Although behavioral interventions have slowed the epidemic in some regions, the momentum of HIV transmission has accelerated throughout the world. In response to alarming projections of future AIDS cases worldwide and the optimism about recent results in HIV vaccine development, the National Institutes of Health (NIH) has unveiled controversial plans to study the feasibility of large-scale vaccine trials and lay the groundwork for their implementation in the United States and abroad.

Pharmaceutical companies are working to develop more than a dozen possible HIV vaccines for two kinds of use: "prophylactic" vaccines that, like classic vaccines for polio and measles, prevent infection or disease in people who are uninfected, and "therapeutic" vaccines to retard HIV disease progression in people who are already infected. While the same vaccine might fulfill both purposes, this article focuses on prophylactic vaccines. It describes the status of HIV vaccine research and scientific quandaries, the vaccine testing process, and the ethical and legal issues raised by vaccine trials.

The Status of Vaccine Research

Planning a large-scale efficacy trial assumes that a promising vaccine will be available in the near future. But there remain many unanswered questions about HIV vaccines, and HIV poses some problems not confronted previously in making a human vaccine.

First, researchers have not established what immune responses are crucial for protecting the body against HIV infection. Without this information, they cannot tailor the vaccine to produce those particular responses. This question is complicated by the fact that it is too risky to use the entire weakened or inactive HIV, as was done to make vaccines for less deadly viruses such as polio or measles. Most vaccine development is focusing on using parts of the virus to ensure that it cannot replicate when it is introduced into a human host. This strategy applies genetic engineering to synthesize a piece of the virus in hopes that this piece alone will produce an immune response that will prevent HIV infection. So far, scientists have successfully used this approach only once, to develop the hepatitis B vaccine.

Second, HIV undergoes a high rate of mutation as it replicates, and strains from different parts of the world vary by as much as 20 percent in terms of the proteins that comprise the outer coat of the virus. Even within an infected individual, over a period of years, the virus may change its component proteins by as much as 10 percent. This degree of variation means that a vaccine made from one strain of HIV may not protect against a different strain. While it may be possible to design a vaccine to protect against multiple strains, all current vaccines are based on single strains. To prove their effectiveness, these vaccines may have to be tested in geographic areas where the prevalent HIV strains are the same as the strain used in the vaccine.

Third, the immune response raised by the vaccine may be protective for only a short period of time. In such cases, booster vaccinations would be required too frequently to be practical. For all of these reasons, most scientists think that current HIV vaccine candidates are likely to be at best only partly effective: they may protect only a proportion of those who get...
Clinical trials offer people with HIV disease access to a wide variety of experimental treatments, free medical care and testing, and the support of a community of researchers and clinicians. The advantages of vaccine trials, however, are not as clear. For preventive vaccines, in particular, where direct medical benefits are likely to be minimal, potential participants will have to be motivated by psychological and moral reasons.

In helping clients approach these issues, mental health and medical practitioners face an array of scientific, social, ethical, and legal factors. In this month’s issue, Dennis Osmond and J. Marie Johnson focus on preventive vaccines, and examine these factors and offer insights into how potential participants might balance them. Among the factors are the risk of infection, the possibility of falsely testing HIV antibody positive after a trial, the discrimination that might result from appearing to be HIV-infected, vaccine-related side effects, medical and legal expenses, and the moral responsibility to help develop a cure.

The factors involved in making decisions about therapeutic vaccine trials are similar, but the decision to participate is easier. Potential participants, by definition HIV-infected, already deal with HIV-related discrimination and may believe they have less to lose by trying a vaccine that may extend life.

The essential question for clients, particularly those in preventive vaccine trials, is: “What needs are fulfilled by participating in a process that may not directly benefit me?”

This question apparently pits self-interest against altruism. But, in reality, it pits explicit desires for health and safety against more subtle needs related to self-esteem, social norms for compassion, and personal experience with HIV disease. Perhaps the most powerful of these subtle factors is hope—the “magical thinking” that says, “It will be different for me. Being in this trial will help me.” It is the role of practitioners to help clients sort through these issues and focus as much on motivations that appear to go against self interest as on those that respond to rational concerns.

In the end, it may be as difficult for researchers to recruit trial subjects as it is for them to overcome the technical barriers of vaccine development. But, with a special appreciation of the subject, practitioners can ensure that clients make informed and healthy decisions.

**Vaccine Testing**

Despite scientific uncertainty about the likelihood of success, small-scale vaccine testing is already underway. Vaccine testing proceeds in two stages. In the first stage, called a “phase I/II trial,” researchers give promising vaccines to small numbers of uninfected volunteers to confirm vaccine safety, and to determine the dose and the number and spacing of booster shots.

Although researchers can make some inferences about vaccine efficacy during safety testing, testing whether the vaccine prevents infection requires a much larger study. The second stage—the stage now being planned by NIH and called an “efficacy” or “phase III” trial—compares two large groups of subjects, one that has received the vaccine and one that has received a placebo, to see whether the vaccinated group has a lower rate of HIV infection. In carrying out efficacy trials, the number of participants, the length of the follow-up period, the rate of HIV infection, and the presumed efficacy of the vaccine are related to each other. Because the rate of HIV infection is low, even in “high-risk” populations, researchers estimate they will need to study several thousand participants to determine whether an HIV vaccine is effective. The original polio vaccine trial was completed in a year but required nearly half a million children.

An important variable in determining the parameters of the trial is whether the vaccine is prophylactic or therapeutic. If the vaccine actually prevents infection, the trial will measure the rate at which participants develop HIV antibodies. If, however, the vaccine allows infection but prevents or greatly retards disease progression, the trial will measure the rate at which disease develops and will therefore require many more years of follow-up.

**Ethical Issues**

Whether or not the subjects needed for a vaccine trial will participate may depend on how researchers and manufacturers resolve the unprecedented ethical and legal issues posed by HIV vaccine development. Prominent among these concerns is that those receiving the vaccine through a
clinical trial may test positive on the standard ELISA HIV antibody test. Follow-up tests, such as the widely used Western Blot assay, will be able to distinguish a vaccine positive result from natural infection, but this may not be sufficient to protect individuals from the adverse social, employment, and other discrimination following an initially positive antibody test.

In response, researchers have suggested creating a confidential registry of trial participants. A registry, however, is a double-edged form of protection against discrimination. Participants may have more to fear from the stigma of being listed in a registry of vaccine trial subjects—who in the U.S. are almost certain to be gay men, or injection drug users or their sexual partners—than from the stigma of having a false positive antibody test. In addition, in many other countries, confidentiality is extremely difficult to arrange and sustain. Some current phase I/II trials give participants identification cards as proof of participation, but this also may not provide adequate protection. Strong and enforceable legislation banning HIV-related job and insurance discrimination could provide safeguards, and it is possible that the need to develop an HIV vaccine might motivate better legal protections.

A second ethical problem arises because HIV infection is preventable and the ways of avoiding infection are well-known. For a trial to show that a vaccine works, some people receiving the placebo will have to become infected. If no one on placebo is infected, researchers will be unable to show it was the vaccine itself—and not some other factor like safer sex practices—that prevented HIV infection. Thus, researchers will be in the paradoxical position of recommending safer sex guidelines while recognizing that an adequate test of a vaccine will require that some participants ignore those guidelines.

Some argue that vaccine researchers are ethically obliged only to explain the conditions of the trial to participants and refer them to community resources for advice on HIV prevention. Most researchers think such a passive approach is unethical and that vaccine trial organizers must provide more active safer sex counseling. Even if safer sex counseling is provided for all participants, researchers disagree about the amount, frequency, and type of delivery of counseling.

A third issue poses an ethical problem for participants and a practical problem for researchers. Participants consent to be randomly assigned to vaccine or placebo groups, and to be “blinded” to their status. Some participants, however, will be able to determine whether they received the vaccine by seeking an HIV antibody test from an outside source: this is known as “unblinding” oneself. Ethically, participants should remain blinded, but many may not do so. It is hard to predict the effect of unblinding on a vaccine trial. Will participants who discover that they did not receive the vaccine drop out of the study? Will those who learn that they did receive the vaccine take more behavioral risks and thus be at higher risk of infection than the placebo group? If so, could this mask a partially protective vaccine?

Legal Liability

Ethical concerns are complicated by issues of legal liability, and it may be difficult to strike a balance between the rights of participants to seek legal redress for damages and the reluctance of manufacturers to make an HIV vaccine without some protection from liability claims. Because of such concerns, a number of pharmaceutical companies stopped HIV vaccine development programs.3 Vaccine manufacturers want to be free from liability unless they fail to disclose known risks to participants or to explain the meaning of such concepts as “randomization” or “placebo.” A recent California court ruling, which upheld this point of view, has resulted in renewed interest in HIV vaccines by some companies, and a new Connecticut law offers protection to companies testing HIV vaccines in pregnant women. Liability construed in this restricted fashion would leave participants without recourse if a large-scale trial should reveal harmful side effects undetected in earlier, smaller studies.

Liability may also be problematic for participants if damage is not to health but is nonetheless a consequence of trial participation. For example, would a manufacturer be responsible if a seronegative

Universal vaccination may not be viable, but targeting “high-risk” group members may not be effective. Still even a moderately effective, incompletely distributed vaccine could prevent thousands of infections yearly.
Responses of Researchers and Participants

In response to ethical and legal concerns, researchers should fully inform participants about the probable effect of vaccination on serostatus, how long this effect will persist, what safeguards the trial is offering to prevent against resulting discrimination, and whether any special measures will be taken in states or countries that require reporting by name of people who test HIV antibody positive. They should also state whether participants given the placebo during the trial will be offered vaccine free of charge if, at the end of the study, researchers determine that the vaccine is effective. They should tell participants about any liability legislation or court decisions bearing on vaccination trials, and they should clarify the distinction between known and unknown, but possible, side effects. Finally, researchers should describe any effects receiving the study vaccine might have on the efficacy of future, improved vaccines.

Most of these concerns fall to researchers and policy planners to address, but participants, themselves, must understand that they are consenting to a scientific experiment that may have a negative result—that is, the vaccine may not work. In order to consent, they must be comfortable with the knowledge that even this result would be a worthwhile scientific contribution.

Conclusion

What is the goal of developing an HIV vaccine? The best outcome would be to eradicate HIV infection, but this does not seem likely. Of those infectious agents for which we have an effective vaccine, only smallpox has been eradicated.

For an infectious agent to be a good candidate for eradication, several conditions must exist. The most important of these are that only humans are infected, that infection is easily recognized, and that infected persons do not remain asymptomatic but infectious for long periods of time. HIV meets only the first of these conditions, and even this is questionable as it may have mutated from closely related monkey viruses. The goal of an HIV vaccine must be more modest.

Vaccine development and manufacture is costly, and there is concern that developing countries, where a vaccine is needed most, will be least able to afford it or unable to develop distribution systems given their fragile infrastructures. Even within developed countries, the vaccine effort may be too expensive. It will be difficult to raise the political will in the developed world to subsidize the cost and organize the distribution of a vaccine to the countries in greatest need.

Even if the political will can be found, it is still not clear what the best vaccination strategy would be. Universal vaccination of the whole population may not be viable, but targeting “high-risk” groups, a practice that has been unsuccessful in controlling hepatitis B in the U.S., may not be effective. Still even a moderately effective, incompletely distributed vaccine could prevent thousands of infections yearly, and that alone is justification for a vaccine effort and for encouraging the involvement of trial participants.

References


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Clearinghouse: HIV Vaccines

References


Illeman M. Vaccines. BETA: Bulletin of Experimental Treatments. August 1992: 27-30. (To order a single issue, send $14 to PO Box 2189, Berkeley, CA 94702, or call (800) 327-9893.)


Picard O, Achour A, Bernard J, et al. A 2-year follow-up of an anti-HIV immune reaction in HIV-1 gp160-
As research progress continues, many clients may contemplate entering clinical trials to test experimental vaccines. It will fall to mental health practitioners to help clients make decisions about their participation in these trials and to address the feelings that arise after a decision to participate or not to participate is made. This article discusses some of the motivations and concerns of people in vaccine trials, the stages through which participants go as they decide whether to participate in a trial, and the responses of clinicians to clients involved in or considering vaccine trials.

In general, people are motivated to enter vaccine trials because of their fears about disease, and their hopes that the test vaccine can resolve these fears and perhaps even make otherwise high-risk behaviors safe. Clients may view clinical trials as a way to allay these fears by providing the possibility of prevention or cure. As a result, clients may approach trials with unrealistic hopes about the potential benefits of the test vaccine.

As clients learn more through informed consent procedures and by talking with others, these hopes are modulated by the realization that benefits are “possible” but not “promised,” and by the possibility of vaccine-related problems. For example, clients may be concerned that participation in the trial may: fail to protect against HIV infection; lead to vaccine-related side effects; or result in employment or insurance discrimination because subjects in successful vaccine trials will test antibody positive despite the fact that they have not actually been infected. Thus, when deciding about whether to participate in clinical trials, “attenuated” hope is superimposed upon existing worries about developing HIV disease.

Helping Clients Make Decisions

The role counselors play in helping clients resolve conflicted feelings about vaccine trials varies throughout four stages of the clinical trial decision-making process.

Should I enter a trial? This stage requires the most from therapists, who have a responsibility to understand basic clinical trial methodology and recruitment procedures so they can help clients sort through the issues. During this period, it may be necessary for therapists to contact clinical trial staff to find out additional information. More importantly, however, therapists have the task of helping clients clarify entangled feelings: the desire for prevention and treatment versus the fear of unwanted side effects; and altruistic feelings about wanting to help others versus personal feelings of desperation and anger about HIV-related risk.

During this period, therapy may wander from the superficially concrete question about whether to pursue a clinical trial to the deeper, more complex issues of hope, fear, and decision-making.

When a clinical trial is over, participants may experience loss or grief, even if the trial was medically successful.
Clinical trials have strict entry criteria to assure that trial participants are comparable to each other. This is essential for accurate analysis of study results. Clients who are denied entry may feel isolated, angry, and desperate, and have an overwhelming sense of failure.

Again, it is important to help clients untangle and work through their motivations for wanting to participate, and to resolve feelings of anger and disappointment. At the same time, therapists may become involved in more concrete issues such as helping clients find alternative trials or activities that may satisfy altruistic impulses or calm HIV-related fears.

I made it into the trial. Trial participants are not promised safe or effective treatment; demonstrating these properties is generally the purpose of the trial. To assure objectivity, the methodology usually involves randomly assigning study participants to either of two cohorts: a treatment group, which receives the test vaccine, and a control group, which receives a placebo such as a salt water injection. Both groups are “blinded” so that neither clients nor the researchers know to which group any individual has been assigned. Thus, until the trial ends, participants must cope with not knowing whether they have received the experimental vaccine or the placebo, and, even if they have received the vaccine, not knowing the extent of its efficacy.

Clients use various defense mechanisms to cope with these unknowns. Some clients may use repression to avoid thinking about the risks of dangerous behaviors or rationalize that the test vaccine assures safety. Other clients may take direct action to cope: they may try to “unblind” themselves by testing for HIV antibody.

During the trial, therapists should help clients understand the coping mechanisms they are using and how they can use these mechanisms in more positive and healthy ways. Therapists should also reinforce the message that trial participation in no way assures immunity from infection. They should further educate clients about the ongoing risks of unsafe behaviors, and help them to make appropriate decisions about risk reduction.

The trial is over. When a clinical trial is over, participants may experience loss or grief, even if the trial was medically successful. The trial can provide clients with a support system, since they receive attention from a team of researchers actively involved in their lives. Through the process, trial participants often feel nurtured and develop a sense of accomplishment. Finally, many trials include periodic medical visits and laboratory tests, usually at no charge. All of this support—emotional and medical—disappears when the trial is over.

When the “blind” is broken, participants learn whether they have received the study vaccine or the placebo. If a participant has received the placebo, or if the vaccine is shown to be ineffective, participants may feel a sense of disappointment or failure. Therapists must help clients overcome these feelings, using techniques similar to those they use to help clients adjust to other losses.

Conclusion

Large-scale vaccine trials will begin sometime in the near future, and counselors are likely to be faced with clients trying to decide whether to participate. To prepare for this clinical situation, therapists have a responsibility to learn the basics of clinical trial methodology, become familiar with the stages of vaccine trials, and understand the rewards and challenges of trial participation. Only with this information can they help their clients make the best decisions for themselves.

**CDC AIDS Definition**

In a surprising turn-around, the Centers for Disease Control (CDC) has announced that it will, in fact, expand the definition of AIDS as of January 1, 1993. Under the new definition HIV-infected people will be considered to have AIDS if they have: a T-helper cell count of below 200—a standard first proposed in 1991—pulmonary tuberculosis, recurrent bacterial pneumonia, or invasive cervical cancer.

Readers interested in further information should see the August issue of *FOCUS*, which examined the CDC proposal, and an upcoming issue of *FOCUS* that will discuss the three new AIDS-defining conditions.
Recent Reports

Researching Vaccines in Africa

The ethical imperative for using voluntary informed consent in clinical trials is unequivocal, according to a discussion about biomedical research in Africa. While the concept of cultural sensitivity in research is appealing, the suggestion that informed consent is not culturally appropriate to Africa is factually flawed.

The anthropological data used to justify eliminating individual informed consent does not reflect the urbanization, industrialization, and mass education that have transformed African Society. This outdated research, characterizing African social structure as essentially group-oriented and non-individualistic, is drawn from a small number of studies conducted primarily in rural settings. It fails to reflect the diminished role of the tribal heads; the growing political corruption in African governments that undermines their ability to honestly speak on behalf of their people; and the fact that 40 percent of the continent’s population lives in urban areas.

Although effective communication between African researchers and subjects may be impaired because of differences in language, educational levels, and conceptions about health and disease, similar cultural differences exist between medical researchers and subjects in the United States, Canada, and Western Europe, where informed consent is standard. In addition, any arguments implying intellectual incompetence on the part of disadvantaged research subjects are both insulting and false, and contradict the stipulations for ethical research set forth in the Nuremberg Code of 1946, which require that the autonomy of adults not suffering from mental illness, be respected.

The claim that informed consent must be sacrificed to an accelerated research process in Africa cannot be substantiated, since a severe lack of resources prevents African nations from making effective use of research data. Attempts to eliminate informed consent in Africa should be viewed with suspicion because of the complicated motivations behind decisions to carry on research in Africa. These include lowered costs, increased availability of subjects, less litigation, weakened ethical review, and a desire to create new markets for products.

Ethics and HIV Vaccination

A review of literature published since 1988 delineates major ethical questions relating to HIV vaccine clinical trials, manufacture, and distribution.

Although ethical standards—articulated in the Nuremberg Code (1946), the Helsinki Declaration (1983), and the Belmont Report (1979)—guide clinical research and drug trials, AIDS vaccine research presents a unique set of ethical problems. As a result, the World Health Organization developed HIV-specific recommendations in 1986 to guide vaccine testing. The recommendations call for placebo testing, preliminary laboratory and animal testing, conducting trials only in countries with viable public health systems, informed consent, confidentiality, involvement of members of high-risk groups in clinical trials committees.

The manufacture of vaccines raises further questions. The economic reality of producing HIV vaccines—high costs, potential insurance liability, and low probability of economic gain—may compromise the ethical imperative to develop them, particularly since the greatest need for vaccine exists in developing countries.

The question of who will be vaccinated presents ethical choices, regardless of whether the vaccine is made compulsory, voluntary, or selectively administered to “at-risk” populations. Discrimination plays a large role in these choices. If the vaccine is distributed to targeted populations, this will require screening and disclosure of risk behaviors, some of which are stigmatized. Similarly, those who might voluntarily seek out vaccination may not come forward because of the disease’s stigma.

The Liability Issues of Vaccine Development

A forum comprised of manufacturers, insurers, researchers, lawyers, academics,
and consumers suggested an administrative approach outside the legal system to respond to liability issues arising from vaccine trials, and suggested two options—a compensation system, and a compensation system in conjunction with a modified tort system—for resolving vaccine marketing liability issues arising.

To resolve clinical trials liability issues, the forum called for the following components: informed consent; a determination of cause and degree of disability by a panel of members of the scientific community; a separate "fact-finder," for example, an administrative law judge, to determine the level of compensation; and an appeals process accessible to either the claimant or the vaccine developer. The policy group proposed a liberal standard for causation giving the claimant the benefit of the doubt in showing that a vaccine has produced a negative effect. Compensation would be paid by manufacturers up to a limit, above which it would be covered by a federal trust fund.

To resolve liability issues arising from vaccine marketing, the forum first suggested an exclusive compensation system. This system would provide compensation for well-defined, specified losses, and payment of reasonable attorneys' fees, with a cap on the amount paid to compensate pain and suffering. Claimants would be required to show causation but not fault, that is, they would have to demonstrate that a vaccine had produced a negative effect, but not that the manufacturer had failed to comply with the law. Payments would be made from a trust fund with an independent administration.

The forum suggested alternately a compensation system with a modified tort law approach. Claimants would be encouraged to select this system—despite the fact that an award could be appealed—by assuring them of reasonable, timely awards using a liberal causation standard or a no-fault approach. The tort system would be used only in those cases where the behavior of a marketer was grossly unacceptable.

Two types of vaccines are being tested: therapeutic vaccines that enhance immune response in seropositive people and prevent disease progression; and preventive vaccines that protect seronegative people from HIV infection. Of the therapeutic vaccines, gp160 and gp120 appear to offer hopeful possibilities. A number of research projects on these vaccines found increased antibody response and T-helper cell counts, reduced viral load, and few side effects.

Research on preventive vaccines, including rgp 120 and rgp 160, showed that subjects developed antibody responses with some side effects. Another report proposed that, had a vaccine with a 60 percent efficacy rate been made available to 1 million people in 1988, it would have prevented 147,000 cases of HIV infection, while a 90 percent effective vaccine, which will take until 2004 to develop, will have prevented only 87,000 of those infections. The report suggests that despite lower efficacy, candidate vaccines should be used as early as possible.

At the conference, Jonas Salk presented a controversial theory postulating that an effective vaccine will evoke only one of the two types of immune response induced by HIV. The vaccine should suppress the "humoral" response, characterized by antibody production, and induce only the "cellular" response.

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**Next Month**

Over the past four years, the term "relapse" has become a central concept in HIV prevention efforts. There has been some disagreement among educators about the role of behavior change theory in developing sexual relapse interventions. In the January issue of *FOCUS*, David Silven, PhD, Clinical Coordinator of Educational and Support Services at the UCSF AIDS Health Project, describes four behavioral theories and examines their applicability to relapse approaches.

Also in the January issue, Wayne Blankenship, Campaign Development Coordinator at the San Francisco AIDS Foundation and Coordinator of the National Relapse Prevention Network, discusses current relapse prevention programs ranging from peer education to professional counseling and referral to social marketing.

A brief survey of the scientific findings on AIDS vaccines reported at the International Conference on AIDS in Amsterdam cited progress as the vaccines advance into human trials.

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**Progress in Developing Vaccines**


A brief survey of the scientific findings on AIDS vaccines reported at the International Conference on AIDS in Amsterdam cited progress as the vaccines advance into human trials.
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