Cost as a Barrier to Condom Use: The Evidence for Condom Subsidies in the United States

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ABSTRACT

Objectives. This study sought to determine the impact of price on condom use.

Methods. A program based on distribution of condoms at no charge was replaced with one providing low-cost condoms (25 cents). Pretest and posttest surveys asked about condom use among persons reporting 2 or more sex partners.

Results. At pretest, 57% of respondents had obtained free condoms, and 77% had used a condom during their most recent sexual encounter. When the price was raised to 25 cents, the respective percentages decreased to 30% and 64%.

Conclusions. Cost is a barrier to condom use. Free condoms should be distributed to encourage their use by persons at risk for HIV and other sexually transmitted diseases. (*Am J Public Health.* 1999;89:567–568)

Worldwide, social marketing of condoms is a key strategy for controlling sexually transmitted diseases (STDs), including HIV.[1] In 1993, Louisiana initiated a statewide condom social marketing campaign that involved free condom distribution in publicly funded health clinics and more than 1000 small businesses in neighborhoods with high rates of STDs and HIV.[2] Demand for free condoms through this program grew faster than the budget to purchase condoms.

We introduced the sale of low-cost condoms in small businesses to address budgetary problems. Businesses were asked to purchase condoms for 8 cents and sell them for up to 25 cents each. An attractive point-of-purchase display, posters advertising condoms, decals, key chains, and other free, related materials were distributed.

We evaluated the impact of this transition from free to low-cost condoms on reported condom use among persons with 2 or more sex partners.

Methods

Interviewers conducted anonymous surveys in 3 time periods: before the introduction of the low-cost condoms (time 1), approximately 3 months after introduction of the low-cost condoms (time 2), and approximately 9 months after this first posttest survey (time 3). Participating businesses included 5 convenience stores, 3 liquor stores, and 1 bar.

Customers aged 18 to 45 years were approached as they entered or exited the business. The number of persons refusing the interview was recorded. During each survey period, a total of 20 to 40 persons completed questionnaires during 2 different days and times at each site.

We asked customers how they obtained condoms (at no charge or by purchasing them), whether they used condoms, and their number of sex partners in the previous 12 months. Chi-square tests were used to assess differences in categorical variables. Logistic regression was used to control for differences in age, race, gender, education, and sexual orientation.

Results

We recruited into the low-cost condom program 195 of more than 1000 businesses distributing free condoms. The sites included 14 bars (7% of total), 12 beauty salons/barber shops (6%), 115 convenience stores (59%), 12 liquor stores (6%), 6 motels (3%), and a variety of other sites ranging from tattoo parlors to a car wash. When condoms were provided at no charge, an average of 200381 per month were distributed by the 1000 participating business sites throughout Louisiana (2000 per site). When low-cost condoms were introduced, an average of 4217 per month were sold (22 per site), or 2% of the condoms previously distributed for free.

Refusal rates during the 3 survey periods were 30%, 22%, and 26%, respectively, with 335, 243, and 291 individuals participating in the 3 surveys. At time 1, 152 of the 329 respondents with complete information (46%) reported picking up free condoms at the site in the previous 30 days. Among those who had picked up free condoms, 84% reported using a condom during their most recent sexual encounter, as compared with 43% among those who had not picked up condoms ($P<.001$). Individuals who had picked up free condoms were more likely to report having 2 or more sex partners (71% vs 47%; $P<.001$).

During the 3 respective survey periods, 50% (163/329), 55% (133/243), and 59% (172/291) of respondents reported having 2 or more sex partners in the previous 12 months ($P = .07$). Table 1 describes the characteristics of respondents with 2 or more sex partners at each survey period. Respondents were similar in gender, age, race, and education across the 3 survey periods.

Among these persons with 2 or more sex partners, at time 1 (when condoms were

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free), 57% reported picking up condoms at the business during the previous month, 62% reported picking up between 1 and 10 condoms during the previous 30 days, and 77% reported using a condom during their most recent sexual encounter. After the free condoms had been replaced by the low-cost condoms, the percentage of respondents who reported picking up condoms and using a condom during their most recent sexual encounter declined to 70% (Table 1). By time 3, the number of individuals who reported using a condom during their most recent sexual encounter had dropped to 64%. The difference between the time 1 and time 3 rates ($P<.03$) remained after age, sex, race, education, and sexual orientation had been controlled for (odds ratio [OR] = 0.72, 95% confidence interval [CI] = 0.47, 0.96).

At time 3, 100 of the 172 persons with 2 or more sex partners (58%) still had access to free condoms, primarily through public health clinics. In comparison with individuals who did not have access to free condoms, those who did were less likely to buy condoms (22% vs 40%; $P<.01$) but were more likely to have used a condom during their most recent sexual encounter (76% vs 49%; $P<.0003$).

TABLE 1—Characteristics of Survey Participants Reporting 2 or More Sex Partners in the Previous 12 Months: Louisiana, 1996–1997

Characteristic	Time 1 (Free Condoms) (n=163), No. (%)	Time 2 (Low-Cost Condoms) (n=133), No. (%)	Time 3 (Low-Cost Condoms) (n=172), No. (%)
Age, y			
18–24	85 (52)	54 (41)	96 (56)
25–34	57 (35)	58 (44)	56 (33)
≥35	21 (13)	21 (16)	20 (12)
Gender			
Male	109 (68)	91 (69)	122 (71)
Female	52 (32)	41 (31)	50 (29)
Race			
African American	122 (75)	96 (72)	133 (78)
White	38 (23)	34 (26)	30 (18)
Other	2 (1)	3 (2)	8 (5)
Years of education			
<12	54 (33)	55 (41)	45 (26)
12	54 (33)	50 (38)	74 (43)
>12	54 (33)	28 (21)	53 (31)
Sexual orientation			
Male homosexual	5 (3)	2 (2)	10 (6)
Lesbian	4 (2)	3 (2)	12 (7)
Heterosexual	154 (95)	127 (96)	150 (87)
Picked up condoms during previous month	92 (57)	46 (35)	51 (30)
Condom use during most recent sexual encounter	126 (77)	93 (70)	110 (64)

Note. As a result of missing information, not all variable responses sum to total.

Discussion

In this condom distribution program, introduction of a price for obtaining condoms caused a marked reduction in the number of participating sites and condoms distributed and a decrease in reported condom use among persons with 2 or more sex partners.

Possible explanations for these decreases in participating sites and condom use are (1) changes in the population sampled for the surveys, (2) a secular trend in condom use unrelated to the purchase price for condoms, and (3) cost being a barrier to use. While we cannot absolutely exclude the possibility that the surveyed population changed over time, the demographics of the population did not change substantially, and we minimized the likelihood of this potential bias by conducting surveys at the same locations, using the same methods, and limiting the analysis to persons with 2 or more sex partners. Two pieces of information speak against an unrelated secular trend as the explanation. First, before this study, condom use (as measured by serial surveys) had been increasing, rather than decreasing, in parallel with the introduction of free condom distribution.[2] Second, among individuals participating in these surveys, those who still had access to free condoms at time 3 continued to use condoms with a frequency similar to that of the entire population before the transition. Concluding that cost was the reason for a decline in condom use, the Louisiana Office of Public Health altered its policies to reemphasize free condom distribution.

Although having to purchase the condoms was clearly a barrier to their use, we are unable to differentiate whether the barrier was the actual financial cost or the loss of privacy or embarrassment[3–5] associated with a condom purchase. The actual cost of free condoms distributed by local businesses before low-cost condoms were introduced was about $150000 per year (for 3 million condoms). If only 2 cases of HIV infection were prevented as a result of this expenditure, the program could be considered cost-effective.[6] The staff time to recruit businesses willing to purchase and sell low-cost condoms was estimated to be more than 4 to 5 times greater than the time it took to recruit businesses to distribute condoms at no charge. Considering the relatively small number of condoms sold, all cost savings from condom sales were more than offset by the cost of labor to recruit the businesses to sell the condoms.

For optimal condom use, all barriers to condom acquisition should be removed. During an STD/HIV epidemic, the best price for a condom is no price at all. □

Contributors

D. Cohen and T. A. Farley planned the intervention. R. Scribner, D. Cohen, and T. A. Farley designed the evaluation. R. Bedimo analyzed the data. D. Cohen wrote the paper with substantial contributions from T. A. Farley, R. Scribner, and R. Bedimo. All 4 authors are guarantors for the integrity of the research.

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