginal use among heterosexual couples and men who have sex with men.

Lastly, since increased plasma viral load is highly correlated with increased infectiousness, and antiretroviral treatment reduces both plasma and genital viral load, researchers are studying the role of HIV antiretroviral therapy in reducing transmission from people with HIV to their partners. In 2008, Switzerland's Federal AIDS Commission concluded that HIV-positive individuals do not risk transmitting HIV to HIV-negative partners if HIV-positive partners have had undetectable viral loads for at least six months, are strictly adhering to an antiretroviral regimen, and are free of any other STDs. In an ongoing, international, multicenter study of mixed-status couples, participants in the intervention arm are receiving oral antiretroviral treatment earlier than clinically indicated (CD4+ cell counts between 350 and 550), while control arm participants receive antiviral treatment according to standard World Health Organization guidelines. Results are expected in 2012.

Vaccines

Initially, HIV vaccine research concentrated on identifying immunogens—parts of HIV that trigger the immune system—that would elicit antibodies at sufficiently high levels to prevent infection. However, these efforts have been thwarted by HIV's high genetic variability and ability to evade host defenses, both of which mean that a particular vaccine is often not able to target a wide variety of viral strains.

Another group of vaccine efforts focused on boosting T-cell responses rather than inducing neutralizing antibodies. While this outcome may not prevent infection, it may reduce the initial viremia—the amount of virus in the blood right after infection—a change that has been correlated with better clinical outcomes and reductions in transmission. In 2007, after 3,000 subjects had been enrolled, an interim analysis revealed that the first T-cell vaccine neither prevented HIV acquisition nor reduced initial viremia despite the T-cell response it induced. Trials of other T-cell vaccines are being examined for their future potential.

Only one vaccine candidate has shown moderate efficacy against HIV infection. This is a “prime-boost” combination of two vaccines: ALVAC HIV vaccine (the prime), and AIDSVAX B/E vaccine (the boost). In a trial conducted in Thailand, the vaccine lowered the rate of HIV acquisition by 31 percent, although there was no reduction, as had been expected, in the post-infection HIV viral load of people who did seroconvert. Further, despite the trial's large sample size, the low HIV incidence among this sample drawn from the general population limited the statistical power of the study, and conflicting results using different analytical methods have raised questions about the interpretability of the results. Regardless of these limitations, the study's findings represent the first hopeful results from a vaccine trial, and research in this area is ongoing.

Conclusion

Many biomedical prevention tools have had disappointing results in randomized controlled trials. However, even a simple and successful biomedical strategy has the potential to alter individual behavior. Thus, all biomedical intervention strategies must include behavioral components to ensure uptake of and adherence to the strategy and to prevent risk compensation. Further, prevention research has shifted toward HIV treatment-related interventions and combination prevention methods. Yet, even if successful, these interventions present challenges related to cost, target group, method of distribution, and long-term side effects that will have to be addressed in future research.
Risk Compensation in the Age of Biomedical Prevention
Matthew Hogben, PhD and Sevgi O. Aral, PhD

As with all human interventions, HIV prevention interventions may lead to unintended consequences, one example of which is called “risk compensation.” Typically, risk compensation unfolds for individuals who, feeling protected against one health danger after implementing a behavior change, engage in other behaviors that put them at risk for the same or other health dangers. For example, debate around human papillomavirus (HPV) vaccination included fears that young women might feel free from concern about cervical cancer, which is a potential outcome of infection with certain strains of HPV. As a result, they might have more unprotected sex with more partners at an earlier age, putting themselves at risk for other sexually transmitted diseases or pregnancy.

In considering these effects, it is important to distinguish between “disinhibition” and “risk compensation,” which are often used interchangeably but describe two distinct concepts. Disinhibition occurs when people stop trying to avoid a health danger to themselves or others. Classic studies on learned helplessness show that people who believe they are unable to avoid a harm stop trying to do so.1 Impairment through alcohol or other substance use is another cause of disinhibition.2

Risk compensation, on the other hand, is better characterized as a cognitive process of weighing the risks and benefits of a health danger. The term applies to people who, diminishing their susceptibility to a health danger by adapting a preventive intervention, increase their susceptibility via another behavior because they can still maintain what seems to be the same level of susceptibility. The questions for prevention interventions are the extent to and circumstances under which risk compensation (a) occurs and (b) reduces the prevention effects of the intervention.

Evidence of Risk Compensation
Pre-exposure prophylaxis (PrEP) is a candidate for an intervention where the preventive effects could be undone by risk compensation. PrEP offers subjects a drug—the HIV antiviral medication tenofovir—prior to possible HIV exposure to create “antiviral drug readiness” should a person be exposed to HIV. Risk compensation in this case might arise if people taking tenofovir, feeling more protected against HIV than if they were not taking the drug, were to increase their number of sexual partners or decrease their condom use. Further, if such behavior then affected community norms, the shift in behavior would be widespread enough to lead to an overall increase in the likelihood of HIV exposure and seroconversion within a population. However, a tenofovir PrEP trial among Ghanaian sex workers found no evidence of risk compensation.2 These and other data3,4 indicate that the beliefs that would lead to risk compensation are not widespread in the populations most affected by HIV.

There is, however, evidence that risk compensation may occur in some subpopulations. In a Dutch study of perceptions regarding HIV antiviral treatment, a minority of the men who believed that their viral loads were low enough that they were highly unlikely to transmit HIV increased their numbers of sexual partners.4 The existence of risk-compensating subgroups such as the one in the Dutch study might suffice to keep the epidemic in a steady state or even “refuel” prevalence in the larger population, a point offered in other reviews.5

These points all call for a closer look at risk compensation especially in two domains. First, researchers need to measure the health outcomes of risk compensation. Only outcome data can demonstrate that what we believe to be risk compensation actually is risk compensation. Second, researchers need to elaborate upon and deepen the construct itself, since the term probably represents a more complex set of cognitions and causes of behavior than its current definition suggests. That is, the behaviors called risk compensation occur in complicated historical, social, and ecological contexts. Even though what are identified as “risk compensation” behaviors may appear to be similar across situations, their causes, and therefore appropriate interventions, may be different.

Measuring Risk Compensation
Measurement of health outcomes addresses one important question immediately: are the behaviors we call risk compensation related to factors such as seroconversion that negatively affect a person’s health? That is, in the face of an otherwise effective prevention intervention, do those behaviors still confer risk?

References
In Britain, for example, an influential study found that front seat belt use was not associated with reduced injury or death in the period following the introduction of seat belt laws. In fact, pedestrian and cyclist deaths from accidents actually increased. The study’s author, John Adams, suggests a model of “risk equilibrium” to describe this situation: drivers wearing seat belts felt they could increase driving speed, since they believed they incurred no more risk of dying in an accident.

HIV researchers have made the analogy to condom use. We emphasize that the strength of the seat belt analysis is its use of outcome data on accidents and deaths. In a model of sexual risk compensation, similar outcome data would be HIV transmission rates and rates and rates of HIV-related illness and death. Accurate infection rate measurement often requires large numbers of participants and significant funding, so researchers often use proxy measurements such as condom use rates or number of partners to gauge the efficacy of the intervention they are testing. Nevertheless, without measurements of relevant outcomes—that is, using only proxy measurements—the actual level of post-intervention risk remains in question. In addition, while mathematical models of risk and behavior can be immensely helpful, they must eventually be validated with data.

The choice of outcomes to measure is important. In the case of the HPV vaccine, because the vaccine is virtually 100 percent efficacious, the recipients will not be acquiring HPV regardless of their sexual activity. Therefore, it would not be helpful to track HPV infection as an outcome in order to gauge the effects of risk compensation. However, changes in behavior might become apparent in rates of other newly acquired sexually transmitted diseases, so outcome measures ought to include acquisition and transmission of infections other than HPV (and possibly selected strains of HPV not covered by vaccines).

Seat belts and driving safety provide a more subtle illustration. As noted above in the British seat belt example, because the putative outcomes of risk compensation were felt most keenly by cyclists and pedestrians—parties other than those engaging in risk compensation—researchers have to measure outcomes across populations beyond the subpopulations that are targets of intervention. In terms of HIV, the closest analogy is risk compensation (or disinhibition) that results in transmission; that is, the principal harm (HIV infection) accrues to the sex partner, not the HIV-positive individual. The earlier Dutch example of the subgroup of men who believed antiviral treatment made them unlikely to transmit HIV, and who also engaged in higher levels of unprotected sex than others, illustrates this point.

Even if researchers are able to address the problems above, other complications remain. For instance, when advances in treatment are matched by technological innovations that facilitate sexual contacts—for example, internet-mediated sex seeking—it becomes hard to disentangle risk compensation from a host of other causes.

### Elaborating Risk Compensation: A Typology

The second area in which we take a closer look at risk compensation concerns the context in which it occurs. The contexts in which risk-compensating behaviors unfold may be far more varied than the behaviors themselves. The actual behaviors that provide a measure of risk compensation, if measured adequately and validated through relevant outcomes, will look the same, but we suggest the contexts in which they occur change how we interpret those behaviors. This in turn may influence the best choice (or mix) of interventions.

We have divided the complex mixture of behavior and context into three areas. Together they form what might be called a typology of risk compensation.

#### Type 1: Prevalence of One Behavior Increases as Risk from Another Behavior Decreases (Classic Risk Compensation)

Risk compensation in this area arises from the interaction of a preventive intervention with the individual’s personal level of risk tolerance: the individual “compensates” for the added level of safety by permitting higher levels of other risk up to a consistent tolerance level. In sexual behavior, this is the risk homeostasis hypothesis posited by Eaton and Kalichman. Note that, at its base, risk homeostasis is centered around a consistent, individual-level construct: the perception of suitable risk. Personality characteristics derived from trait factors and temperament probably do contribute to risk homeostasis—openness to experience from the five-factor theory of personality is one candidate, as is Kalichman’s work on sensation seeking.

A factor to consider beyond personality is the historical context of the target population’s behavior. Some groups that currently define targets for an intervention group may have valued a given behavior up to the point when a threat was introduced. For example,
consider open sexual expression among gay men during the 1970s and 1980s. Such expression is intrinsically pleasurable, as well as a marker of the assertion of the civil right to be gay. The prevalence of such behaviors, for example, multiple sexual partners among young gay men, was reduced in the era of untreatable HIV infection and progression to AIDS (maintaining risk homeostasis is one explanation, differential mortality is another). Upon the introduction of a preventive intervention, however, members of the population may resume the previous prevalence of “risk” behaviors. To continue the example, because the depressed prevalence of sexual behavior was an artifact of the threat to health, any intervention that reduces the threat of HIV transmission and progression to AIDS also reduces the motivation to take alternative precautions.

Type 2: A Preventive Technique for One Health Threat Replaces a Technique that Had Been Preventing Another Threat. A preventive intervention may remediate only one of a series of related health threats. If that particular threat is most salient to the population, then individuals using the intervention may increase behaviors that confer other risks. This outcome will have the appearance of risk compensation, but it is not. Consider the introduction of hormonal contraception to a population using condoms as contraception. Data generally show that couples in which the woman begins to use hormonal contraception drop off in their use of condoms.12 Data also show that unwanted pregnancies tend to be a more salient concern than STD acquisition as contraception. The introduction of hormonal contraception is so effective for preventing pregnancy, this perception would be accurate. However, the behavior—sex—is now unprotected against the threat of STD acquisition or transmission. Again, it remains vital to properly define and measure outcomes in this case, since the switch to hormonal contraception from condom use is actually correlated with markers of lower risk—longer relationship tenure, greater trust, and increased monogamy—each of which might mitigate any decrease in condom use in terms of the risk of contracting an STD.

If the greater rates of unprotected sex do not yield greater rates of STD acquisition or transmission, then no empirical case for risk compensation exists. However, in settings where STD/HIV rates are high enough, concurrency and relationship turnover are sufficiently prevalent, and the gap from one relationship to another is short enough, a decrease in condom use may confer additional acquisition risk. Such risk will be likely construed as risk compensation or disinhibition, but would be independent of the individual-level theories discussed above.

Type 3: Intervention for One Behavior Overlooks Another. A preventive intervention may reduce one source of danger in a system, but not others. Individuals who do not understand that there are multiple sources of risk affecting a given outcome may get a false sense of security about their safety and also appear to be engaging in risk compensation. The same interpretation applies for individuals who overestimate the efficacy of an intervention. Even those conducting an efficacious intervention have to balance the goal of convincing people that an intervention is useful enough to implement with the danger of overselling the intervention and leaving the individuals with the impression that it will eliminate risk.

Conclusion

Although risk compensation is not a widespread, population-level phenomenon in terms of sexual risk, it should not be ignored. Those interested in changing public health behavior should at least be aware of the possibility of risk compensation or disinhibition and be prepared to address any negative unintended consequences of their interventions.

Other commentators have appropriately concluded that the prospects of risk compensation should not limit efforts to engage in preventive intervention. Although “risk compensation” is a defensible phrase for the phenomena outlined in this article, the precise subtype of risk compensation should drive the response. Fortunately, there are a range of responses that could apply, including increasing awareness of the spectrum of risk, ensuring preventive interventions encompass prevention from multiple risk factors and levels, and even preparing secondary interventions to cope with the possible resumption of STD and HIV-related behaviors.

Authors

Matthew Hogben, PhD, is the chief of the Behavioral Interventions and Research Branch of the Division of STD Prevention at the U.S. Centers for Disease Control and Prevention. His research centers around health care seeking and provision, STD and HIV partner services, and the interaction of behaviors and social context in STD prevention and health promotion.

Sevgi O. Aral, PhD, is the associate director of science of the Division of STD Prevention at the U.S. Centers for Disease Control and Prevention.
HIV Exceptionalism as a Prescription for Health Care Reform

Robert Marks and James W. Dilley, MD

In 1991, health policy scholar Ronald Bayer coined the term “HIV exceptionalism” to refer to the divergence of HIV medical practice from the standards used to control other infectious diseases. In response to fears of stigma, and housing, job, and health care discrimination, HIV-related policies that sought to protect patient confidentiality, address mental health, and avoid extreme measures extended significantly beyond those for other communicable diseases. In 2006, Bayer (and Amy Fairchild) concluded that new U.S. Centers for Disease Control and Prevention policies heralded an end to HIV exceptionalism. Perhaps most notably, these policies sought to broaden access to HIV antibody testing by “normalizing” the process, that is, by eliminating “exceptional” informed consent procedures for HIV testing and reducing “exceptional” pre- and post-test counseling. In 2007, researchers David Holtgrave and Jean McGuire suggested that such “normalizing” failed to take into account data demonstrating the value of test counseling, including the “exceptional” components Bayer had criticized.

One of the arguments for “normalizing” HIV testing is that simplified testing procedures are faster and cheaper, qualities that improve access to testing and allow more people to learn their HIV status. This argument presumes that the most significant health effect of testing lies in the test result itself. Although data strongly suggest that people who know they have HIV are more likely to change their behaviors, studies have also demonstrated the value of risk-reduction counseling for HIV-negative clients.

Further, while the CDC’s 2006 guidelines still recommend that counseling accompany HIV testing for HIV-positive people and HIV-negative people at high risk for HIV, “normalizing” approaches jeopardize the innovations of more than two decades of HIV prevention practice. At a time when pressure mounts to find effective people at high risk for HIV, the fact that the characteristics that justified HIV disease’s exceptional status 20 years ago—stigma, fear, uncertainty, and confusion—endure today. By failing to explore these implications, routine informed consent procedures infer rather than truly obtain consent. In the best case, a high level of trust between doctor and patient may leave the patient confident that his or her doctor’s mere recommendation affirms that the procedure is useful and safe. Often, however, informed consent is pro forma. Despite its best intentions, routine consent, rather than engaging the patient in his or her care, in effect, undermines the patient’s participation and authority (and might lead to unintended consequences such as underuse, because cursorily informed individuals may not understand their risks and opportunities and may decline testing). “Exceptional” informed consent procedures, which occur during the first part of the HIV counseling session, walk the client through test-related information, cultivating the sort of interactive process that can tailor communication, gauge comprehension, and create a context for care that will extend well beyond the session.

Second, health care outcomes benefit from “counseling,” that is, from the client- or patient-centered interaction that accompanies treatment. In fact, the opportunity to talk to patients or clients may be as valuable as a test result itself, offering what might be the most effective health maintenance intervention: engagement in discussions about the challenges of dealing with health care and risk. Just as the HIV testing session represents the first substantial prevention interaction for many people at risk for HIV transmission, so does any medical test represent a uniquely intervenable moment. It is a time when both individual and provider are poised before decisions that will not only set the course of treatment but also determine whether their future relationship is productive. Conversely, routinized—and truncated—interactions can impede the provider-patient relationship, which one might imagine could result in patients withholding information or dropping out of care.

References


Normalizing HIV Advances in Care

The main argument for “normalism” is that improved access to testing will increase the likelihood that more people with HIV will learn their status, seek treatment, and change their behaviors. “Improved access,” however, is sometimes code for a different goal: decreasing the personnel time for administering the
test. The health care system has two problems with this provider “time.” First, it is often unreimbursed. A test process that can take five minutes of provider time costs less than one that takes 20 minutes. Second, medical and nursing school curricula do not emphasize the skills of client-centered counseling that are essential to informed consent and, more significantly, to risk-reduction counseling.

The first of these problems can be resolved, in part, by recognizing that the expense related to counseling those at highest risk for HIV is money well spent. Some commentators believe the data do not support test counseling except as a link to medical care and partner counseling services for HIV-positive clients. As Holmgren and McGuire point out, however, there have been few systematic studies of test counseling, and the oft-cited 1999 review article, which found mixed results, is out-of-date and flawed.

In fact, counseling can reduce risk and save money. Two studies—Project RESPECT and Personalized Cognitive Counseling (PCC)—both randomized and controlled, include clearly defined and standardized counseling methods and incorporate long-term follow-up. Both protocols include the three key CDC-endorsed approaches to test counseling: informed consent, risk assessment, and results disclosure. Both studies of HIV-negative participants found significant reductions in the highest risk behaviors—for example, unprotected sex with partners of unknown serostatus—and follow-up evaluation showed the preventive effects of both protocols were sustained over time. These data contradict the assertion that counseling itself, has no significant preventive effect. Holtgrave and McGuire suggest that the question is not whether we should implement testing alone versus counseling and testing, but how can we ensure adherence to the client-centered counseling standard, which is responsible for preventive effects?

Authors
Robert Marks is publications and training manager of the AIDS Health Project and, since 1989, editor of FOCUS. He and Dr. Dilley co-wrote AIDS Law for Mental Health and authored FOCUS's AIDS Health Project Guide to Counseling (Jossey-Bass). James W. Dilley, MD, executive director of the AIDS Health Project, has been executive editor of FOCUS since 1985. He is a clinical professor and vice-chair of the UCSF Department of Psychiatry and chief of psychiatry at San Francisco General Hospital. He has published widely on HIV and mental health, and is principal investigator in studies of PCC.

References
8. FOCUS's Medical Advisor, Stephen Folke, MD, with whom we planned, in 1996, a book called The New Bedside Manner, remains a pioneer in constructing the HIV-related doctor-patient relationship and the community coalitions that are the hallmark of HIV-related care.
9. For example, since 2007, the California Department of Public Health Office of AIDS’s protocol differentiates between more and less intensive services for two groups—higher risk and lower risk—as determined by a client assessment form. Lower-risk clients who test HIV-positive automatically shift into more intensive counseling.
Twenty-Five Years of Thanks

Twenty-five years of FOCUS has generated 25 years of thank you opportunities. During this period, we published 260 issues and more than 500 articles. Many of those articles were written by more than one author, so more than 1,000 people donated their time and effort to narrate the evolution of the epidemic, the places where medicine, mental health, and counseling intersect, and the skills that frontline providers need to navigate the complex landscape these intersections form. We offered authors no monetary compensation, tight deadlines, and more editorial input than they might have wanted. They stuck with us—some even agreeing to write for us more than once—and we are profoundly grateful.

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FOCUS will continue to live on at AHP’s web site, which hosts a searchable topic index and free, downloadable PDF copies of all past issues. There you can find every author and his or her contribution. To access this archive, go to: www.ucsf-ahp.org/HTML2/services_providers_publications_focus.html.

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