COMMERCIAL MARKET STRATEGIES
NEW DIRECTIONS IN REPRODUCTIVE HEALTH

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USING BEHAVIOR CHANGE COMMUNICATIONS TO OVERCOME SOCIAL MARKETING SALES PLATEAUS

Case Studies of Nigeria and India

Dominique Meekers, PhD; Ronan Van Rossem, PhD; Sara Zellner, PhD & Ruth Berg, PhD

MONTH 2004

Using Behavior Change Communications to Overcome Social Marketing Sales Plateaus: Case Studies of Nigeria and India

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COMMERCIAL MARKET STRATEGIES

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COVER PHOTO

Image from a Goli Ke Hamjoli advertisement in northern India.

KEY WORDS

family planning, oral contraception, condoms, behavior change, Nigeria, Kenya, mass media, Commercial Market Strategies, reproductive health, social marketing.

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ABSTRACT

In an effort to improve social marketing programming knowledge about the extent to which behavior change interventions can bolster social marketing sales, this report presents case studies of two social marketing programs: the Society for Family Health's condom program in Nigeria and the Commercial Market Strategies project's oral contraceptive program in India. Both programs recently adopted behavior change strategies to counter stagnating reproductive health product sales, and both collected multiple rounds of household survey data to closely monitor program outcomes. The analysis reveals that both social marketing sales and method prevalence increased significantly following the behavior change campaigns in the two countries. However, a substantial time lag of up to two years transpired before measurable change occurred in some indicators of knowledge and attitudes related to method use. These findings suggest that behavior change communications can help revive social marketing sales in mature social marketing programs. Given time, this approach appears to be effective at improving knowledge and attitudes related to reproductive health methods, which, in turn, may contribute to further increases in method prevalence in the long run.

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EXECUTIVE SUMMARY

Although many social marketing programs have been effective at rapidly increasing reproductive health product sales, several mature programs are experiencing sales stagnation or even decline. In response, some social marketing program managers have moved away from longstanding brand-specific promotional campaigns in favor of broader behavior change approaches, especially behavior change communications (BCC). Nevertheless, because little is known about the extent to which shifts in strategy have been successful, others remain reluctant to abandon traditional brand-specific approaches.

To improve social marketing programming knowledge about the extent to which behavior change interventions can bolster social marketing sales, we present case studies of two social marketing programs: the Society for Family Health's condom program in Nigeria and the Commercial Market Strategies project's oral contraceptive program in India. Both programs recently adopted behavior change strategies to counter stagnating reproductive health product sales, and both collected multiple rounds of household survey data to closely monitor program outcomes. Our analysis reveals the following key findings:

- Social marketing sales and method prevalence increased significantly following the behavior change campaigns in Nigeria and India.
- A substantial time lag of up to two years transpired before measurable change occurred in some indicators of knowledge and attitudes related to method use.
- Improvements in some attitudes and beliefs toward reproductive health methods followed, rather than preceded, increases in method use.
- Switching from brand-specific advertising to BCC did not reduce brand recognition.

Taken together, these findings suggest that BCC can help revive social marketing sales in mature social marketing programs. More important, in both countries, the increase in sales reflected growth in method prevalence, rather than mere brand switching. Given time, this approach appears to be effective at improving knowledge and attitudes related to reproductive health methods, which, in turn, may contribute to further increases in method prevalence in the long run.

1 Introduction

INTRODUCTION

Since the early 1970s there has been a surge in the number and size of reproductive health social marketing programs (Altman and Piotrow, 1980; Chester, 1986; Harvey, 1999; DKT International, 2002; Sherris, Ravenholt, and Blackburn, 1985; Stover, 2001). At present, large-scale social marketing programs operate in more than 60 countries worldwide, and some countries have more than one program (DKT International, 2002). Recognizing the potential to meet global reproductive health needs better, several large donors — including the United States Agency for International Development (USAID), the British Department for International Development (DFID), the German Kreditanstalt für Wiederaufbau (KfW), and the Dutch Government — have made large investments in these projects. It has been estimated that USAID alone has invested more than $500 million in 40 or more social marketing programs (Harvey, 1999; page 61). Hence, these programs play a key role in providing family planning and information services and preventing transmission of sexually transmitted diseases (STDs) and human immunodeficiency virus (HIV).

The advantages of social marketing programs and models are well documented (Armand, 2003; Chester, 1986; Pollard, 2001). Product social marketing is an important delivery mechanism because it provides affordable contraceptives at convenient locations and often fills the gap between free, public-sector products and high-priced, commercial-sector products. Moreover, because social marketing programs often distribute products through existing commercial infrastructure, start-up times and capital investments are often minimal.

Although social marketing programs typically achieve rapid sales increases in their initial years, several mature programs (including programs in Nigeria, Bangladesh, Mozambique, and India) have experienced stagnating or even declining sales. Some of these programs have responded by decreasing their emphasis on product distribution and brand-specific promotion in favor of intensive behavior change communications (BCC) activities. To date, however, there has been little information about the effect of this shift in strategy on social marketing product sales — a longstanding indicator of program success — and method prevalence in the target population. Consequently, some program managers have been reluctant to employ BCC approaches.

This report provides case studies of two large social marketing programs that adopted BCC strategies to overcome stagnating product sales: the Society for Family Health's (SFH) condom social marketing program in Nigeria and the Commercial Market Strategies (CMS) "Friends of the Pill" oral contraceptive program in India. We developed case studies around these particular programs for two reasons: Not only did they adopt a behavior change strategy, but they also collected several rounds of household survey data to inform and assess the strategy. The purpose of this study is to give social marketing program managers a better understanding of the potential impact of BCC on reproductive health product sales; overall method prevalence; and associated attitudes, beliefs, and behaviors by addressing the following three questions:

1. Is there a significant increase in both product sales and method prevalence following the implementation of BCC strategies?

2. Which behavior change components respond most to BCC campaigns?

3. Do BCC strategies result in short-term changes (i.e., a peak in indicators) or sustained achievements?

Following this Introduction, we discuss briefly the behavior change models that SFH and CMS integrated into their social marketing programs. We then present the two case studies and conclude with a discussion of program implications.

2 Adapting Behavior Change Models to Social Marketing Goals

ADAPTING BEHAVIOR CHANGE MODELS TO SOCIAL MARKETING GOALS

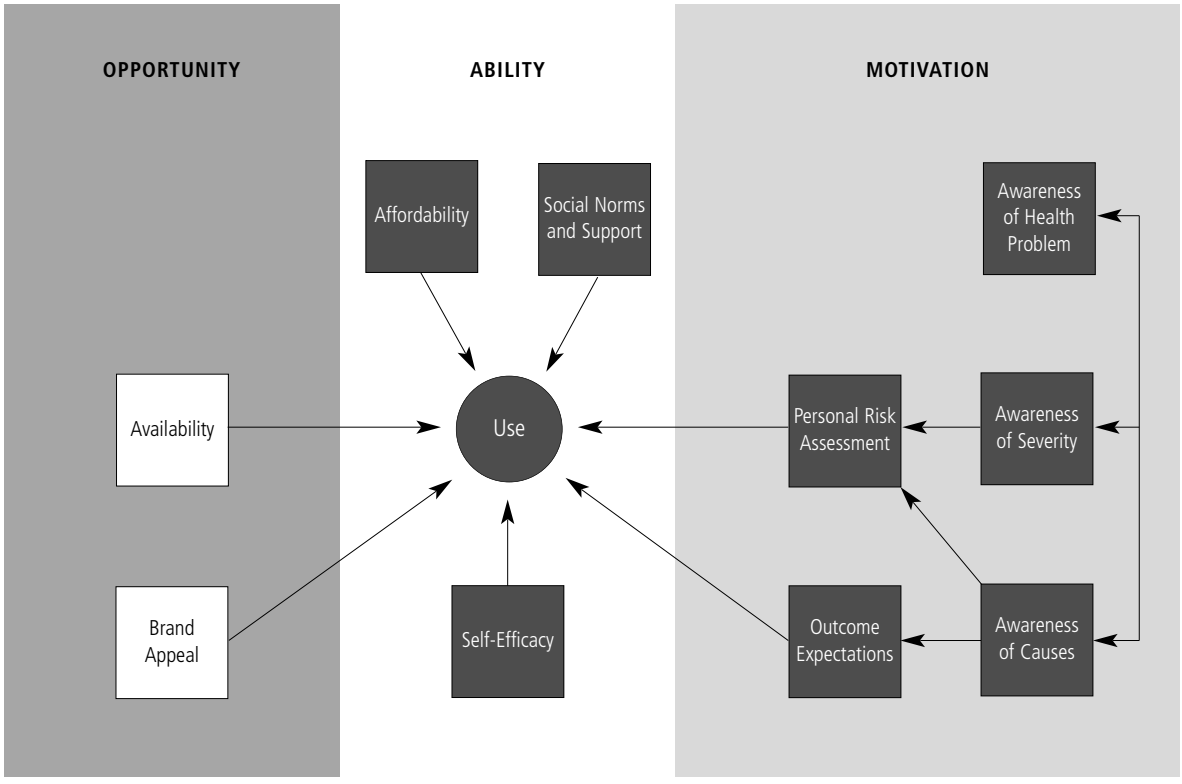
In developing their respective behavior change campaigns, the SFH social marketing program in Nigeria and the CMS project in India both adapted existing behavior change theories and models to their specific country contexts and to their specific reproductive health goals. This section briefly describes the behavior change models that each program developed.

SFH BEHAVIOR CHANGE MODEL IN NIGERIA. A central goal of the SFH social marketing program is to increase condom use to prevent the transmission of HIV/AIDS. The BCC approach that SFH adopted draws on a behavior change model developed by Population Services International (PSI) that includes core elements of a combination of well-established theoretical models, including the Health Belief Model, Social Learning Theory, and the Theory of Reasoned Action (Bandura, 1977; Becker, 1974; Janz and Becker, 1984; Mantell, DiVittis, and Auerbach, 1997; Rosenstock, Strecher, and Becker, 1988).

Figure 1 presents PSI's full behavior change model. The shaded areas indicate the components of the model that SFH adopted. Within the model, "opportunity" refers to environmental attributes that affect the likelihood that a person will use a health product or service, including the availability of the product or service and its level of brand appeal in society. The middle panel of the model labeled "ability" refers to both individual level and societal level factors that permit an individual to access available products and services, including self-efficacy, affordability, and social norms and support. Last, "motivation" refers to cognitive factors that affect health product and service use, including awareness of the given health problem (as well as its causes and severity), personal risk assessment, and the expected health benefits (or outcomes) of using the product or service.

Guided by the behavior change model outlined above, SFH launched a nationwide mass media campaign in 1998, which it supplemented with interpersonal communications and self-empowerment activities. The case study in chapter 3 discusses the specific communications messages that SFH employed to influence attitudinal and behavioral outcomes.

Figure 1. PSI's behavior change model



Note: Dark items adopted by SFH in Nigeria

CMS BEHAVIOR CHANGE MODEL IN INDIA. In India, CMS adapted elements of the Stages of Behavior Change Model (Prochaska, 1984; Grimley, Prochaska, and Prochaska, 1995) to broaden contraceptive options for couples in India by improving oral contraceptive (OC) knowledge, attitudes, and self-efficacy. The first three stages of behavior change reflect varying degrees of readiness and intention to use OCs: pre-contemplation, where there is no intention to use OCs; contemplation, where non-users begin to consider using OCs, but not in the immediate future; and preparation, where there is concrete intention to use OCs in the next six months and some initial behavioral steps have been taken, such as gathering information about OCs. The last two stages, action and maintenance, refer to short-term and long-term durations of OC use, respectively. Table 1 below provides the operational definition, the target audience, and the program goal for CMS/India activities at each stage.

Drawing on this model, CMS/India launched an integrated behavior change campaign in 1998 called *Goli ke Hamjoli* — Hindi for "Friends of the Pill" — that combined advertising, public relations, and large-scale provider training and detailing. The case study in chapter 4 describes the key communications messages that CMS/India tailored to each behavior change stage and the results of the campaign.

The behavior change models described in this chapter guided the development of the BCC activities that the case studies in the next two chapters present. Each case study provides a program overview; a detailed description of communications messages; a discussion of the data, methods, and indicators that we used to monitor program outcomes; and a presentation of program results.

Table 1. Stages of behavior change model adapted to CMS/India

	Pre-contemplation	Contemplation	Preparation	Action	Maintenance
Operational definition	Has no intention to use OCs	Is attracted by OC benefits, but concerned about OC "costs," including side effects	Has sought information about OCs	Began OC use in past six months	Has been using OCs for more than six months
Target audience[a]	Non-users and traditional-method users	Those who intend to use OCs at some point in the future	Those who intend to use OCs within the near future	New OC users	Experienced OC users
Program goal	Raise awareness about low-dose OCs Stress benefits	Improve knowledge Reduce perceived costs	Motivate use of OCs	Increase self-efficacy and social support	Reinforce self-efficacy and social support

a *The overall target audience for the CMS/India social marketing campaign is urban women aged 18–29 from the upper to middle-lower socio-economic classes who are not sterilized. Within this target audience, CMS/India tailors messages and activities to the smaller stage-specific target audiences outlined in the behavior change model above.*

3 Case Study 1: The Society for Family Health in Nigeria

CASE STUDY 1: THE SOCIETY FOR FAMILY HEALTH IN NIGERIA

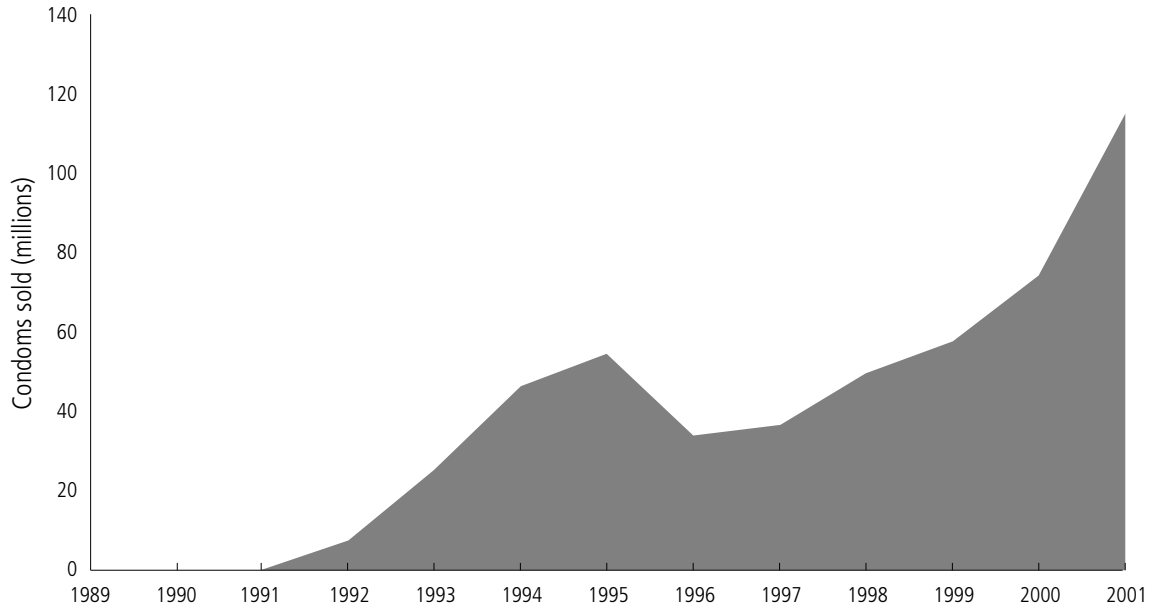
PROGRAM OVERVIEW

The Society for Family Health in Nigeria socially markets *Gold Circle* condoms.[1] These condoms are subsidized, making them more affordable than commercial brands, and they currently account for approximately 90 percent of the total condom market (Van Rossem, Meekers, and Akinyemi, 2001). In the initial phase of the program, *Gold Circle* sales increased steadily from 1.9 million in 1991, to 23.6 million in 1993, and to 55.7 million in 1995 (Figure 2). However, in 1996, sales dropped to 34.2 million (PSI, 2001). Concerned that this sales decline may have meant that only the latent demand for condoms had been met (Parkinson, 2002), SFH implemented a gradual, but radical, change in its intervention strategy in 1998. As Figure 2 shows, sales picked up dramatically after the shift in strategy. This case study highlights some of the key changes in knowledge and attitudes that appear to have led to this turnaround.

1 The Society for Family Health in Nigeria is an affiliate of Population Services International.

Whereas the early phases of the SFH program had focused on distributing and marketing the *Gold Circle* brand, as of 1998, the program increasingly focused on BCC rather than product distribution and ceased brand-specific advertising altogether. These BCC activities aimed to increase safe sex practices and condom use in non-marital relationships drawing on the PSI behavior change model outlined in chapter 2. As a result of the new focus, resources shifted to mass media and interpersonal communications, and program activities changed from brand-specific advertising to general safe sex and condom promotion. SFH launched mass media activities that included advertising on radio and television, educational messages by popular Nigerian personalities, and radio dramas on HIV prevention and family planning (Van Rossem, Meekers, and Akinyemi, 2001; page 253). SFH also transformed its sales force from a team primarily dedicated to condom distribution to a team primarily dedicated to interpersonal communications about HIV and acquired immunodeficiency syndrome (AIDS) and the generation of self-empowerment among potential condom users. This was made possible through a number of training activities, adjustments to field personnel incentives, and changes to the supervisory structure (McLellan, 2003; Parkinson, 2002).

Figure 2. Annual social marketing condom sales, SFH Nigeria



It is important to note that SFH did not abandon condom distribution, as distribution is key to ensuring condom access. However, it determined that the private sector was willing and able to play a greater role in the distribution process. Accordingly, SFH personnel reduced their time spent on distribution activities from 100 to 10 percent.

Since the strategy change in 1998, the SFH social marketing program has implemented a wide range of mass media BCC activities:

- To increase awareness of HIV/AIDS, its causes and consequences, SFH developed several different radio dramas about HIV prevention, which were broadcast to target different cultural and ethnic groups. These include the Pidgin drama "One Thing at a Time," aired in 1998; the Hausa drama "Garin Muna Fata" (Town of Hope), broadcast in January 2000; and the Igbo drama "Odenjiji," aired in 2001. A Yoruba adaptation of "Odenjiji," titled "Abule Oloke Merin," was also produced and broadcast in 2001. SFH developed an HIV-prevention radio campaign that was broadcast in seven languages and on 25 radio stations nationwide in September 1999, February 2000, and in early 2001. Last, a television campaign featuring HIV-prevention messages by Nigerian soccer star Sunday Oliseh aimed to promote safe sex, including condom use (PSI, 2002). The campaign was first broadcast during the 1998 World Cup and again during the widely watched African Cup of Nations soccer tournament in 2000. The messages were broadcast both in English and Pidgin.

- The "Future Dreams" HIV/AIDS-prevention radio campaign addressed expected benefits of safe sex, self-efficacy, and social norms and support. The advertisements, which aimed to encourage consistent condom use outside marriage, were designed to provide reproductive health information, increase condom use and negotiation skills, decrease the stigma around condom use, and encourage peer support for condom use (Ankomah and Anyanti, 2001; PSI, 2002). The campaign themes varied according to the target population. In southern regions, the main theme was condom use negotiation; in northern regions, the main theme was that one need not be embarrassed to carry or buy condoms. "Future Dreams" was broadcast on 43 radio stations, covering most of the country. The campaign first aired in December 2000, but was banned in February 2001. After the ads were modified, they were rebroadcast from June 2001 to September 2001.

- To address personal risk perceptions, SFH developed an HIV-prevention billboard campaign with two different presentations. The first billboard was posted between 1999 and 2000. The display consisted of faces of people with the message, "AIDS no dey show for face," which means that one cannot determine if someone is or is not infected with HIV just by looking at his or her face. The second billboard ran the same message from 2002 to early 2004, but a well-known musician from southern Nigeria and an actress from northern Nigeria were featured in it.

A wide range of interpersonal communications and self-empowerment activities supplemented these mass media activities. For example, SFH subcontracted with Group Africa to conduct road shows for selected target audiences, such as students and men with little or no education. The road shows traveled to places where people engaged in high-risk behavior, and performers acted out HIV/AIDS-related scenarios. The drama was usually followed by question-and-answer sessions and distribution of informational materials and condom samples to participants. By 1999, these road shows were estimated to reach approximately 200,000 people per month. Some road shows also targeted long-distance truckers, junction towns, and schools. SFH staff members (including former sales agents) were also trained to conduct interpersonal communications, which currently reach about 175,000 persons every month.

Each of the campaign elements described above draws directly from the PSI behavior change model that SFH adopted (see chapter 2). The next section of this case study describes the data that we used to assess the extent to which attitudes, knowledge, and behaviors improved as expected.

DATA, METHODS, AND INDICATORS

DATA

To measure change in the behavior change components outlined in the SFH behavior change model, we analyze data from eight waves of the Nigerian Sexual Behavior and Condom Use surveys. These surveys were conducted between June 1998 (before the behavior change campaign was fully implemented) and December 2001 at approximately six-month intervals to collect information on a representative sample of males and females aged 15 to 59. The surveys were commissioned by SFH and implemented by Research and Marketing Surveys, Ltd. (RMS) as part of Nigerbus, a large omnibus survey. We restricted our analysis to respondents aged 18 to 59, leaving samples of 5,007; 4,952; 4,967; 4,958; 4,977; 4,970; 4,945; and 4,961 respondents, respectively, for a total of 39,737 respondents.

METHODS

The analysis is descriptive and examines behavior change indicators over time before and after the launch of the campaign. Logistic regression analysis is used to control for any socio-demographic differences across the cross-sectional surveys; results are presented as adjusted percentages.[2,3] We conducted separate analyses for men and women. (See Appendix B for more information on the coding of indicators.)

INDICATORS

CONDOM USE: The questionnaire asked about condom use by type of partner: spouse, cohabiting partner, boy- or girlfriend, commercial sex worker (CSW), street girls, someone just met, and other. Each of these categories was self-defined by the respondents.[4] We measured both condom use during last sexual intercourse and consistent condom use. With respect to consistent condom use, the questionnaire asked the frequency of condom use during the past two months (always, sometimes, never) with each type of partner. Respondents were coded one if they responded that they "always" used condoms in the past two months with this partner, and zero otherwise.

PROGRAM EXPOSURE: Program exposure was measured by whether the respondent heard a radio campaign on HIV/AIDS or STDs in the two months prior to the survey. Respondents were coded one if they had heard search a radio campaign, and zero otherwise. Unfortunately, questions about exposure to the programs' interpersonal and other communications activities were not asked consistently across survey waves. Therefore, we were unable to examine long-term trends in exposure to these campaign elements.

AWARENESS OF HEALTH PROBLEM: Respondents were coded one if they were aware that AIDS exists in Nigeria, and zero otherwise.

AWARENESS OF CAUSES/PROTECTIVE MEASURES: The surveys asked about the respondent's awareness of HIV/AIDS risk factors, including the risk associated with engaging in commercial sex, failing to use condoms, having or having had an STD, having sex with multiple partners, having sex with a partner who has other partners, and engaging in extramarital affairs. We summarized this information in dichotomous variables that equal one for respondents who were aware of three or more risk factors ("high" awareness), and zero otherwise. To measure awareness of protective factors, respondents who knew that condoms protect against HIV infection were coded one, and zero otherwise.

AWARENESS OF SEVERITY: Respondents were coded one if they were aware that there is no cure for AIDS, and zero otherwise. In addition, respondents were also coded one if they were aware that AIDS kills, and zero otherwise.

PERSONAL RISK ASSESSMENT: Respondents were asked to assess whether they were at higher, similar, or lower risk of HIV infection than their peers and were coded one if they answered "higher," and zero otherwise.

2 Socio-demographic control variables in Nigeria included age and gender of the respondent, rural/urban residence, marital status (married versus unmarried), an asset index, level of education (none, primary, secondary, or higher), religion (Christian, Muslim, or other) and survey wave. The asset index is an indicator of the material well-being of the respondent's household and is based on the possession of selected consumer durables.

3 Appendix A provides additional detail on the specification of the statistical model.

4 We considered boyfriends, girlfriends, and cohabiting partners (concubines) to be "regular" non-marital partners. Similarly, we considered CSWs, street girls, someone just met, and "other" partners to be casual partners.

AFFORDABILITY: Respondents were coded one if they thought that most people could easily afford condoms, and zero otherwise.

SELF-EFFICACY: To measure self-efficacy, respondents were asked whether they believe one can protect oneself against HIV/AIDS and whether they themselves did something to avoid AIDS. Respondents were also asked whether they agreed that it would be improper to ask one's spouse to use a condom and whether they would be embarrassed to buy condoms.

BRAND APPEAL: Respondents were coded one if they had heard of *Gold Circle* condoms, and coded zero if they had not.

RESULTS

In this section, we first highlight the results pertaining to condom use by partner type. We then present the results associated with program exposure and the various behavior change components of the PSI behavior change model that SFH adopted. Finally, because loss of brand recognition is a concern that some social marketing program managers have when considering a shift toward behavior change approaches, we present results related to *Gold Circle* brand recognition over the campaign period.

CONDOM USE. Figure 3a shows the trend in the adjusted percentage of unmarried men and women who reported using a condom in their last sexual encounter with their regular partner. A clear increase in condom use can be observed for both men and women, paralleling the increase in *Gold Circle* sales as shown in Figure 2. This increase appears to occur in two distinct phases. The first phase spans from December 1998 through June 1999. The second phase spans from June 2000 through December 2001. Taking the two phases together, the results show that condom use rose significantly among men with regular partners from 42 percent in December 1998 to 61 percent in December 2001. Similarly, over the same three-year period, condom use increased among women from 35 percent to 60 percent. Importantly, results in Figure 3b reveal that this rise in condom use did not begin to translate into a rise in consistent condom use until after June 2000, about two years after the initial campaign launch.

Figures 3c and 3d show levels of condom use during last sexual intercourse and consistent condom use, respectively, with a casual partner.[5] The changes in condom use displayed in the two figures are not statistically significant; therefore, we conclude that the campaign did not have a substantial impact on condom use with casual partners.

As is true in most countries, condom use is considerably lower with spouses than with regular or casual partners (Figure 3e). Though these levels remain at 5 percent through most of the monitoring period, the results show a sudden rise to 12 percent among men and to 10 percent among women in December 2001. Whether this constitutes a new trend or is simply a one-time event cannot be determined based on the available data. Furthermore, despite the increase in condom use among spouses during last sexual intercourse, consistent condom use remains very low; less than 1 percent of both married men and women always used condoms during the study period (Figure 3f). Hence, the available data provide no evidence that the new social marketing strategy had any impact on condom use in last intercourse with a spouse.

Figures 3g and 3h show the adjusted percentage of men and women, respectively, who reported using a condom during last sexual intercourse, irrespective of partner type. Because marital relations account for the majority of the encounters, the low level of condom use with spouses results in a low overall level of condom use. Overall, only 11.1 percent of men and 7.6 percent of women in the December 1998 survey reported using a condom during last intercourse. However, from June 2000 onward there was an increase in condom use during last sexual intercourse for both men and women to 22.6 percent of men and 20.9 percent of women by December 2001, driven largely by the increase in use with regular partners as shown in Figures 3a and 3b. Consistent condom use has improved as well, although less dramatically (Figures 3i and 3j). Again, this improvement was driven largely by the improved condom practices of those with regular partners.

5 Data in Figures 3c and 3d are only shown for married and unmarried men, as the number of women who reported having casual partners during the two months preceding each survey wave was too small for analysis.

Figures 3a–f. Condom use with regular partners, casual partners, and spouses

Figure 3a. Adjusted percentage of respondents who used a condom during last sexual intercourse with their regular partner

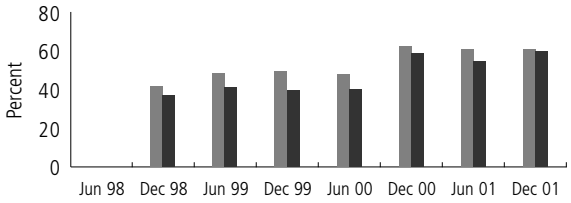


Figure 3b. Adjusted percentage of respondents who always used a condom with their regular partner

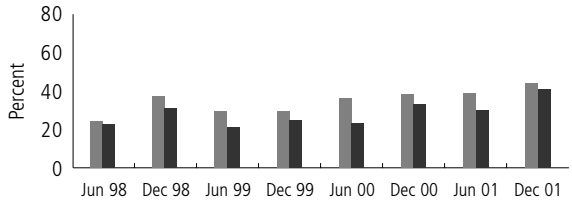


Figure 3c. Adjusted percentage of men who used a condom during last sexual intercourse with a casual partner

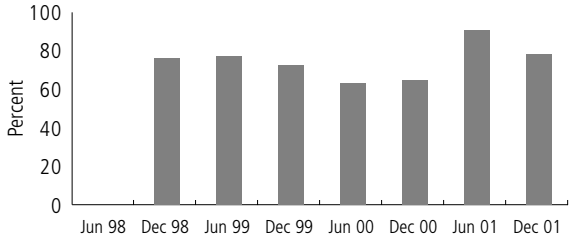


Figure 3d. Adjusted percentage of men who always use a condom with their casual partner

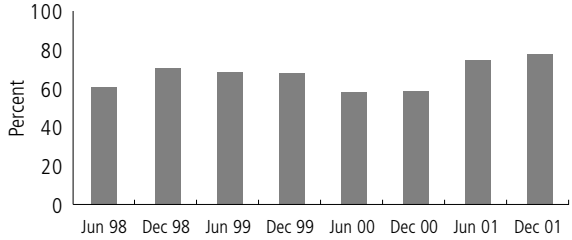


Figure 3e. Adjusted percentage of respondents who used a condom during last sexual intercourse with their spouse

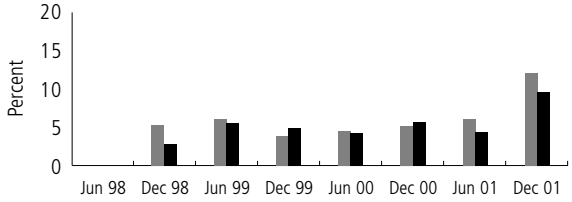
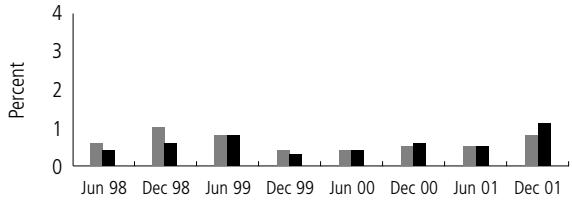


Figure 3f. Adjusted percentage of respondents who always use a condom with their spouse



Figures 3g–j. Overall condom use

Figure 3g. Adjusted percentage of men who used a condom during last sexual intercourse

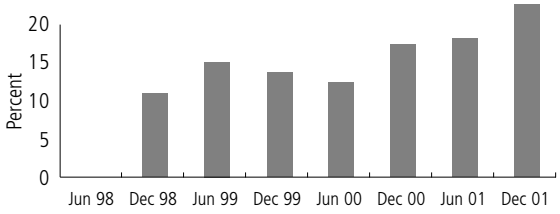


Figure 3h. Adjusted percentage of women who used a condom during last sexual intercourse

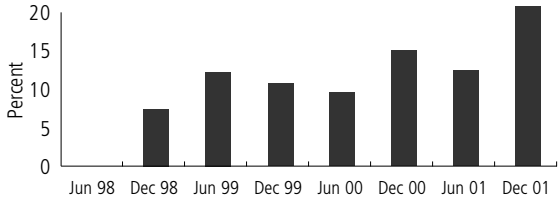


Figure 3i. Adjusted percentage of men who always use condoms

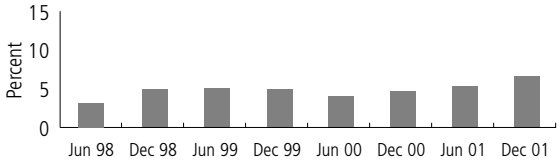
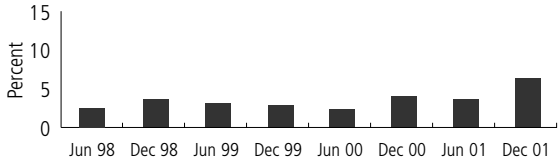


Figure 3j. Adjusted percentage of women who always use condoms



Note: There are no data for June 1998 in Figures 3a, 3c, 3e, 3g, and 3h because these questions weren't asked in those surveys.

Key: Male Female

Figure 4. Program exposure

Adjusted percentage of respondents exposed to HIV/AIDS radio program

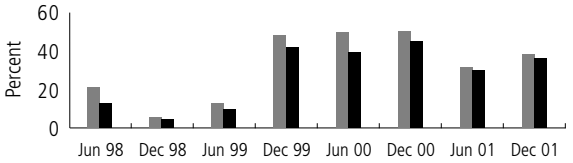
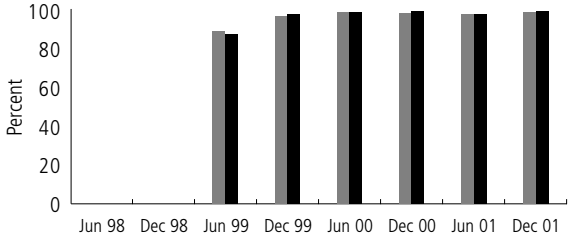


Figure 5. Awareness of health problem

Adjusted percentage of respondents who believe that AIDS exists in Nigeria



Figures 6a–b. Awareness of causes/protective measures

Figure 6a. Adjusted percentage of respondents with high awareness of HIV/AIDS risk factors

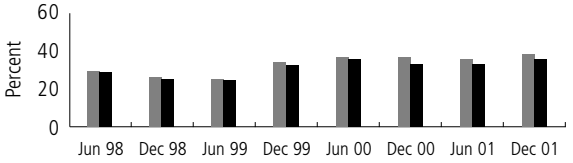
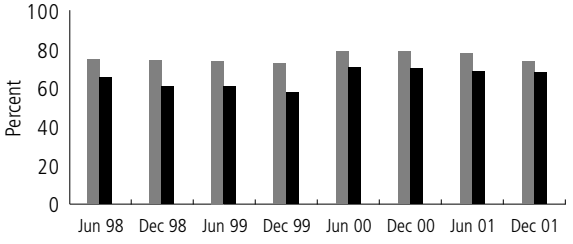


Figure 6b. Adjusted percentage of respondents who believe that condoms protect against HIV/AIDS



Note: There are no data for June 1998 and December 1998 in Figure 5 because this question wasn't asked in those surveys.

Key: Male Female

PROGRAM EXPOSURE: Many of the social marketing campaign's behavior change activities are implemented for relatively short periods of time, rather than continuously. For example, the "One Thing at a Time" radio drama consists of 26 weekly episodes. The first 26-week season was broadcast in 1998; the second season started in mid-1999. The television campaign with soccer star Sunday Oliseh was aired during the 1998 World Cup and the 2000 African Cup of Nations soccer tournament (PSI, 2002). Similarly, the "Future Dreams" radio campaign was broadcast only from December 2000 until February 2001 and then again from June through September 2001 (Ankomah and Anyanti, 2001).

Our indicator of campaign exposure is whether the respondent heard an HIV/AIDS-prevention radio campaign in the previous two months. Consistent with SFH's increased use of radio communications, such as the "One Thing at a Time" radio drama, the percentage who recalled hearing the radio HIV/AIDS campaign increased sharply from 20 percent in June 1998 to almost half of adult men and women in December 2000 (Figure 4). Exposure to the campaign hovered between 30 and 40 percent in 2001.

AWARENESS OF HEALTH PROBLEM: An overwhelming majority of the respondents are aware that AIDS exists in Nigeria (Figure 5). The adjusted percentage reached nearly 100 percent for both sexes by December 1999, an increase from 89 percent among men and 87 percent among women just six months earlier, and remained constant at that level throughout the remainder of the study period. This increase follows the broadcast of the HIV awareness TV campaign featuring soccer star Sunday Oliseh.

AWARENESS OF CAUSES AND PROTECTIVE MEASURES: Awareness of HIV risk factors increased modestly after the start of the BCC campaign (see Figure 6a). Between June 1998 and December 2001, the adjusted percentage of respondents with high awareness of HIV risk factors increased from 29 to 36 percent for men and from 29 to 33 percent for women. Figure 6b shows that the majority of the respondents believe that condoms protect against HIV/AIDS. Although the level of this belief among both men and women fluctuates somewhat over time, the levels in June 1998 (the beginning of the campaign period) and December 2001 (the end of the study period) are not significantly different.

AWARENESS OF SEVERITY: Information on awareness that AIDS kills and that there is no cure for AIDS was only collected from June 2000 onward, after the transition to the new behavior change strategy had already been completed. Figures 7a and 7b show that knowledge that AIDS kills is almost universal in the sample (greater than 98 percent), as is awareness that there is no cure for AIDS (about 85 percent). This remained the case throughout the observation period.

PERSONAL RISK ASSESSMENT: Figure 8 shows that the adjusted percentage of respondents who perceived themselves to be at high risk of contracting HIV/AIDS was 20 percent for men and 15 percent for women in June 2000 and changed little over the study period. This suggests that the BCC campaign had little effect on personal risk assessment.

SELF-EFFICACY: As Figure 9a shows, more than 90 percent of respondents agree that AIDS could be avoided, and little change is observed across survey waves. It is noteworthy that the percentage of respondents who believe that AIDS can be avoided is substantially higher than the percentage who believe that condoms protect against HIV/AIDS (see Figure 6b).

The lack of ability to negotiate condom use with a spouse persisted as a potential obstacle to condom use with spouses. Figure 9b shows that only a minority of the respondents felt that it would be acceptable to ask one's spouse to use a condom. The adjusted percentage expressing this opinion shows a modest increase (32 to 36 percent for men and 27 to 34 percent for women) between 1998 and 2001.

Most respondents reported taking steps to avoid AIDS. As shown in Figure 9c, the adjusted percentage of respondents who reported doing something to avoid AIDS began at a very high rate (near 96 percent) but gradually decreased over time, dropping dramatically in December 1999. The rapid decline in self-reported AIDS avoidance behavior in December 1999 corresponds with the change in campaign strategy, but it is not in the expected direction. We speculate that this counterintuitive finding stems in part from the fact that awareness of HIV risk factors was relatively low prior to December 1999 (see Figure 6a). It is possible that some people were reporting ineffective responses, such as avoiding mosquito bites or avoiding contact with HIV-positive people in the early period of the campaign.

Figure 7a–b. Awareness of severity

Figure 7a. Adjusted percentage of respondents who believe that AIDS kills

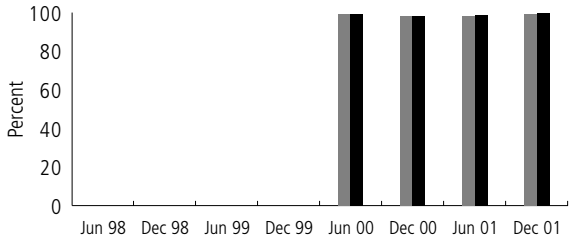


Figure 7b. Adjusted percentage of respondents who believe that there is no cure for AIDS

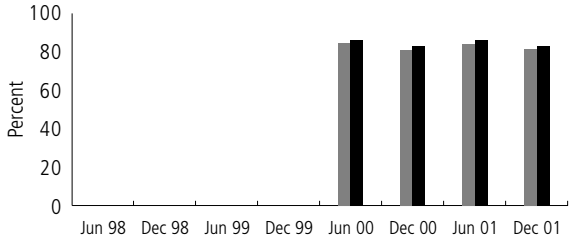
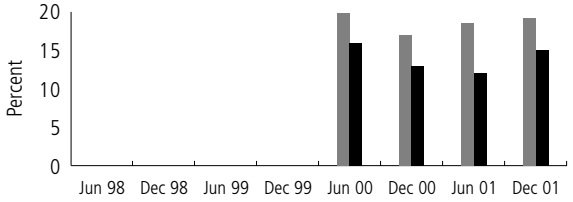


Figure 8. Personal risk assessment

Adjusted percentage of respondents who believe that they are at high risk of HIV/AIDS



Note: There are no data for June 1998 through December 1999 in Figures 7a, 7b, and 8 because these questions weren't asked in those surveys.

Key: Male Female

Figures 9a–d. Self-efficacy

Figure 9a. Adjusted percentage of respondents who believe that AIDS can be avoided

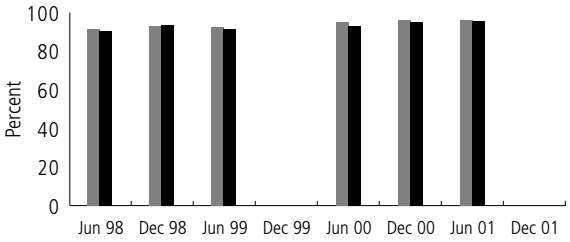


Figure 9b. Adjusted percentage of respondents who believe that it is acceptable to ask one's spouse to use a condom

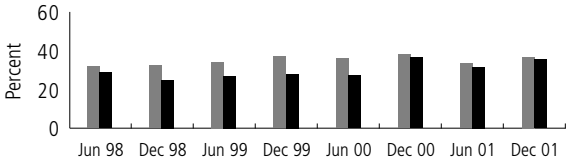


Figure 9c. Adjusted percentage of respondents who do something to avoid AIDS

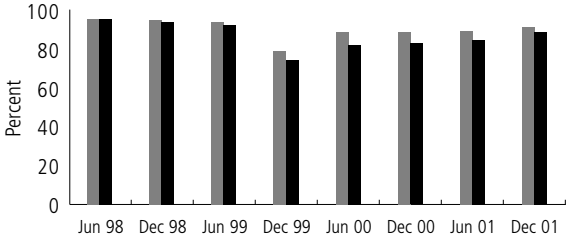
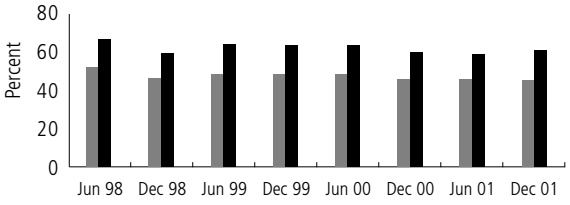


Figure 9d. Adjusted percentage of respondents who are embarrassed to buy condoms



Note: There are no data for December 1999 and December 2001 in Figure 9a because this question wasn't asked in those surveys.

Key: Male Female

Reports of such ineffective behaviors are likely to have reduced by December 1999 as a result of the increased awareness of HIV risk factors.

The adjusted percentage of respondents reporting that they would be embarrassed to buy condoms decreased slightly over the campaign period (see Figure 9d), from 52 percent of men in June 1998 to 46 percent of men in December 2001 and from 66 percent of women in June 1998 to 59 percent of women in December 2001.

PERCEIVED AFFORDABILITY: Figure 10 shows trends in the adjusted percentage of respondents who agreed that most people could easily afford condoms. In June 1998, the adjusted percentage reporting that condoms are affordable is 65 percent for men and 53 percent for women and remained roughly constant until December 1999. Between December 1999 and June 2000, the adjusted percentage sharply increased to 88 percent for men and 89 percent for women. However, by December 2000, the adjusted percentage of respondents who believe that condoms are affordable declined to 73 percent for men and 63 percent for women, still remaining significantly higher than baseline levels.

BRAND APPEAL: Figure 11 shows that knowledge of *Gold Circle* condoms was very high (74 percent for men and 62 percent for women) at the beginning of the behavior change campaign. Even though SFH ceased all brand-specific advertising in favor of BCC activites in 1998, knowledge of *Gold Circle* condoms remained relatively stable over the study period. In fact, by December 2001, brand recognition had actually increased somewhat to 82 percent among men and 71 percent among women.

SUMMARY

In 1998, SFH radically changed its social marketing program focus from condom distribution and brand-specific promotion to BCC activities. This involved disbanding the existing sales force, training staff in interpersonal communications, and changing the focus of mass media communications. Specifically, SFH began to develop numerous mass media messages that focused not on selling a particular brand of condom, but rather on changing knowledge, attitudes, and behaviors related to the health problem that condoms help prevent: HIV/AIDS. This change in strategy began in 1998 and was completed by the end of 1999.

A dramatic rise in social marketing condom sales followed the launch of the BCC campaign. However, condom sales are a crude indicator of program success, given that increases may reflect brand switching rather than increased condom prevalence in the target population. Moreover, sales data do not provide any information about the mechanisms through which the newly established communication activities succeeded in overcoming the problem of stagnating sales. This case study analyzed eight waves of the Nigerian Sexual Behavior and Condom Use surveys (spanning the period from June 1998 through December 2001) to assess trends in the various behavior change components of the PSI behavior change model that SFH adopted to guide its new strategy. Key findings are as follows:

- *Significant increases in condom prevalence among both men and women accompanied the rise in SFH social marketing sales in Nigeria.* This result, which was driven primarily by increases in condom use among unmarried couples with regular partners, suggests that sales increases reflect growth in the overall condom market, rather than mere brand switching.

- *Although condom use during last sexual intercourse increased substantially following SFH's shift in social marketing strategy, consistent condom use increased only modestly.* Thus, designing interventions to significantly increase consistent condom use remains a social marketing challenge in Nigeria.

Figure 10. Perceived affordability

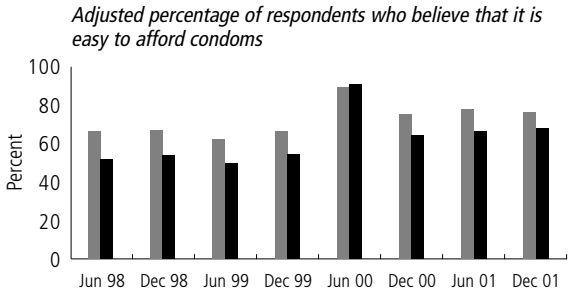
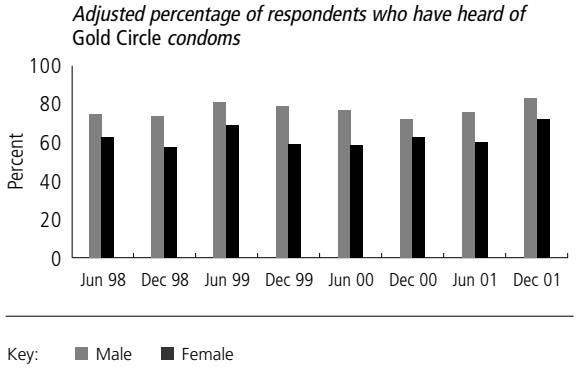


Figure 11.* Gold Circle *brand appeal



- *Modest improvements in the following four behavior change components accompanied the rise in condom sales and condom prevalence:* (1) awareness that AIDS exists in Nigeria; (2) high awareness of risk factors associated with HIV/AIDS, including failure to use condoms; (3) the belief that condoms protect against HIV/AIDS; and (4) the perceived affordability of condoms.

- *Switching from brand-specific promotional messages to BCC activities did not result in a decline in* Gold Circle *brand recognition.* This finding suggests that switching to BCC messages does not necessarily compromise brand recognition in mature programs that have already achieved substantial brand recognition.

In sum, this case study finds that significant increases in social marketing condom sales and overall condom prevalence followed SFH's shift away from brand-specific social marketing approaches toward a broader behavior change strategy. Greater awareness of HIV/AIDS as a health problem in Nigeria and modest improvements in the understanding of HIV risk factors, confidence in the effectiveness of condoms for HIV prevention, and perceived condom affordability accompanied the increases in condom sales and prevalence. By contrast, self-efficacy showed no improvement over the campaign period. Chapter 5 discusses the program implications of these findings.

4 Case Study 2: The “Friends of the Pill” Social Marketing Program in India

CASE STUDY 2: THE "FRIENDS OF THE PILL" SOCIAL MARKETING PROGRAM IN INDIA

PROGRAM OVERVIEW

Whereas SFH adopted a behavior change approach to revive condom sales as part of a broader HIV/AIDS-prevention effort in Nigeria, CMS initiated its *Goli ke Hamjoli* behavior change campaign in India to improve contraceptive options in that country by promoting low-dose OCs. The twin objectives of the *Goli ke Hamjoli* program are to improve low-dose OC knowledge and use among young, married, urban women and to encourage pharmaceutical firms to invest in the low-dose OC market.

The *Goli ke Hamjoli* (GkH) program, which means "Friends of the Pill" in Hindi, is a USAID-funded initiative managed by ICICI Bank as part of the Program for the Advancement of Commercial Technology–Child and Reproductive Health (PACT–CRH) program (Chaudhuri, 2001; Commercial Market Strategies, 2002, 2003; Mehta, 2001; USAID India, 2000). It was named Healthcare Campaign of the Year at the 1999 Asian Public Relations Awards and also won India's Abby Award from the Bombay Ad Club for the best social concern campaign (Chaudhuri, 2001; Commercial Market Strategies, 2002, 2003; Mehta, 2001; Sinha, 2003; USAID India, 2000). CMS provided the technical direction for the program, monitored its effectiveness, and served as a coordinator among the three OC manufacturers who joined the program (Wyeth, Infar/Organon, and German Remedies/Schering).

CMS launched the *Goli ke Hamjoli* campaign in November 1998 in the urban areas of the following eight northern states: Rajasthan, Madhya Pradesh, Uttar Pradesh, Bihar, Uttaranchal, Jharkhand, Chhattisgarh, and Delhi. These states were selected specifically because they have especially low levels of OC use and because they are primarily Hindi-speaking, which allows communications to be in a single language. Together, they comprise more than 42 percent of India's population (Office of the Registrar General, India, 2001). They also have relatively high urban total fertility rates (TFRs), ranging between 2.37 and 2.98 compared to 2.27 for all of India (International Institute for Population Sciences, 2001).

At the start of the program, both total monthly OC sales in northern India and OC prevalence were nearly stagnant. Formative research revealed that many doctors and chemists did not approve of OCs, often believing that contemporary (low-dose) OCs have side effects similar to the high-dose estrogen and progestin contraceptive pills from the early 1960s. At the same time, the National Family Health Survey (NFHS) showed that many women intended to use OCs. Specifically, more than 27 percent of Indian women who stated that they planned to use a contraceptive method in the future responded that OCs were the method they intended to use (International Institute for Population Sciences, 1995). Therefore, one of the initial goals of the *Goli ke Hamjoli* campaign was to ensure that these OC "intenders" had the support they needed to act on their intentions, including accurate information about low-dose OCs and support from both contraceptive providers and society.

To address provider biases and enhance provider knowledge, CMS sent mailers and regular scientific updates about low-dose OCs to the entire community of 30,000 general practitioners, gynecologists, and pediatricians and to 15,000 chemists (Sinha, 2004). It also held intensive training workshops for 28,600 traditional doctors and 34,000 chemists. A subsequent survey of medical practitioners found that trained providers were more likely than untrained practitioners to answer many questions about OC side effects correctly. They were also more likely to be aware of OC benefits and to offer correct advice about managing side effects in a hypothetical counseling session (Research International, n.d.).

At the same time, to reach consumers, the firm of Ogilvy & Mather was hired to implement a mass media campaign. The campaign, which comprised more than 20 advertisements between 1998 and 2003, attacked deep-rooted myths about the side effects of contraceptive pills and encouraged couples to ask for more information about low-dose OCs (Bahl's Business Communications, 2003). The *Goli ke Hamjoli* program does not promote any particular pill brand, but rather does generic promotion to encourage use of the entire category of low-dose OCs (Bahl's Business Communications, 2003; Chaudhuri, 2001; Commercial Market Strategies, 2003; Siddiqui, 2000).

The mass media campaign included television advertisements and celebrity endorsements (Indian Market Research Bureau, 2000, 2001), and advertisements typically aired for six to eight months. In an effort to address the information needs of the relatively large number of women who stated in the NFHS that they intended to use OCs at some point in the future, the initial advertisements targeted women in the contemplation and preparation stages of behavior change. These first advertisements aired from November 1998 through February 1999 and stressed that OCs put the "future of a woman's family in her own hands" and offered reassurance about the minor and temporary nature of low-dose OC side effects. A second media burst began in April 1999. It continued to emphasize that side effects were temporary and also stressed the reversibility of the method. Celebrity endorsements supplemented this second wave of advertising.

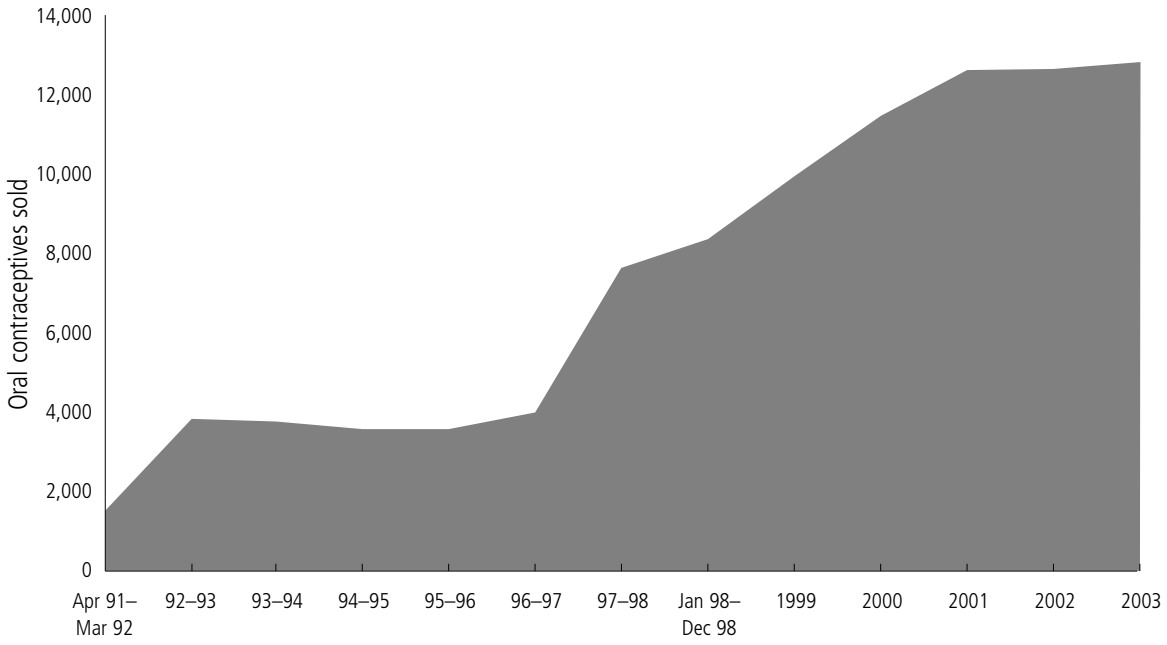
Between December 1999 and February 2000, the campaign expanded to target women in the pre-contemplation stages by highlighting the benefits of OCs, particularly that low-dose OCs can make a woman's life "tension-free." The campaign also began to address the needs of women in the preparation, action, and maintenance stages with messages about joint decision-making and the importance of actively seeking OC information.

During the third year of the campaign, *Goli ke Hamjoli* continued to address women in all five of the behavior change stages. Doctor endorsements targeted women in the contemplation and preparation stages with discussions of safety and the pill regimen. Advertisements on frequently asked questions (FAQs) targeted women in the pre-contemplation, action, and maintenance stages by highlighting OC benefits and discussing the OC regimen. Public relations articles in magazines supplemented the advertising campaign, giving more detail on OC benefits and listing respected doctors in 19 major cities who offered free counseling. It was at this point that the campaign also began targeting traditional-method users with an advertisement emphasizing the relative convenience and reliability of OCs.

By the fourth year of the campaign, retail audit data indicated that OC sales had improved substantially (see Figure 12). Tracking surveys showed that OC prevalence had also increased (see Figure 13). Nevertheless, the tracking surveys also revealed that the intention to use OCs had declined steadily (see Figure 17b), suggesting that although the campaign had succeeded in converting OC intenders to OC users, it had been less effective at shifting pre-contemplators to the contemplation stage. Consequently, CMS began to focus its attention on those in the pre-contemplation stages, particularly traditional-method users, and shifted its campaign emphasis away from the issue of side effects to stressing OC benefits. Such benefits included a decrease in certain cancers, healthy skin, protection from anemia, and reduced menstrual cramping. However OC use declined slightly and sales leveled off during this fourth year. Therefore CMS decided that it would need to return to addressing women's concerns about side effects.

Table 2 provides a detailed summary of the content of each advertisement and its link to the CMS/India BCC model. The remainder of this case study describes the data and indicators that we used to measure the extent to which attitudes, knowledge, and behaviors changed as a result of these advertisements, as well as the program results.

Figure 12. Monthly OC sales from commercial outlets, urban northern India



DATA, METHODS, AND INDICATORS

DATA

Our analysis is based on five waves of household surveys. The surveys were conducted in July 1999 (Track 2), February 2000 (Track 3), July 2001 (Track 4), April 2002 (Track 5), and March 2003 (Track 6). In addition, a survey was conducted in February 1999 (Track 1), however, we used the Track 2 survey as our baseline because the sample sizes and questionnaires were modified significantly after the Track 1 survey and do not allow adequate comparison with subsequent surveys. The surveys were commissioned by CMS and funded by USAID. The Indian Market Research Bureau conducted Tracks 1 through 5. The research firm Synovate conducted Track 6.

The sampling frame for all survey waves covers five large towns and three small towns across the following states: Uttar Pradesh, Bihar, Madhya Pradesh, Rajasthan, and Delhi (Indian Market Research Bureau, 2001).[6] Additionally, the samples are limited to married urban women aged 18 to 29 who belong to the A through D socioeconomic categories and who are not surgically sterilized.[7,8] The sample sizes are 2,082; 2,239; 2,262; 2,770; and 2,490, for Tracks 2 through 6, respectively.

METHODS

The analysis presents indicators expressed as percentages that have been adjusted by logistic regression to control for selected socio-demographic differences across the cross-sectional surveys. (See Appendix B for more information on the coding of indicators.)

6 Commercial Marketing Strategies (CMS) staff in Washington, DC, and India have concluded that data from Tracks 4 (2001), and 5 (2002) from Bhopal, one of the eight centers covered in the tracking surveys, are not reliable. Data from all eight centers (including Bhopal) covered in the remaining Tracks 2 (1999), 3 (2000), and 6 (2003), however, are acceptable. Therefore for the purposes of examining longitudinal "trends," this study excludes data from the region of Bhopal from all five surveys. However, for reporting overall effects of the program on OC use over the five-year campaign, CMS/India will refer to the percentages reported from Tracks 2 and 6 with the inclusion of data from Bhopal that have been found to be acceptable in those two survey years. In the data that includes Bhopal, percentages of OC current use are 6.4 percent in Track 2 and 11.3 percent in Track 6.

7 Sampling was done as follows: In each of the selected towns, starting addresses were drawn from the electoral rolls using systematic sampling. The number of starting addresses per city was proportional to the target sample size.

8 Socioeconomic categories A–D are from the urban Indian SEC classification system and are based on responses about education and occupation of the chief wage earner of the household. See Table C1 in Appendix C for a more detailed description.

Table 2. Description of advertisements broadcast during the* Goli ke Hamjoli *BCC campaign

Advertisement and ad OC focus	Year of advertisement	Description of advertisement	Related stages of change
Shaadi Bidaai — Taking reproductive responsibility	Nov 1998	The advertisement addresses changes in a woman's status post marriage, including having a first child. It teaches a woman that the future of the family is in her hands. A doctor reassures the woman about a new generation of OCs that have minimal side effects.	Contemplation, preparation
Archana — Reversibility	Apr 1999	A celebrity endorses OCs, focusing on reversibility and the fact that the joy of becoming a mother is greater when one does it by choice.	Contemplation
Shefali — Side effects	Apr 1999	A celebrity endorses the pill with a special focus on side effects being minimal and going away as the body adjusts to OCs.	Contemplation
Mandira — Weight gain	Apr 1999	A celebrity endorsement exposes the myth that OCs cause weight gain.	Contemplation
Baby — Family issues	Dec 1999	This ad shows social pressure from the older generation on a new mother to have another child, emphasizes the importance of joint decision-making, and highlights a new generation of OCs. A doctor endorses the safety of low-dose OCs and stresses that there are no adverse effects on future children.	Contemplation, action, maintenance
Kite — Family and tension-free	Dec 1999	Promoting joint decision-making between partners, the ad illustrates a woman's relationship with various family members. A doctor endorses a new generation OC pills as being a tension-free method, with no adverse effect on the unborn child. Furthermore, it emphasizes the fact that there are many pills in the market and consultation with one's doctor/chemist if expert advice is needed about which pill will suit a woman best.	Pre-contemplation, contemplation, preparation
Mandira — Tension-free	Feb 2000	A celebrity endorses the new-generation (low-dose) pill being so safe, effective, and dependable that it helps to make your life tension-free.	Pre-contemplation, contemplation
Pallavi — Regimen	Feb 2000	A celebrity endorses OCs with a special focus on how one always remembers the most important things in one's daily routine — like taking OCs daily — and what to do if one misses a pill.	Action, maintenance
Ashwini & Nitesh — Joint decision	May 2000	A celebrity couple endorses OCs as a safe and effective way to prevent pregnancy.	Pre-contemplation, contemplation

Table 2. (continued) Description of advertisements broadcast during the* Goli ke Hamjoli *BCC campaign

Advertisement and ad OC focus	Year of advertisement	Description of advertisement	Related stages of change
Train — Doctor endorsement	Feb 2001	A doctor endorses OCs as a safe method. The ad also tackles what to do if one misses a pill. It advertises that more than 8 million women in the world use it to make their lives tension-free.	Pre-contemplation, preparation, action, maintenance
Acrobat — Balancing act and tension-free	Feb 2001	This ad illustrates the balancing act that women go through every month and how OCs are a safe and effective method to make one's life tension-free. Again, it advertises that more than 8 million women in the world use it to make their lives tension-free.	Pre-contemplation
Benefit — OC FAQs	Feb 2001	A doctor endorses OCs with a focus on regularizing menstrual cycle and reducing anemia.	Pre-contemplation, preparation
Time — OC FAQs	Feb 2001	A doctor endorses the fact that one can use OCs for as long as one wants with no rest period required.	Pre-contemplation
Brand — OC FAQs	Feb 2001	A doctor talks about many brands of new-generation (low-dose) pills in the market that one can adopt.	Pre-contemplation, preparation
Bahana (excuses) — Couple intimacy	Feb 2002	This ad illustrates how OCs promote greater intimacy between husband and wife, along with other health benefits, such as protection from anemia, regular menstrual cycles, and healthy complexion.	Pre-contemplation
Honeymoon — Couples and long-term use	Feb 2003	This ad is a testimonial showing a joint decision between a husband and wife to adopt OCs. Key messages include promoting long-term use (three years), minor adjustments when starting OCs, and the end benefit of a tension-free life.	Pre-contemplation, preparation, action, maintenance
Superwoman — Balanced life with OCs	Feb 2003	This testimonial shows how OCs can serve as a support system for a working woman to keep her life balanced and tension-free. It also promotes long-term use (five years).	Pre-contemplation
Regimen — Couple intimacy	Feb 2003	This testimonial shows how the hassle of taking a pill daily is overcome because it promotes intimacy between partners.	Contemplation
Other benefits — OC benefits	Feb 2003	This ad is a testimonial promoting other benefits of OCs along with contraception, such as protection from anemia, regular menstrual cycles, and healthy complexion.	Pre-contemplation

INDICATORS

OC USE: Respondents were coded one if they currently use OCs, and zero otherwise.

PRE-CONTEMPLATION: The *Goli ke Hamjoli* program stressed OC benefits to move women from the precontemplation stage to the contemplation stage. We measured four specific benefits stressed in the campaign: (1) whether women believe that OCs are a good way to plan one's family; (2) whether women believe that OCs are an effective way to prevent unwanted pregnancy; (3) whether women believe that OCs keep the body fit;[9] and (4) whether women believe that OCs give one greater control over when to conceive. In each case, respondents were coded one if they agreed with the statement and zero otherwise.

CONTEMPLATION: The main program objective with respect to women in the contemplation stage was to improve knowledge about OC side effects and to reduce the perceived costs associated with OC use. The tracking surveys measured the following five key indicators of knowledge related to side effects: (1) whether women believe that OCs have only minor side effects; (2) whether they believe that side effects usually go away quickly; (3) whether they believe that OCs do not cause weight gain; (4) whether they believe that OCs do not cause difficulties having children later; and (5) whether they believe that OCs have no side effects on the unborn child. Again, in each instance, respondents were coded one if they agreed with the statement, and zero otherwise. Each of the above indicators corresponded directly to specific campaign messages. Three indicators measured perceived OC costs: (1) whether women disagree that it is inconvenient to remember to take OCs every day; (2) whether they believe that OCs should not be used after a certain age; and (3) whether they disagree that OCs are too expensive.

PREPARATION: CMS's objective with respect to women in the preparation stage was to increase intention to use OCs within the near future among women who intend to use at some point in time. The indicator we used to measure this outcome is the percentage of all OC "intenders" who intend to use OCs within six months.

ACTION AND MAINTENANCE: Finally, CMS's main goal with respect to new and existing OC users was to promote continued self-efficacy by stressing women's role in OC decisions. The following two statements were evaluated: "One should consult a doctor before starting to use OCs," because the campaign encouraged women to make decisions themselves about whether to use OCs, and "If my husband does not allow me, I will not use OCs to plan my family." In each case, respondents were coded one if they agreed with the statement, and zero otherwise.

RESULTS

ORAL CONTRACEPTIVE USE

Figure 13 shows trends in OC prevalence in the target population. OC prevalence increased from 6 percent in July 1999 to 10 percent just two years later in July 2001. Use then declined to 8 percent in April 2002, the year that CMS shifted its advertising away from addressing concerns about side effects in favor of stressing OC benefits. Subsequent to this downturn, CMS reintroduced messages related to side effects. By the end of the study period in March 2003, OC prevalence was 9 percent. In short, the data show that a rise in OC prevalence in the target population accompanies the rise in OC sales in the first three years of the campaign, as shown in Figure 12. After 2001, there is no significant increase in either OC sales or OC prevalence.

9 "Keeps the body fit" is defined as regulating menstruation, reducing anemia, and not causing weight gain.

PRE-CONTEMPLATION

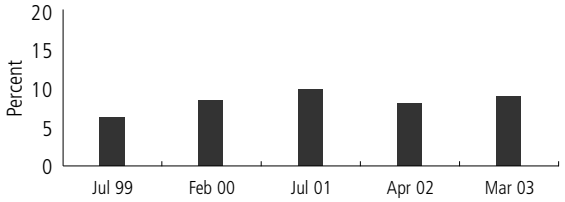
The *Goli ke Hamjoli* campaign stressed OC benefits to women who had no intention of using OCs (i.e., those in the pre-contemplation stage) in an effort to move many of these women from pre-contemplation to contemplation. Figures 14a–d show trends in perceived benefits over the study period among the target population. Figure 14a indicates that the percentage of women who agree that OCs are a good way to plan one's family increases after July 2001 from 74 percent in that year to 80 percent in March 2003. Figure 14b shows, however, that although the majority of women also think that OCs are effective at preventing unwanted pregnancy, there is no increase in this perception over the campaign period. The results in Figure 14c suggest that messages emphasizing that OCs keep the body fit were effective. Nearly 50 percent of targeted women agreed with this statement in March 2003 compared to slightly fewer than 40 percent three years earlier. Last, Figure 14d shows a decline in the percentage of women who agree that OCs give greater control over the timing of conception. The reason for this decline is unclear.

CONTEMPLATION

An important objective of the *Goli ke Hamjoli* BCC strategy was to dispel myths about side effects, especially to motivate intenders to consider using OCs in the near future. Hence, if those efforts were successful, we would expect to find substantial changes in women's beliefs about the side effects of OCs. Figures 15a–e show trends in related indicators.

Figure 13. Oral contraceptive use

Figure 13. Adjusted percentage of respondents who currently use OCs



Figures 14a–d. Perceived OC benefits

Figure 14a. Adjusted percentage who believe that OCs are a good way to plan one's family

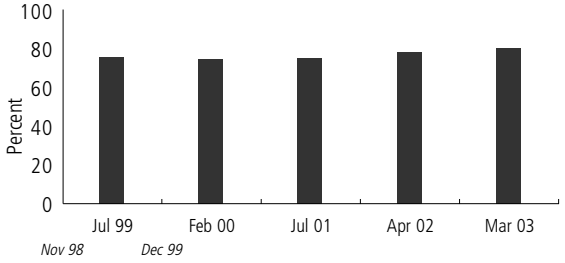


Figure 14b. Adjusted percentage who believe that OCs are an effective way to prevent unwanted pregnancy

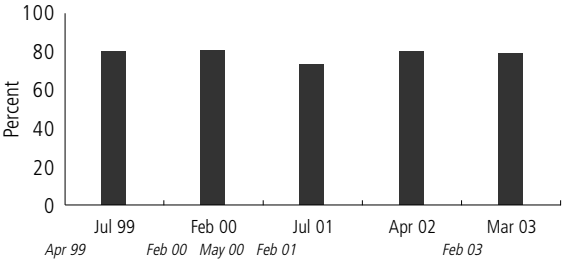


Figure 14c. Adjusted percentage who believe that OC use keeps the body fit

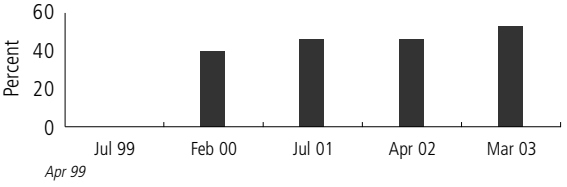
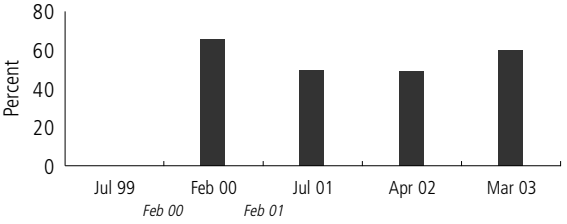


Figure 14d. Adjusted percentage who believe that OCs give greater control when to conceive



Note: *Dates in italics on the X-axis show the date that CMS began airing a related* Goli ke Hamjoli *advertisement.*

There are no data for July 1999 in Figures 14c and 14d because these questions weren't asked in those surveys.

Figure 15a–e. Knowledge about side effects

Figure 15a. Adjusted percentage who believe that OCs only have minor side effects

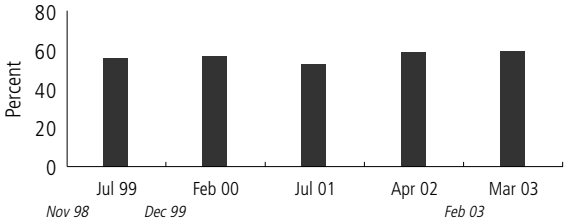


Figure 15b. Adjusted percentage who believe that side effects of OCs usually go away

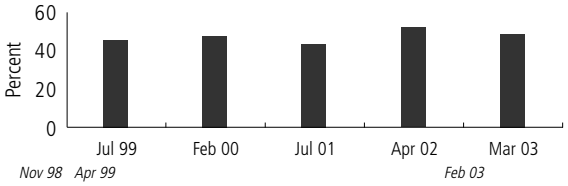


Figure 15c. Adjusted percentage who believe that OCs do not cause weight gain

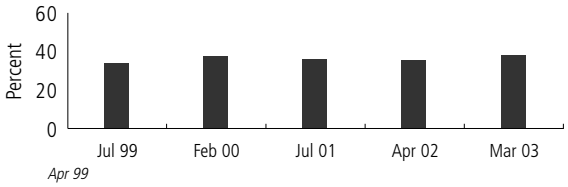


Figure 15d. Adjusted percentage who believe that OCs do not cause difficulties having children later

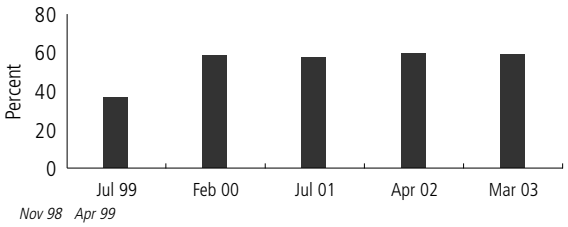
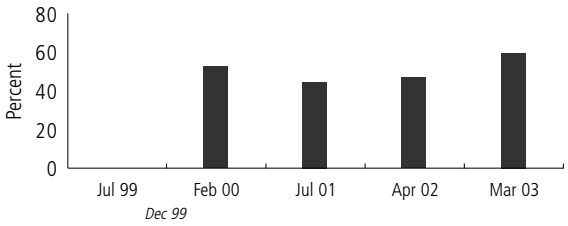


Figure 15e. Adjusted percentage who believe that OCs have no side effects on the unborn child



Note: Dates in italics on the X-axis show the date that CMS began airing a related Goli ke Hamjoli *advertisement.*

There are no data for July 1999 in Figure 15e because this question wasn't asked in those surveys.

Figure 15a shows that the belief that OCs have only minor side effects increased modestly, but not until April 2002, nearly two years after the launch of the campaign. Specifically, the percentage of women with that belief rises from 54 percent in July 1999 to 58 percent in April 2002 and then to 60 percent in March 2003. By contrast, the percentage of women believing that side effects go away quickly fluctuated between about 45 and 50 percent throughout the study period (Figure 15b), suggesting that although women may have become more convinced that OC side effects are minor (Figure 15a), little headway was made in convincing them that side effects are temporary. Ads on weight gain aired very briefly in April 1999, and the percentage of women who believe that OCs do not cause weight gain shows little subsequent change (Figure 15c). Last, results in Figures 15d and 15e show significant increases in the percentage of women who agree that OCs do not cause "difficulties having children later" or "side effects on the unborn child," respectively. However, the increase in those agreeing that OCs do not harm unborn children does not occur until more than two years after the launch of the *Goli ke Hamjoli* campaign.

In addition to addressing concerns about side effects, *Goli ke Hamjoli* targeted OC users with messages about other types of "costs," including the inconvenience of taking the pill every day, the belief that OCs should not be used after a "certain" age, and the belief that OCs are expensive. Figures 16a–c show trends in related indicators. Figure 16a indicates that only about one-fourth of respondents think it is easy to remember taking OCs every day throughout the study period, even though ads were broadcast throughout the campaign concerning this subject matter. By contrast, the data show a steady and significant decline from 72 percent in February 2000 to 57 percent in March 2003 in the percentage of women who believe that OCs should not be used after a certain age (Figure 16b). Similarly, Figure 16c shows that perceptions about the expense of OCs improved significantly after the launch of the campaign and remained stable. Specifically, the percentage of women who disagree that OCs are too expensive was 45 percent in July 1999 compared to about 60 percent thereafter.

PREPARATION

With respect to the preparation stage of behavior change, we used a measure of intention to use OCs to gauge women's motivation to begin OC use. Figure 17a shows that among all women who said they intend to use OCs at some point in the future, an increasing percentage reported that they intend to start within six months, suggesting that the program succeeded in shifting contemplators to the preparation stage. However, Figure 17b shows that the percentage of total respondents who reported that they intend to use OCs sometime in the future decreased steadily from 14 percent in July 1999 to 7 percent in March 2003, indicating that the campaign was less effective at shifting pre-contemplators to the contemplation stage.

ACTION AND MAINTENANCE

To encourage continued use among new and existing OC users, *Goli ke Hamjoli* stressed self-efficacy. Because OCs are available without a prescription in India, CMS/India believed that reliance on doctors was a barrier to increased use (Sinha, 2004a) and that with correct knowledge about OCs, women could take the initiative to obtain OCs without a doctor's consultation. As displayed in Figure 18a, findings show that although the percentage of women who believe it is best to first consult a doctor decreased somewhat from 94 percent in February 2000 to 88 percent in July 2001, it increased again in March 2003 to 92 percent, showing no significant change by the end of the study period. Conversely, the results in Figure 18b reveal that although nearly 80 percent of women in July 1999 stated that they would not use OCs to plan their family if their husband were to disallow it, only 69 percent agreed with this statement in March 2003. This finding suggests that increases in self-efficacy related to spousal interaction did occur during the study period.

Figures 16a–c. Perceived costs

Figure 16a. Adjusted percentage who disagree that it is inconvenient to remember taking OCs every day

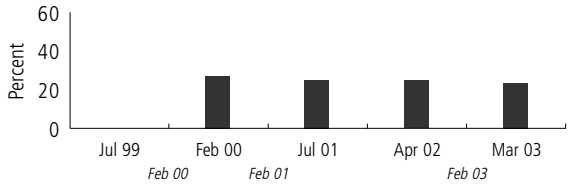


Figure 16b. Adjusted percentage who believe that OCs should not be used after a certain age

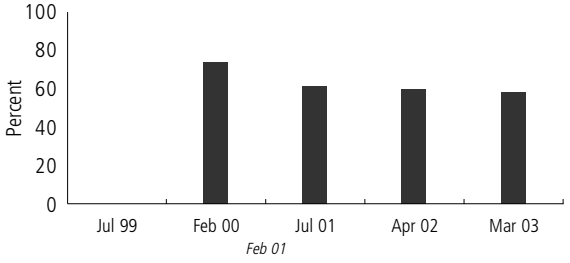
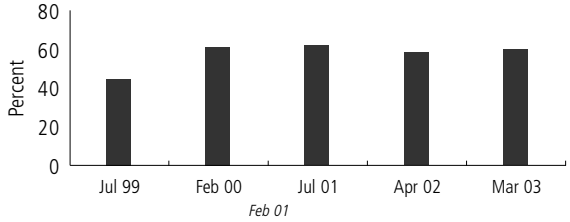


Figure 16c. Adjusted percentage who disagree that OCs are too expensive



Figures 17a–b. Preparation

Figure 17a. Adjusted percentage who say they intend to use OCs in six months or less (intenders only)

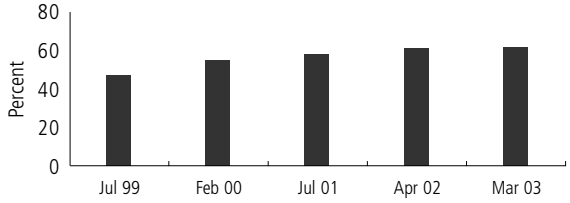
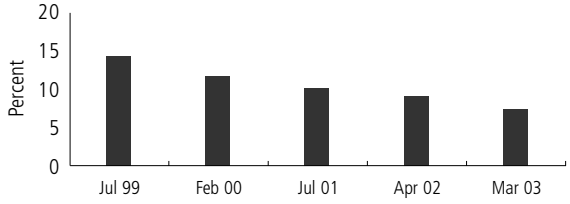


Figure 17b. Adjusted percentage of women who say they intend to use OCs sometime in the future (total sample)



Note: *Dates in italics on the X-axis show the date that CMS began airing a related* Goli ke Hamjoli *advertisement.*

There are no data for July 1999 in Figures 16a and 16b because these questions weren't asked in those surveys.

Figures 18a–b. Action and maintenance

Figure 18a. Adjusted percentage who believe that one should consult a doctor before starting OC use

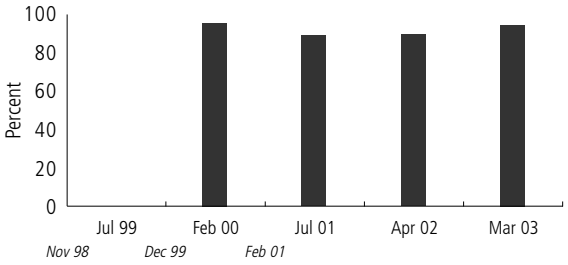
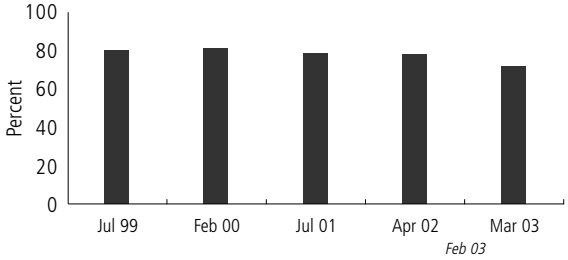


Figure 18b. Adjusted percentage of respondents who would not use OCs if their husband were to disallow it



Note: Dates in italics on the X-axis show the date that CMS began airing a related Goli ke Hamjoli *advertisement.*

There are no data for July 1999 in Figure 18a because this question wasn't asked in this survey.

SUMMARY

The *Goli ke Hamjoli* program promoted low-dose OC use in urban areas in eight states in northern India, a region characterized by especially low levels of OC use. The program used a holistic behavior change approach that simultaneously educated both providers and consumers about the benefits and side effects of low-dose OCs. Analyses of five waves of survey data indicate the following key findings:

- Both OC prevalence and OC sales showed significant increases during the initial three years of the *Goli ke Hamjoli* campaign and then leveled off.

- The percentage of intenders who said they intend to start using OCs within six months increased steadily, suggesting that the campaign may have succeeded in moving many contemplators to the preparation stage. However, the overall percentage of women who stated that they intend to use OCs sometime in the future declined throughout the study period.

- Several indicators related to perceived OC benefits, knowledge about side effects, and the perceived expense of OCs improved over the study period. Some improvements occurred quickly and stabilized, others improved steadily over time, and still others did not change until more than two years after the launch of the campaign. These improvements suggest that changes in fundamental OC knowledge and attitudes are taking place in India and that further improvements in OC use and sales are likely in the future.

5 Discussion

DISCUSSION

Over the past three decades, the number of reproductive health social marketing programs has increased substantially in the developing world. At present, large-scale programs operate in more than 60 countries worldwide, and many appear to have been very successful, as evidenced by rapidly increasing product sales. As these programs have matured, however, some have begun to experience stagnating or even declining sales. Moreover, it is not clear that sales increases have consistently translated to increases in method prevalence.

This research developed case studies of social marketing programs in Nigeria and India, both of which experienced stagnating or declining reproductive health product sales and both of which adopted behavior change approaches in an effort to turn sales around. The analysis finds that, for the most part, the BCC approach succeeded in both countries. With respect to the three initial questions that this study set out to answer, we find that:

1. Not only sales, but method prevalence increased significantly following behavior change campaigns in both countries. In India, however, both sales and OC prevalence stabilized about three years after the campaign launch. Nevertheless, several improvements in OC attitudes and knowledge suggest that intention to use OCs and actual OC use are likely to improve in the future.

2. In the case of condom promotion in Nigeria, the changes in attitudes and behaviors that accompanied increases in condom use included greater awareness that HIV/AIDS exists in Nigeria, modest increases in the understanding of HIV/AIDS risk factors, confidence in the effectiveness of condoms for HIV/AIDS prevention, and perceived condom affordability. Attitudes and behaviors that did not appear to respond to the SFH campaign in Nigeria included the belief that AIDS kills (the belief is universal), the belief that there is no cure for AIDS, personal risk assessment, and various measures of condom self-efficacy.

3. With respect to OC promotion in India, several indicators measuring OC benefits, OC knowledge, perceived OC costs, and OC self-efficacy improved over the campaign period. Indicators that did not appear to respond to the campaign include the belief that OCs are an effective way to prevent unwanted pregnancy, the belief that OCs give greater control over when to conceive, the belief that side effects go away quickly, the opinion that OCs do not cause weight gain, the view that it is inconvenient to remember to take OCs every day, and the belief that one should consult a doctor before starting OC use.

4. In India, some indicators of knowledge and attitudes improved readily while others improved only after a substantial time lag. Specifically, the results suggest that it may take up to two years before some ingrained beliefs about OC side effects improve.

These findings have some important programmatic implications. First, the findings suggest that social marketing managers who face stagnating product sales may benefit from moving away from brand-specific communications toward communications that educate consumers about the product category as a whole (e.g., the benefits of condoms and low-dose OCs in general) and that emphasize healthy behaviors. In both Nigeria and India, such an approach appears to have been successful at not only increasing brand-specific sales, but also at contributing to increased method prevalence (as opposed to mere brand switching). Second, if a BCC campaign yields few measurable improvements after the first year of implementation, this does not necessarily imply that the campaign failed and should be terminated. Indeed, because some changes, such as perceptions about OC side effects, may not occur until more than two years after the start of the campaign, it may not be possible to fully assess a program's effectiveness in less than three years. Last, multiple rounds of population-based data can help pinpoint those attitudes and behaviors that resist change and may require a new or more intense approach to the intervention (e.g., condom self-efficacy in Nigeria and perceptions about OC inconvenience in India). This information can provide feedback to help fine-tune projection activities that will, in turn, help increase impact.

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Appendix A

APPENDIX A

DESCRIPTION OF ADJUSTED PERCENTAGES

Adjusted percentages and means are calculated in a two-step process. For adjusted proportions the first step consists of estimating a logistic regression equation

$$\ln\left(\frac{p_i}{1-p_i}\right) = \beta_0 + \sum_{t=2}^{8}\beta_{Wt}W_{ti} + \beta_{Sex}S_i + \sum_{t=2}^{8}\beta_{SWt}W_{ti}S_i + \sum_{k=1}^{m}\beta_{Xk}X_{ki} + \varepsilon_i$$

where p_i is the probability that an outcome occurs for respondent i; the W_{ti} is a set of t-1 dummy variables indicating the survey to which observation i belongs, with β_{Wt} the associated set of regression coefficients; S_i a dummy variable for the sex of the respondent (0 = male, 1 = female), and β_{Sex} is the regression coefficient for sex. $W_{ti}S_i$ refers to a set of interaction effects between the survey and the sex of the respondent, and β_{SWt} refers to the associated regression coefficients. X_{ki} is a set of k control variables, and β_{Xk} refers to its associated regression coefficients. β_0 is the intercept, and ε_i is the error term for observation i. In a second step the adjusted proportion $\hat{p}_{ts}$ for each of the groups defined by the combination of each survey (t) and sex (s) is calculated by substituting $\overline{X}_k$ (i.e., the grand mean of X_k) for X_{ki} in Equation one. This means that for the first survey wave the adjusted proportion for males equals

$$\hat{p}_{1m} = \frac{e^{\beta_0 + \sum_{k=1}^{m}\beta_{Xk}\overline{X}_k}}{1+e^{\beta_0 + \sum_{k=1}^{m}\beta_{Xk}\overline{X}_k}}$$

as all W_{ti} = zero and S_i = zero, while for females the adjusted proportion is (as S_i = one)

$$\hat{p}_{1w} = \frac{e^{\beta_0 + \beta_{Sex} + \sum_{k=1}^{m}\beta_{Xk}\overline{X}_k}}{1+e^{\beta_0 + \beta_{Sex} + \sum_{k=1}^{m}\beta_{Xk}\overline{X}_k}}$$

In the other surveys a coefficient for W_t needs to be added. For males this means that the adjusted proportion becomes

$$\hat{p}_{tm} = \frac{e^{\beta_0 + \beta_{Wt} + \sum_{k=1}^{m}\beta_{Xk}\overline{X}_k}}{1+e^{\beta_0 + \beta_{Wt} + \sum_{k=1}^{m}\beta_{Xk}\overline{X}_k}}$$

where β_{Wt} is the regression coefficient associated with survey t. When calculating the adjusted proportion for females at survey t, the coefficients for the main effect of sex (β_{Sex}) for the interaction term between survey t and sex (β_{SWt}) needs to be added

$$\hat{p}_{tw} = \frac{e^{\beta_0 + \beta_{Wt} + \beta_{Sex} + \beta_{SWt} + \sum_{k=1}^{m}\beta_{Xk}\overline{X}_k}}{1+e^{\beta_0 + \beta_{Wt} + \beta_{Sex} + \beta_{SWt} + \sum_{k=1}^{m}\beta_{Xk}\overline{X}_k}}$$

Adjusted percentages are obtained by multiplying the adjusted proportions by 100. The procedure for the calculation of adjusted means is similar. First, the ordinary least squares (OLS) regression is estimated:

$$Y_i = b_0 + \sum_{t=2}^{8}b_{Wt}W_{ti} + b_{Sex}S_i + \sum_{t=2}^{8}b_{SWt}W_{ti}S_i + \sum_{k=1}^{m}b_{Xk}X_{ki} + \varepsilon_i$$

and subsequently the X_{ki} are substituted by their grand mean ($\overline{X}_k$) to calculate the adjusted mean ($\hat{Y}_{ts}$). For males in the first survey wave, the adjusted mean equals

$$\hat{Y}_{1m} = b_0 + \sum_{k=1}^{m}b_{Xk}\overline{X}_k$$

while for females in the first survey wave it is

$$\hat{Y}_{1w} = b_0 + b_{Sex} + \sum_{k=1}^{m}b_{Xk}\overline{X}_k$$

Similarly, for males at survey t (t > one) the adjusted mean equals

$$\hat{Y}_{tm} = b_0 + b_{Wt} + \sum_{k=1}^{m}b_{Xk}\overline{X}_k$$

and for females in survey t (t > one) it equals

$$\hat{Y}_{tw} = b_0 + b_{Wt} + b_{Sex} + b_{SWt} + \sum_{k=1}^{m}b_{Xk}\overline{X}_k$$

Appendix B

APPENDIX B

MEASUREMENT NOTES FOR VARIABLES

NIGERIA

PROGRAM EXPOSURE. In the 1998 surveys, information was collected about exposure to campaign messages on TV, whereas the June 2000 survey contained information on whether the respondents saw the campaign road show. The December 1999 and June 2000 surveys also queried whether respondents were familiar with the "One Thing at a Time" program.

AWARENESS OF HEALTH PROBLEM. Information asked about the respondent's knowledge or awareness of risk factors was summarized as dichotomous variables that equal one for respondents who were aware of three or more risk factors, zero otherwise. The measure of whether they thought that AIDS existed in Nigeria was not available for the 1998 surveys.

AWARENESS OF CAUSES/PROTECTIVE MEASURES. No additional information.

AWARENESS OF SEVERITY. Measures on whether the respondent was aware that no cure for AIDS exists and that AIDS kills are available only from June 2000 onward.

PERSONAL RISK PERCEPTION. This variable assessing whether respondents were at higher, similar, or lower risk of HIV infection than their peers is not available for the 1999 surveys.[10]

AFFORDABILITY. No additional information.

SELF-EFFICACY. The question whether they agreed or disagreed that it would be improper to ask one's spouse to use a condom was coded "disagreed" versus "other."

BRAND APPEAL. No additional information.

SOCIO-DEMOGRAPHIC CONTROL VARIABLES. The asset index was calculated by counting the number of assets a respondent possessed and recoding this count in four categories (low, medium-low, medium, and high) of similar size. Age was included as a categorical variable (18 to 20 years, 21 to 25, 26 to 30, 31 to 40, 41 to 50, and 51 to 59 years).

INDIA

PRE-CONTEMPLATION. Respondents were asked whether they "completely disagreed," "somewhat disagreed," "neither agreed nor disagreed," "somewhat agreed," or "completely agreed." The responses to each of these statements were recoded as "completely or somewhat agree" versus all other categories.

CONTEMPLATION. Questions concerning knowledge about side effects were coded in the same manner as questions in the pre-contemplation stage. In terms of perceived costs, statements included: "OCs should not be used after certain age," "It is highly inconvenient to remember to take OCs everyday," and "OCs are very expensive." The first statement was recoded as "agreed" versus "other," whereas the latter two were recoded as "disagreed" versus "other."

PREPARATION. Respondents were asked when they intended to use OCs. Responses included "within the next week," "within the next month," "within the next month," "within the next 3 months," "within the next 6 months," "within the next 12 months," and "12 months or more from now". For intention to use sometime in the future, all responses were coded one if they chose any of the responses above, and coded zero if they did not answer the question at all. In respect to intention to use within 6 months, those who responded that they would use OCs within 6 months or less were coded one while the rest of the responses were coded zero.

ACTION AND MAINTENANCE. Both statements were recoded as "agree" versus "other."

10 The way risk perception was measured changed across the survey waves. In the two 1998 survey waves, respondents were asked, "Thinking of your own way of life, would you say that your risk of catching HIV/AIDS is the same as for other people, a little lower, or a little higher?" In the survey waves from June 2000 onward, respondents were asked, "Given your current sexual behavior, suppose you were not using a condom, would you be at high risk, low risk, or no risk of contracting HIV/AIDS?"

SOCIO-DEMOGRAPHIC CONTROL VARIABLES. Our socio-demographic control variables include the age of the respondent, number of children, marital status (married versus unmarried), family type (nuclear family, nuclear family with elders, joint family, single, or other), and family income. Three additional socio-demographic variables were education, occupation, and geographic region. Education was scored in the following categories: illiterate, literate but no formal education, four years or less of formal education, five to nine years of schooling, SSC-HSC (high school), college, general graduate degree, and professional graduate degree. Occupation was measured in a large number of categories. However, as more than 90 percent of the women in the surveys reported to be housewives, the occupation variable was recoded to housewife versus other. Finally, geographic region was coded as a dichotomous variable with the capital city of Delhi versus all other regions.

Appendix C

Table C1. Socioeconomic categories used for India surveys

Occupation		Education							
		Illiterate	Literate, no school	School: Up to 4 years	School: 5–9 years	SSC/HSC	Some college, not graduate	Graduate/PG: General	Graduate/PG: Professional
		1	2	3	4	5	6	7	8
01	Unskilled worker	E2	E2	E2	E1	D	D	D	D
02	Skilled manual	E2	E1	E1	D	C	C	B2	B2
03	Petty traders	E2	D	D	D	C	C	B2	B2
04	Shop owners	D	D	D	C	B2	B1	A2	A2
	Industrialists with employees								
05	None	D	C	C	B2	B1	A2	A2	A1
06	1–10	C	B2	B2	B2	B1	A2	A1	A1
07	10+	B1	B1	B1	A2	A2	A1	A1	A1
08	Self-employed professionals	D	D	D	D	B2	B1	A2	A1
09	Clerical/Salesmen	D	D	D	D	C	B2	B1	B1
10	Supervisor Level	D	D	D	C	C	B2	B1	A2
	Officers/Executives								
11	Junior	C	C	C	C	B2	B1	A2	A2
12	Middle/Senior	B1	B1	B1	B1	B1	A2	A1	A1

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