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Measuring the Effectiveness of Dual Protection Initiatives for Youth

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One of FOCUS' key objectives has been to identify programs and policies that have proved effective in reducing risks faced by youth. Promoting condom use by sexually active adolescents is now accepted as an important "dual protection" intervention for preventing both undesired pregnancy and transmission of HIV and other sexually transmitted infections (STIs). As interventions are developed for encouraging correct and consistent condom use among youth, practical research techniques must be applied to measure effectiveness. Objective evidence must be gathered to answer the following questions concerning the condom promotion intervention:

1. Did it produce a decrease in the number of unprotected high-risk sex acts?
2. Did it produce a decrease in the incidence of unplanned pregnancies?
3. Did it lead to a decrease in the incidence of STIs?

Answering the first question requires collection and analysis of *behavioral* data. The answers to questions 2 and 3 are obtained through assessment of *biologic* measures. Today the most accurate assessments of condom promotion interventions rely on a combination of behavioral and biologic measures. Both have their strengths and limitations in measuring dual protection program effectiveness. For example, a typical biologic indicator is assessing changes in the proportion of targeted youth testing positive for an STI before and after the introduction of a condom promotion intervention. This is an attractive outcome measure because it directly reflects one of the ultimate objectives of dual protection initiatives: driving down STI rates. Investigators can use validated biochemical tests that produce findings of known accuracy.

At the same time, STI testing has its limitations and challenges, particularly when dealing with an adolescent population. In some settings, parental consent may be required for examining or treating minors, and communication of STI test results may not necessarily be confidential between the provider and the young person. Adolescents may be reluctant to undergo testing, particularly if an invasive procedure such as a pelvic exam is involved. Finally, there can be difficulties in documenting decreases in disease rates if the infections that are detected and treated prior to the introduction of the condom promotion program are never actually cleared up as expected. Participants' failure to comply with full treatment regimens often contributes to this problem.

Behavioral measures of condom promotion effectiveness also have their strengths and limitations. Consider, for example, estimating changes in the proportion of protected sex acts in youth before and after the introduction of a condom promotion intervention. Program evaluators are naturally interested in this measure since increasing the consistency of condom use is an immediate objective of dual protection programs. In some situations it may be far easier and cheaper to assess behaviors than to conduct STI testing; the only essential requirements are a reliable questionnaire and interviewers trained in its use. Nonetheless, it can be difficult to obtain accurate behavioral data. Since ethical considerations obviously preclude

direct observation of sexual activity, investigators must rely on self-reported behaviors to assess condom-use practices. Youth may be especially inclined to underreport their sexual activity or exaggerate their use of condoms to avoid embarrassment or reprisals. This tendency to give socially desirable responses may only increase as condom promotion campaigns, with their expected "right" answers, intensify. Furthermore, no "gold-standard" method exists for obtaining precise condom use data. Consequently, each time a new survey technique is developed, there is no way of knowing for certain that the condom use data derived from it are accurate. This uncertainty generates skepticism about the validity and value of data on self-reported condom-use behaviors.

Relying on a combination of behavioral and biologic data is an effective means of drawing on the unique advantages of both sets of techniques, while compensating for the limitations of each. Combining condom-use data with information on pregnancy and STI rates can help create a full picture of how an intervention is working in a community. In some cases, a documented change in behavior may fail to achieve the anticipated public health impact. For example, if a condom promotion campaign leads to increases in dual protection use primarily among the most responsible youth who are in mutually monogamous relationships and already using contraception, then the initiative will fail to achieve substantial decreases in STI transmission and pregnancies. In such a case, program evaluators who have access to both behavioral and biologic outcome data might correctly discern that the condom promotion program is not completely ineffective, but that it should be targeted more directly toward youth at highest risk.

This example shows that combining basic information on condom use frequency with STI test results may still not be enough for understanding fully the effectiveness of dual protection interventions. Ideally, program evaluators will complement surveys and STI testing that measure outcomes in terms of counts or percentages—*quantitative* indicators—with *qualitative* investigations that delve more into *why* and *how* programs succeed. Qualitative methods, such as focus-group discussions and in-depth interviews, allow youth to share their thoughts and experiences in greater depth and in their own words. They allow the investigator to build rapport, probe, and explore. Youth may offer information that is more accurate and complete than that provided by short responses to a structured questionnaire. Evaluation of dual protection programs would be well served by qualitative examinations that explore issues such as the following:

- young people's perception of risk and their level of motivation to protect themselves from disease and pregnancy;
- obstacles they face in using condoms consistently;
- their knowledge, skills, and confidence level related to correct condom use;
- their condom use patterns in different circumstances, with different types of partners;
- problems they have in using condoms and things they like about them;
- their impressions of the existing dual protection program intervention and their ideas for program improvement.

A qualitative investigation exploring such issues will produce findings that can be combined with quantitative outcome measures on pregnancy, STI rates, and condom-use behaviors to arrive at a complete understanding of how well the dual protection program works, how it can be strengthened, and what lessons learned can be transferred to other sites.

Recommended Reading:

Fishbein, M., and B. Jarvis. 2000. Failure to find a behavioral surrogate for STD incidence—what does it really mean? *Sexually Transmitted Diseases.* 27: 452-5.

Morgan, D.L. 1998. Practical strategies for combining qualitative and quantitative methods: applications to health research. *Qualitative Health Research.* 8: 362-76.