

public health problem. National Academy Press, Washington, DC, 1985.

2. Graitcer, P. L.: The development of State and local injury surveillance systems. *J Safety Res* 18: 191-198, 1987.
3. Sniezek, J. E., Finklea, J. F., and Graitcer, P. L.: Injury coding and hospital discharge data. *JAMA* 262: 2270-2272, Oct. 27, 1989.
4. MacKenzie, E. J., Shapiro, S., and Siegel, J. H.: The economic impact of traumatic injuries. One-year treatment-related expendi-

tures. *JAMA* 260: 3290-3296, Dec. 9, 1988.

5. National Center for Health Statistics: International Classification of Diseases, Ninth Revision. Clinical Modification, Vols. I-III. Commission of Professional and Hospital Activities, Ann Arbor, MI, 1980.
6. Guyer, B., Berenholz, G., and Gallagher, S. S.: Injury surveillance using hospital discharge abstracts coded by cause of injury-E code. In press, *J Trauma*.

## A Study of the Deficiencies in the Condom-Use Skills of Gay Men

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The research reported in this paper was conducted at the Long Beach, CA, gay and lesbian community services center in its AIDS risk reduction program. A preliminary version of this study was presented as part of a larger presentation at the 11th National Lesbian and Gay Health Conference and 7th National AIDS Forum in San Francisco in April 1989.

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### Synopsis

*The use of condoms has been advocated as an important method of reducing the risk of AIDS for such peo-*

*ple as gay men, prostitutes, IV drug users, adolescents, hemophiliacs, and others who may become infected with the human immunodeficiency virus (HIV) that causes AIDS. Although AIDS risk-reduction programs have provided information on condoms, none has assessed baseline or followup skills in their use. Because most condom failures have been attributed to errors in use, promoters of condom use should determine whether they are used correctly among those persons targeted for education.*

*A total of 219 gay men entering an AIDS risk-reduction program were asked to demonstrate the use of condoms on a model. All errors made during the demonstration were corrected, and participants were trained during the exercise in the proper use of condoms. More than 80 percent required correction in such things as opening the package, determining the outside of the condom, unrolling the condom to the base of the penis, and expressing air from the space at the tip of the penis.*

*Although proper use of condoms may seem obvious, this small study demonstrates that it must be taught. Since instructions found in condom packaging frequently are not easily understood by potential users, explicit instructions for condom use are needed.*

The use of condoms has been advocated as one of the most important ways to reduce the risk of AIDS for people who may be in danger of infection with the human immunodeficiency virus (HIV) that causes AIDS. Since the early stages of the AIDS epidemic, programs targeted at the gay community have emphasized the need for the use of condoms in anal intercourse and in the avoidance of semen exchange between sex partners to reduce the risk of AIDS community-wide (1-6). Condom use also has been promoted for prostitutes (7), IV drug users (8), adolescents

(9), hemophiliacs (10), and others. Although AIDS risk-reduction programs have provided information on condoms, none has assessed baseline or followup skills in their use.

It has been pointed out that condoms may fail as much as 10 percent of the time (11). Most condom failures, however, have been attributed to errors in use (12). In addition, lack of familiarity with condoms may interfere with the spontaneity of the sexual act and therefore diminish their consistent use. In promoting condoms, it is important to determine whether they are

used properly among persons who have been targeted for AIDS risk reduction.

## Method

As part of a larger AIDS education program targeted at gay men, a skills assessment was conducted on condom use among a sample of men initially enrolling in the program. Overall, these men were primarily white (85 percent), had an average education of 1 to 3 years of college and an average income of approximately \$20,000 per year. A total of 219 entrants in the risk-reduction program were asked to demonstrate the use of condoms on a model. To score their performance, a 4-point checklist was developed, based on four component steps in condom use. Each step was scored pass or fail.

First, the men were scored on whether or not they correctly opened the condom package. This step is important because of the risk of tearing or puncturing the condom if the package is opened incorrectly. Correct opening of the package entails holding the package between the thumb and forefinger of each hand near the edge and tearing the package open. Using one's teeth to open the package constitutes a failure. Second, the men were scored on whether or not they could quickly identify which side of the rolled condom was the interior and which was the exterior. This is important because putting on a condom inside out risks contaminating the exterior with pre-ejaculate, rendering it ineffective. The third step scored involved unrolling the condom to the base of the penis. The importance of this lies in the fact that the condom can slip off during intercourse if it is not unrolled to the base of the penis. Finally, participants were scored on whether or not they allowed space at the end of the condom from which they expressed the air. Holding the condom by the tip with the thumb and forefingers of one hand while unrolling it with the other accomplishes this task. This allows room for the ejaculate and permits movement within the condom during intercourse. All these steps are consistent with the recommendations of the Centers for Disease Control (CDC) on the proper use of condoms (12).

## Results

All the errors the participants made in the demonstration were corrected, and they were trained to make no mistakes during the exercise.

All participants were questioned about their use of lubricants and corrected if they reported use of inappropriate lubricants. There is evidence that many gay men either do not know the composition of the lubricants they use, or they don't know that oil-based lubricants can cause latex condoms to break (13, 14).

More than 80 percent of the men in this study required correction.

- 1.8 percent required correction on how to open the package. The most common error was attempting to open the package with the teeth.
- 8.6 percent required correction on which was the outside of the condom.
- 8.2 percent required feedback on unrolling the condom to the base of the model, and
- 80.4 percent required briefing on expressing air from the space at the tip of the penis.

Two men (0.9 percent) failed to pass any of the elements of the test, an additional 6 (2.7 percent) failed three of the four steps, 20 (9.1 percent) failed 2 of the 4, and 151 (68.9 percent) failed 1 of the 4 elements. Only 40 participants (18.3 percent) initially passed all elements.

## Conclusion

Although proper use of condoms might appear obvious to many, this small study demonstrates that it must be taught. The people in this program reported greater risk-reduction efforts on enrollment than a community sample surveyed during the enrollment period (14), and therefore they may have exhibited fewer skills deficits than might be expected in the community at large. Moreover, because they have been targeted for AIDS risk reduction for such an extended period, gay men are likely to be more knowledgeable in the use of condoms and in other risk-reduction measures than those outside the gay communities. In view of a recent study suggesting that instructions found in condom packaging frequently are not easily understood by potential users (15), the results of my sampling suggest that efforts to provide explicit instructions for condom use are needed. In addition, findings that many gay men report use of oil-based lubricants with condoms suggest that condom use instructions also should include specific examples of appropriate and inappropriate lubricants.

## References

1. McKusick, L., Horstman W., and Coates T. J.: AIDS and sexual behavior reported by gay men in San Francisco. *Am J Public Health* 75: 493-496 (1985).
2. McKusick L., et al.: Reported changes in the sexual behavior of men at risk for AIDS: San Francisco, 1982-1984: the AIDS behavioral research project. *Public Health Rep* 100: 622-629, November-December 1985.
3. Martin J. L.: The impact of AIDS on gay male sexual behavior patterns in New York City. *Am J Public Health* 77: 578-581 (1987).
4. Becker M. H., and Joseph J. G.: AIDS and behavioral change

to reduce risk: a review. *Am J Public Health* 78: 394-410 (1988).

5. Martin J. L., Garcia M. A., and Beatrice, S. T.: Sexual behavior changes and HIV antibody in a cohort of New York City gay men. *Am J Public Health* 79: 501-503 (1989).
6. Winkelstein W., et al.: Reduction in Human Immunodeficiency Virus transmission among homosexual/bi sexual men: 1982-1986. *Am J Public Health* 76: 685-689 (1987).
7. Valdespino, J., et al.: Evaluation of key messages to increase the use of condoms in sex workers: A quasi-experimental study. Paper presented at the V International Conference on AIDS, Montreal, 1989.
8. Magura, S., Shapiro, J. L., Siddiqi, Q., and Lipton, D. S.: Variables influencing condom use among intravenous drug users. Paper presented at the V International Conference on AIDS, Montreal, 1989.
9. Kegeles, S. M., Adler, N. E., and Irwin, C. E.: Sexually active adolescents and condoms: changes over one year in knowledge, attitudes, and use. *Am J Public Health* 78: 460-461 (1988).
10. HIV infection and pregnancies in sexual partners of HIV seropositive hemophilic men—United States. *MMWR* 36: 593-595, Sept. 11, 1987.
11. Goldsmith, M. F.: Sex in the age of AIDS calls for common sense and 'condom sense.' *JAMA* 257: 2261-2266, May 1, 1987.
12. Condoms for prevention of sexually transmitted disease. *MMWR* 37: 133-137, Mar. 11, 1988.
13. Voeller, B., Coulson, A. H., Berstein, G. S., and Nakamura, R. M.: Mineral oil lubricants cause rapid deterioration of latex condoms. *Contraception* 39: 95-102 (1989).
14. Martin, D. J., and Edwards, C. W.: Condom use skills deficits among gay men. Paper presented at the 11th National Lesbian and Gay Health Conference and 7th National AIDS Forum, San Francisco, 1989.
15. Richwald, G., Wamsley, M. A., Coulson, A. H., and Morisky, D. E.: Are condom instructions readable? Results of a readability study. *Public Health Rep* 103: 355-359, July-August 1988.

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