

Slips, Breaks, and "Falls": Condom Errors and Problems Reported By Men
Attending An STI Clinic

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Richard Crosby, PhD,¹⁻³ William L. Yarber, HSD,²⁻⁴ Stephanie A. Sanders, PhD,^{2,3,5} Cynthia A.
Graham, PhD,^{2,3,6} Janet N. Arno, MD^{2,7}

¹ College of Public Health at the University of Kentucky

² Rural Center for AIDS/STD Prevention at Indiana University

³ The Kinsey Institute for Research in Sex, Gender, and Reproduction at Indiana University

⁴ Department of Applied Health Science at Indiana University

⁵ Department of Gender Studies at Indiana University

⁶ Oxford Doctoral Course in Clinical Psychology, University of Oxford, England

⁷ Department of Infectious Diseases, Indiana University School of Medicine

Short title: Slips, Breaks, and "Falls"

Correspondence: Richard Crosby, PhD, College of Public Health, 121 Washington Ave.

Lexington, KY 40506-0003; telephone: 859-257-5678 (ext 82039) /FAX: 859-323-2933/e-

mail: crosby@uky.edu.

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Abstract

Objective: To comprehensively assess the prevalence of condom use errors and problems among male clients attending a public STI clinic.

Methods: Men (n = 278) attending an STI clinic responded to an anonymous questionnaire aided by a CD-recording of the questions. Participants were English-speaking, 18-35 year old men who had used a condom during penile-vaginal intercourse at least 3 times in the past 3 months. Seven errors and 6 problems were assessed for these 3 condom use events. Summative scores were tested for associations with age, race/ethnicity, and whether they had been taught how to use condoms.

Results: Several errors and problems were highly prevalent. For example, of the 834 condom-protected events: 19% were associated with "fit and feel" problems; 15% involved breakage; 14% were associated with lost erection during sex; 9% were associated with lost erection while applying condoms; 8% involved slippage during withdrawal; and 7% involved slippage during sex. A mean of 6.4 errors/problems (SD=3.92; ranging from 1-25) were observed. The only significant association with summative scores was that men indicating they had never been taught how to use a condom reported a higher mean frequency of errors (9.6) compared to those who had been taught (8.2) (P=.01).

Conclusions: Multiple types of condom use errors and problems may be highly prevalent among men attending public STI clinics. Efficacious, brief, clinic-based interventions designed to rectify men's condom use errors and problems may be warranted.

Introduction

Clinicians know that condoms are the major tool that we have to prevent sexually transmitted diseases at a time when national rates of Chlamydia and HIV are rising.¹⁻² Indeed, recent evidence is quite compelling that the male latex condom is the single best method of reducing the risk of acquiring and transmitting sexually transmitted infections (STIs) for people who choose to have sex.^{3,4} For condoms to be effective, however, they must be used, not just consistently, but correctly.⁵ Indeed, evidence suggests that condom failure typically stems from user error rather than product defects.⁶⁻¹⁰ Thus, identifying prevalent user errors and problems represents an important starting point toward the goal of promoting improved quality of condom use. Several studies have investigated this question among college students,^{7,11-16} and more recently, among STI clinic patients as well as patients attending family planning, managed care programs, and reproductive health care programs.^{8, 17-26} However, certain errors and problems such as erection difficulties and problems with “fit and feel”, identified as important in previous research, have not been investigated with clinic populations.^{10, 27}

The purpose of this study was to comprehensively assess the prevalence of condom use errors and problems among male patients attending a public STI clinic in the United States. Young males who have sex with female partners are an important study population given their increased risk of STIs.^{28,29} Thus, the study population comprised males, 18-35 years old, who reported recent condom use during vaginal-penile sex.

Methods

Sample

Data were collected at a large, urban, Midwestern, public STD clinic from October 2004 to September 2005. Men attending the clinic were recruited in the waiting area and

screened for eligibility in a private room. Inclusion criteria were: 1) 18-35 years of age, 2) English speaking, and 3) reporting a male condom was used at least 3 times in the past 3 months for sex (penis in vagina) with a female. Five hundred sixteen men (516) were screened and 351 met inclusion criteria. Of these, 314 (89.5%) agreed to participate and completed a questionnaire. After providing written informed consent, volunteers completed a brief self-administered written questionnaire lasting 15-20 minutes. To minimize problems with literacy, the questions were recorded to a CD that men could choose to play using a portable headset to assist them in completing the questionnaire. Each question constituted a single track; thus, men could easily replay a question just as they would a track of music. Responses were anonymous. Men who completed the questionnaire were paid \$10. The Institutional Review Board at Indiana University approved the protocol.

Measures

A questionnaire refined through use in several studies involving more than 800 men, including STI clinics attendees, was used to comprehensively assess men's condom use errors and problems.^{6,7,12,13,27} Original questionnaire development was informed by widely cited condom use guidelines.^{4,31} Seven errors (incorrect use) and 6 problems were assessed (Table 1). Because accuracy of recall was considered vital,¹⁰ the recall period was limited to the last three times condoms were used within the past three months. For each question, men indicated whether the error or problem occurred 0 to 3 times. Sex was defined as “sexual intercourse, or penis in vagina.”

Data Analysis

In addition to counting the frequency of errors and problems, two summative scores were created. The Summative Error Score indicates the total number of times errors were reported [minimum 0; maximum 27 (7 errors X 3 occasions)]. The Summative Problem Score

indicates the total number of times problems were reported [minimum 0; maximum 18 (6 problems X 3 occasions)]. These indices were used to test for possible associations of errors and problems with age, minority status, and whether men had ever been taught to use condoms correctly.

Results

Characteristics of the Sample

Despite screening attempts, 36 men provided questionnaire responses which indicated that they were ineligible, thereby leaving an analytic sample of 278 men (88.5% of the 314). The mean age was 23.7 years (SD=4.13). About two-thirds (67.6%) identified as Black or African American, nearly one-quarter (23.7%) as white, and the remainder as other minority groups.

Prevalence of Errors/Problems

Table 1 displays the prevalence of errors and problems. The Table shows the number of times (and %) each error or problem occurred across all 834 penile-vaginal episodes reported (i.e., 278 men X 3 episodes = 834). Also presented are the number (and %) of men who reported experiencing the error or problem at least once. For clarity, Table entries are arranged in descending order of prevalence of the error or problem.

The mean Summative Error Score was 4.3 (SD=2.57) with values ranging from 0-13 (median 4). The mean Summative Problem Score was 2.15 (SD=3.3) with values ranging from 0-13 (median 2). Combining Summative Error and Problem Scores yielded a mean of 6.4 errors/problems (SD=3.92) with values ranging from 1-25 (median 6). None of these summative variables were significantly associated with age, minority status, or whether men indicated they had ever been "taught how to use a male condom." Of note, however, one difference approached significance. The mean number of errors (of the 7 errors assessed)

among men who had ever been taught how to use a condoms was 41. compared to 4.9 among those who reported they had never been taught how to use a condom ($t=1.8$, 276, $P=.07$).

Discussion

Men sampled from this clinic reported an average of 10 errors and/or problems during the last 3 times a condom was used. Public health STD clinics, such as the one in this study, diagnose a substantial proportion of the nation's STIs. Given these observations, there may be valuable opportunities to correct condom use errors and problems that may contribute to STI prevalence. Indeed, several studies have provided evidence suggesting that condom use errors may lead to breakage^{11,32,33} and that both errors and problems are linked to elevated risk of STD acquisition.^{19,21,34,35} For example, a recent study of more than 1,000 STD clinic patients observed that men reporting recent condom breakage were 1.85 times more likely than men not reporting breakage to test positive for gonorrhea.²¹ In another study...³⁴ Yet another study...³⁵

The study found errors and problems were common regardless of age, race/ethnicity, and whether men had ever been taught how to use condoms correctly. However, it should be noted that the non-significant difference ($P = .07$) in condom use errors between men who had and had not been taught how to use condoms, may have achieved significance given a larger sample size. Nonetheless, the lack of significance for this indicator suggests that any instruction provided to men in the past may have been inadequate and therefore a need may exist to intensify instructional efforts. Clearly, clinical encounters with men attending STD clinics provide an ideal opportunity for instruction in the correct use of condoms. Indeed, CDC guidelines state that "patients should be instructed in the correct use of condoms."⁴ Findings support the need for this form of patient care and provide substantial insight into some of the most likely condom-use issues that may challenge men.

Although these data were obtained from a convenience sample at one public health setting, we believe that they are sufficiently compelling to suggest that clinics should carefully review condom use errors and problems with their patients as part of sexual health counseling or education. Indeed, many of the errors and problems reported may be amenable to correction through clinic-based instruction. For example, men should be instructed about the importance of using the condom from "start to finish" of penile-vaginal intercourse; and about the hazards of allowing teeth, fingernails, jewelry (including genital jewelry), and other sharp objects to contact condoms. Using a penile model, clinical staff can demonstrate correct application techniques including procedures to assure the correct side is facing up before men begin to unroll the condom down the shaft of the penis. In addition, men could be provided with an array of condom sizes to help improve the "fit and feel" for them and their female partners.

In conclusion, multiple types of condom use errors and problems may be highly prevalent among men attending public STI clinics. These findings suggest that efficacious, brief, clinic-based interventions designed to rectify men's condom use errors and problems may be warranted.

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