HIV test during the previous 6 months, and 40% had prescribed more than 10 tests.[9] In 1992, 72% of the population 17 to 45 years of age visited a physician, and one in seven individuals discussed AIDS, mainly the HIV test.[10]

The organization of AIDS prevention activities in Switzerland has permitted extensive diffusion and flexibility of prevention messages. People have access to many complementary sources of information and seem to have made reasonable choices among different options.

HIV testing per se is not a primary prevention method. Data on the effect of HIV testing and counseling on protective behavior, especially among HIV-negative individuals, are not conclusive.[11] In general population campaigns, messages should remain the same in order to avoid confusion and maintain widespread protection. However, targeted interventions and individual counseling may now take into account new developments in treatment and encourage individuals who have been exposed to risk to have a test. □

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Not All Behavior Change Is Equivalent

Dr Fishbein does the public health intervention community a great service by reminding us of the importance of considering the social (or epidemiological) significance of research findings, rather than simply statistical significance.[1] Consider, for example, two hypothetical interventions for the primary prevention of human immunodeficiency (HIV) infection. Assume that the intent of both interventions is to increase condom use among their respective target populations, P_A and P_B. Now suppose that intervention A succeeds in raising condom usage from 10% of all occurrences of sexual intercouse to 30%, while intervention B succeeds only in increasing the proportion of protected sexual acts from 15% to 20%. On the face of it, intervention A appears to be much more effective than intervention B, and one can certainly imagine circumstances under which the increased condom use resulting from intervention A—but not from intervention B—would reach statistical significance.

However, suppose that additional information about the two populations, P_A and P_B, was also available. In particular, suppose that the prevalance of HIV infection was found to be substantially higher in P_B than in P_A (e.g., P_A might consist of heterosexually active men in a small midwestern town and P_B of gay men in a large urban center). Because the a priori risk of infection for members of P_B is much greater than the risk for men in P_A, it should be clear that whether or not the increase in the proportion of condom-protected acts is statistically significant is not nearly as important as whether each man reduced his risk of becoming infected by a tangible amount. Thus, from an HIV prevention standpoint, it would be much more relevant to assess the extent of each individual's actual risk reduction rather than simply evaluating changes in condom use behavior.

For example, risk could be estimated via the following straightforward formula based on a Bernoulli process model of the sexual transmission of HIV[2,3]:

$$\text{Risk} = 1 - [(1 - \pi) + \pi(1-x)^n (1-x')^k]^m,$$

where m is the total number of sexual partners, π is the probability of selecting an infected partner (which depends on the prevalence of infection in the population), n and k are the numbers of unprotected and condom-protected acts of intercourse (respectively) per partner, x is the probability of HIV transmission per act of unprotected intercourse, and x' is the reduced transmission probability associated with condom-protected intercourse. The difference between preintervention and postintervention risk estimates provides an index of the intervention effect that is directly relevant to the goal of the intervention, namely, preventing the transmission of HIV.[4] □

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