AIDS Education and Prevention, 19(5), 422–435, 2007

PROMOTING HIV RISK AWARENESS AND TESTING IN LATINOS LIVING ON THE U.S.–MEXICO BORDER: THE *TÚ NO ME CONOCES* SOCIAL MARKETING CAMPAIGN

Alisa M. Olshefsky, Michelle M. Zive, Rosana Scolari, and María Zuñiga

Increased incidence of HIV/AIDS in Latinos warrants effective social marketing messages to promote testing. The *Tú No Me Conoces* (You Don't Know Me) social marketing campaign promoted awareness of HIV risk and testing in Latinos living on the California–Mexico border. The 8–week campaign included Spanish–language radio, print media, a Web site, and a toll–free HIV–testing referral hotline. We documented an increase in HIV testing at partner clinics; 28% of testers who heard or saw an HIV advertisement specifically identified our campaign. Improved understanding of effective social marketing messages for HIV testing in the growing Latino border population is warranted.

BACKGROUND

Worldwide nearly 40 million persons are living with HIV (UNAIDS/WHO, 2006). The Centers for Disease Control and Prevention (CDC) estimates that there are over 1 million persons living with HIV in the United States and of these, about 25% have not yet been diagnosed and are unaware of their infection (Branson et al., 2006). Undiagnosed HIV in U.S. Latino populations is estimated to be between

Alisa M. Olshefsky Community Health Program Supervisor, University of California, San Diego, Division of Community Pediatrics, La Jolla, CA. Michelle M. Zive is with the University of California, San Diego, Division of Community Pediatrics, La Jolla, CA. Rosana Scolari is the Director of HIV Services, San Ysidro Health Center, San Ysidro, CA. María Luisa Zúñiga is Assistant Professor, University of California, San Diego, Division of International Health and Cross–Cultural Medicine and Division of Community Pediatrics, La Jolla, CA.

The current study is part of a broader 5–year border HIV/AIDS demonstration project funded in 2000 by the U.S. Department of Health and Human Services, Health Resources and Services Administration, HIV/AIDS Bureau, Ryan White Care Act Special Projects of National Significance Program. The messages used in the marketing campaign were developed by Better World Advertising, a co–collaborator in the campaign development activities. This project was partially supported by Grant P60 MD00220, from the San Diego EXPORT Center, National Center of Minority Health and Health Disparities, National Institutes of Health, and Grant 1K01 MH072353 from the National Institutes of Mental Health. The authors gratefully acknowledge the important contribution of Terry Whitaker, Director of Program Development (San Ysidro Health Center) for his vision and leadership throughout the development and implementation of this project. This work would not have been possible without the support of our clinic partners including Clínicas de Salud del Pueblo, Family Health Centers of San Diego and Vista Community Clinic.

Address correspondence to María Zuñiga, Division of International Health and Cross Cultural Medicine, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093.

180,000–280,000 persons (CDC, 2003). The CDC has recently provided recommendations for routine HIV testing for patients in all health care settings (Branson et al., 2006). However, implementation of these recommendations and overcoming barriers and challenges to HIV testing in at–risk populations will in all likelihood take time given that societal perceptions of getting tested for HIV are not the same as getting other routine blood tests such as a serum cholesterol count (Erbelding, 2006).

Latinos as an ethnic group are one of the populations that face significant barriers to getting tested for HIV and are more likely to go for HIV testing later in the course of HIV infection than non–Latino White persons (CDC, 2003). Previous studies indicate that Latinos, particularly in Latino immigrant communities, do not know they are at risk or infected with HIV (Levy et al., 2007). As persons of Hispanic descent are the youngest, largest and fastest growing minority population in the U.S., multifaceted efforts are needed to promote testing in Latino populations, particularly in the U.S.–Mexico border region, where Latino population growth and density is greatest (Guzmán, 2001).

The San Diego, California-Tijuana, Baja California border region has the busiest border crossing in the western hemisphere, with 42.7 million north–bound border passengers in personal vehicles crossing the border in 2006 (U.S. Department of Transportation, 2006). This region is considered a metropolitan area where it is estimated approximately 42,000 persons (about 8% of Tijuana's economically productive population) live in Tijuana and cross the U.S.–Mexico border every day to work in San Diego (Salinas, 2006). Residents on both sides cross the U.S.–Mexico border for work, shopping, to visit family or friends, for school or for health care and other services (San Diego Association of Governments, 2005).

Ruiz and colleagues have reported on the cross–border (both north– and south–bound) high–risk sexual behavior in a study with Tijuana and San Diego residents who were at risk for HIV infection (Ruiz, 2002). A recent survey of injection drug users in Tijuana found that only half had ever had a HIV test (Magis-Rodriguez et al., 2005). Similarly Brouwer and colleagues have observed an increase in HIV in Tijuana, where the prevalence has reached that of San Diego, and it's estimated that one in 125 persons may be infected (Brouwer et al., 2006). Studies in populations of men who have sex with men (MSM) found that young men and men of Latino ethnicity reported high proportions of risky sexual behavior and low HIV testing rates (MacKellar et al., 2005; Qiang et. al., 2006).

SOCIAL MARKETING, LATINOS, AND HIV

Research suggests that mass media have been effective at increasing knowledge and promoting behavior change for a number of public health issues including family planning, smoking cessation, cancer/cardiovascular risk, and AIDS prevention (Elder, Geller, Hovell, & Mayer, 1994; Kane, Gueye, Speizer, Pacque–Margolis, & Barron, 1998; Lashuay et al., 2000). Social marketing applies marketing techniques used successfully in mass marketing and advertising to promote increase in knowledge, behavior change and social change. Radio, television, print media and the Internet Web technology have been used successfully in social marketing campaigns (Novelli, 1990; Valente, Paredes & Poppe, 1998) and more recently in campaigns that target changing HIV/AIDS behavior in young people in developing countries (Bertrand & Anhang, 2006).

Compared with non–Latinos, Latinos spend more time listening to the radio than reading newspapers or watching television, and spend about half of their radio–listening time with Spanish–language radio compared with non–Latinos (Arbitron, 2004).

In the U.S.–Mexico border region, radio can reach Latinos on both sides of the border including public service messages broadcasted in Tijuana radio that reach audiences living in San Diego. The reverse is true as well. The Internet has become a powerful mechanism for information dissemination and communication and its importance as a tool to impart health messages is growing. In 2004, 4.5% of all Internet searches worldwide were for health or health–related information (Morahan–Martin, 2004).

Controlling new HIV infections is the most effective strategy for preventing the spread of the disease, and includes public education about high–risk behavior through activities such as public advertising, promotion of voluntary counseling and testing, community outreach and condom distribution (Idemyor, 2005). Although Spanish–language social marketing campaigns targeting Latinos have been shown to effectively increase awareness (Almendarez, Boysun, & Clark, 2004), there is limited published information on the development and efficacy of a Spanish–language social marketing campaign to promote HIV testing in high–risk Latino groups, and no published studies specific to populations living on the U.S.–Mexico border. This article describes the development, implementation and evaluation of an 8–week culturally specific Spanish–language social marketing campaign targeting Latinos living on the California–Mexico border.

METHODS

The *Tú No Me Conoces* (You Don't Know Me) social marketing campaign was developed through the efforts of the Southern California Border HIV/AIDS Project, an U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA) –funded, Special Projects of National Significance (SPNS) project. This project is a collaborative between the San Ysidro Health Center (lead agency) and the University of California, San Diego, Division of Community Pediatrics (program evaluation). In addition to the lead agency, three other community health centers participated in this project. Family Health Centers of San Diego is located in metropolitan/downtown area of San Diego, Vista Community Clinic in northern San Diego County, and Clínicas de Salud del Pueblo located in Brawley near Mexicali, an international border crossing approximately 100 miles east of Tijuana.

The goals of the *Tú No Me Conoces* social marketing campaign were to (a) increase awareness among Latinos in the targeted groups that they could be at risk for HIV/AIDS, (b) promote HIV testing services of four local community health clinic sites, and (c) assess the appropriateness of the message for these populations as measured by message recall. The 1–minute radio ads aired for 8 weeks between June 15 and August 16, 2003.

CAMPAIGN DEVELOPMENT

Mass media were chosen to reach Latinos at risk for HIV to promote testing among hard–to–reach population including high–risk Latinos, transborder, farmworkers, youth sex workers and MSMs, who may not be aware they are at risk for HIV. The project applied principles of public health mass media marketing (Elder et al., 1994) and the principles of behavioral stages of change (SOC; Prochaska & DiClemente, 1982) to develop the *Tú No Me Conoces* mass media campaign. In our study, the SOC theory, originally developed to understand smoking cessation behavior, allows for a suitable framework for understanding that some persons may be unaware of their risk for HIV infection (precontemplation) and with suitable cues and information (e.g., learning that they may be at risk and need to get tested), they may be

motivated to consider their risk and consider getting tested (contemplation), and then prepare for getting tested by identifying a place where they can go to get tested (preparation). This campaign sought to move targeted groups from precontemplation to contemplation of HIV/AIDS risk, and it also promoted HIV testing action. The campaign used radio advertisements, an Internet Web site, a telephone hotline, and brochures to reach the target population.

San Ysidro Health Center contracted the services of the San Francisco-based marketing agency Better World Advertising in November 2003 to develop and carry out the campaign. Campaign costs were calculated using program and personnel costs provided by San Ysidro Health Center. This included the annual salary of two HIV testers/outreach workers, the cost of the telephone line and the total amount paid to Better World Advertising were used as direct costs for a total cost of $93,755. Societal costs such as participant time were not included in the analysis owing to the scope of the evaluation. Anderson, Hager, Su, and Urban (2002) used a similar method of cost analysis in their study of the cost effectiveness of mammography promotion by volunteers in rural communities. Better World Advertising, founded in 1996, has developed nationally recognized social marketing campaigns such as HIV Stops With Me. Many of its campaigns have focused on HIV prevention with gay and bisexual populations, including Latinos (Conner et al., 2005).

In 2002 the project leadership and Better World Advertising agency collaborated on developing the social marketing campaign, theme, and message content. Three campaign messages were developed and input was solicited from individuals representing the target populations. In March 2003 five focus groups were conducted across the four sites, each of which serve distinct populations. San Ysidro served transborder Latinos, Clinicas de Salud in Imperial County served farmworkers, Vista Community Clinic served sex workers, farmworkers and MSM, and Family Health Centers of San Diego served MSM.

Across the five focus groups, there were 40 Latinos (68% males, age range 17–55 years, 32% MSM, and 42% farmworkers). Focus group participants were given a $10 voucher in appreciation for their time and contributions. During each of the focus groups, participants were asked to listen to an audio tape containing three different HIV prevention messages and to review corresponding brochures. The other two messages from Spanish were "Are you at risk?" and "Hi. I tested a year ago and I'm positive."

The *Tú No Me Conoces* message was chosen unanimously by the 40 participants over the five focus groups as the message with the most impact. Post-focus group discussions between participants and project leadership and the facilitator indicated that participants felt the *Tú No Me Conoces*campaign was the most bold and direct about the real risk of transmitting the HIV virus, where previous campaigns, including the two that were tested in the focus groups, were less direct about the HIV issue and did not confront the taboos regarding sex and gender biases that are common in the Latino culture. Additionally, the *Tú No Me Conoces*radio ad considered a broad Latino audience. The motivation behind the radio campaign was to make listeners realize they are or have been at risk for HIV/AIDS by acknowledging they are or have engaged in risky behavior and/or questioning their partner's monogamy, all powerful reasons to get tested. Voices used in the ads were both male and female to enhance the broad appeal. Each line of the ad opened with the phrase "I am the person who . . . " All radio ads aired in Spanish. (See Table 1.) The design of the brochure depicted four faces melding into one, suggesting that the face of HIV is not clearly distinguishable and complementing "you don't know me" theme.

TABLE 1. *Tu No Me Conoces* Radio Advertisement: 60–Second English and Spanish Version

Spanish	English
Tú No Me Conoces	You Don't Know Me
V: = Voz de . . .	(V:) = Voice of . . .
Tu no me conoces. (V: mujer)	You don't know me. (v: woman)
Yo soy la persona que se acostó con su marido. (V: mujer)	I'm the person . . . that slept with your husband. (V: woman)
Yo soy la persona que ha estado con tu novia. (V: hombre)	I'm the person . . . that got together with your girlfriend. (V: man)
Yo soy la persona que tuvo sexo con tu novio. (V: hombre)	I'm the person . . . that had sex with your boyfriend. (V: man)
Yo soy la persona que tuvo una aventura con tu esposa. (V: hombre)	I'm the person . . . who had an adventure with your wife. (V: man)
Nosotros somos las personas que no usamos condón con tu pareja. (V: todos)	We are the people who didn't use a condom with your partner. (V: all)
¿Crees que no estamos hablando de ti?	Think we're not talking about you?
Piénsalo bien. (repetido 3 veces con diferentes voces)	Think again. (repeated three times by different voices).
La prueba del VIH es para personas que no piensan que la necesita. Recuerde que hay una manera de saber si tu o tu pareja están infectados con el VIH.	The HIV test is for people who don't think they need it. Remember that there is a way to know if you or your partner are infected with HIV.
Hazte la prueba. (V: mujer)	Get tested. (V: woman)
Para una prueba del VIH gratis o para recibir más información, favor de llamar a 1866–me Conoces (repetido tres veces) o visite la página de internet tunomeconoces.org. (V: hombre)	For a free HIV test or for more information please call *1866–me Conoces* (repeated three times) or visit the website tunomeconoces.org. (V: man)

Once the campaign message was chosen, Better World Advertising recommended four radio stations, two in San Diego and two in Imperial County based on the Latino listenership and the strength of the signal to reach both sides of the border. Although our capacity to evaluate the impact in Mexico was limited, the goal was to reach as many members of the Spanish–speaking audience as possible.

CAMPAIGN IMPLEMENTATION

The radio spot was aired over 650 times in San Diego and Imperial Valley between June 15 and August 16, 2003. In an effort to promote HIV testing among the targeted at risk populations, radio advertisements were aired at times of day when the listener base was largest and included weekdays and weekends. In addition to radio, the Internet was used as a source of information for HIV and testing services (www.tunomeconoces.org). The audio advertisement was embedded in the site and accessible to those who had streaming audio capability.

For those who didn't hear the radio ad or didn't have access to the Internet, a brochure was developed to be able to distribute at outreach events. The brochure had the same message as the Web site and radio campaign. All materials contained a list of the participating clinics by name, as well as their addresses and phone numbers if someone was interested in calling to get tested. Photos included on the brochure reflected our population.

A toll–free telephone line was set up and promoted through the radio advertisement and clinic staff distributed campaign brochures. The number 1–866–ME–CONOCES, was developed to improve ease of recall for the listener's reference and to reinforce the campaign message. San Ysidro Health Center personnel were available to answer calls between 6 a.m. and 6 p.m. Monday through Friday. Callers could leave a message on an answering machine if they wanted a call back; however, no messages were left during the 8 weeks the toll–free number was active.

Our system was not able to detect hang–ups if a person called and did not want to leave a message

At San Ysidro Health Center's Spanish–speaking HIV test counselors were trained to receive the calls from the campaign number. Callers were provided with additional education regarding HIV, and could review their personal risk factors with the HIV test counselors.

Callers were then referred to an HIV testing site, one of the four partner agencies, that was most convenient for the caller. Some callers who lived in other regions chose to seek testing services at San Ysidro Health Center because they had already made a connection with the test counselor. Others preferred seeking testing services outside of their communities given the stigma often associated with HIV testing and their concern about being recognized in their own communities.

DATA COLLECTION PROCEDURES

The evaluation plan was modeled after methods proposed by Windsor and associates (Windsor, Clark, Boyd, and Goodman, 2004). Methods used included defining the problem and objective of the campaign, designing the intervention, computing program costs, and documenting intervention outcome. The outcome measures of our evaluation plan included: the number of telephone calls received, the number of hits to the Web site, and message penetration, as measured by campaign theme recall among persons tested and agreed to participate in the survey at the four participating health agencies.

All materials and measures used in this campaign were approved by the University of California, San Diego, Human Research Protection Program. Six staff members from the lead agency were trained on the use of the phone surveys and nine staff members from the four participating community health centers received training on the testing media exposure survey. All trainings were conducted during May and June 2003.

Three evaluation instruments, including Phone Survey, Web site Survey and Testing Media Exposure Survey, and accompanying protocols were developed specifically for the *Tú No Me Conoces*social marketing campaign. In addition, the cost of the program was calculated.

Call Activity Monitoring and Impact Evaluation of Radio Advertisements. Volume of calls and time of calls to the toll–free number were meticulously documented using a telephone log sheet with a brief survey and compared with phone records. Phone surveys to determine media impact were completed by site staff. Once verbal consent was given, the following information was collected from callers on the phone survey: radio station where advertisement was heard; brief description of advertisement; perceived risk for contracting HIV; perception of likelihood of getting tested for HIV; residence region; and, age and gender variables. If consent was refused, the caller was referred to HIV testing sites or the campaign Web site.

Monitoring of Web Site Activity. The number of times the Web site was accessed and length of time accessed were measured using statistics available through Better World Advertising. A small percentage of "hits" was discounted from the total to account for project personnel who accessed the site to check on and update site contents. An online version of the evaluation phone survey was placed on the Web site as a pop–up screen. Visitors could voluntarily complete and submit the survey via the Web site.

Monitoring of Testing Activity. The four clinic sites were asked to report on testing activity 3 months prior to the campaign, during the campaign, and 3 months after

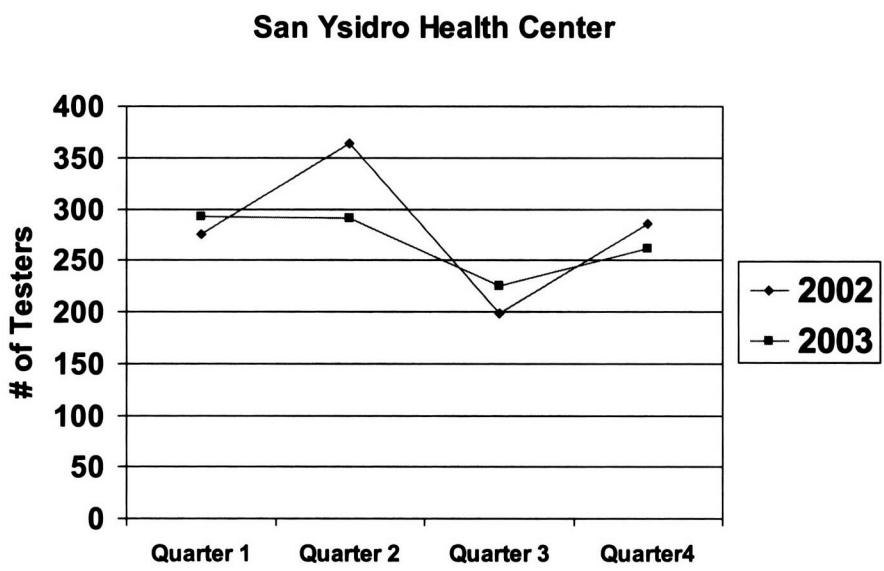

FIGURE 1. Total number of HIV tests conducted at San Ysidro Health Center.

the campaign. A brief media survey was administered at testing to gage the impact of radio advertisements and campaign brochures on individuals who tested at the project clinic sites.

RESULTS

CALL ACTIVITY

Based on telephone records during the 8–week campaign, 68 calls were made to the toll–free number. Ten percent of the calls (n = 7) were repeat calls from the same number and are included in the analysis. Forty percent (n = 27), 32% (n = 22) and 19% (n = 13) were from central, south and north San Diego, respectively, with 9% (n = 6) from Imperial Valley. Of the 68 calls, 38 calls were received on the toll–free line during hours of operation and were fielded by staff members. Of the 38 total calls, 7 of the callers either hung up or had a faulty cellular connection. Two callers refused to participate in the survey and were referred directly to HIV testing and/or the campaign Web site. One person called in error. A total of 28 individuals consented to the administration of the phone survey, a 74% response rate.

Of the 28 callers for whom demographic information was available, all were Latino, 60% (n = 17) were male, 36% (n = 10) were female, and 4% (n = 1) were unknown. The mean age was 32.8, with a range of 20 to 47 years. Seventy–five percent (21 out of 28) of callers were able to identify the station where they heard the advertisement with those radio stations in the south or central San Diego being able to be identified more often (62%; 13/21) compared with north San Diego (24%; 5/21) and Imperial Valley (14%; 3/21).

Sixty–four percent (18 out of 28) of callers were able to describe the *Tú No Me Conoces*advertisement. Fifty–six percent of those who described the advertisement recalled *Yo soy la persona* (I am the person) as the main theme. When asked what time of

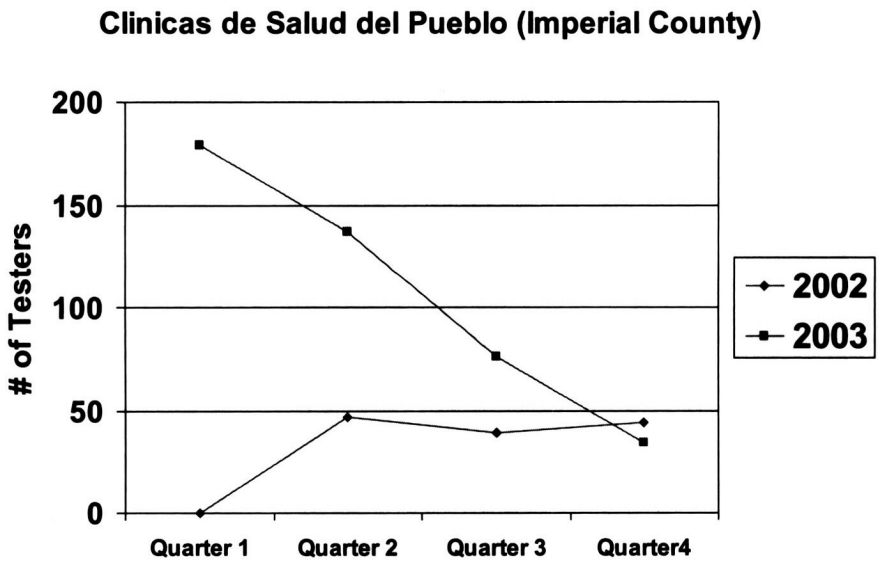

FIGURE 2. Total number of HIV tests conducted at Clinicas de Salud del Pueblo (Imperial County).

day they remembered hearing the ad, 56% said morning, 18% said afternoon, 15% said evening, and 11% recalled hearing the ad at different times.

Twenty–five percent (7 out of 28) of callers responded that they had previously been tested for HIV. Callers were asked how likely they were to get tested based on what they heard on the advertisement. On a 5-point Likert scale (ranging from very likely to very unlikely), responses were categorized as follows: 36% (10/28) very likely, 46% (13/28) likely, 4% (1/28) not sure, 4% (1/28) very unlikely, and 11% (3/28) declined or missing. Sixty–one percent (17/28) think they are at risk for getting HIV, 11% (3/28) did not think they were at risk, 21% (6/28) were unsure, and 7% (2/28) declined/missing. Sixty–four percent (18/28) would ask someone else to get tested, 4% (1/28) wouldn't ask, 18% (5/28) were unsure, and 14% (4/28) declined or missing.

WEB SITE ACTIVITY

There were a total of 203 visits to the Web site during the active 8–week period of the campaign and 114 visits were made from two months after the radio advertisements. Sixty–three percent of the Web site visitors viewed one page only and over 80% spent 1 minute viewing the site. More than half of the viewers went directly to the site (did not use a search engine) which means they obtained the Web site information directly from the radio advertisements or brochures.

CAMPAIGN RECALL AT HIV TESTING SITES

The number of HIV tests given at each clinic site during 2003 was analyzed by quarter to coincide with HIV testing reported by partner sites. The social marketing campaign, which was conducted from June 15 to August 16, 2003, potentially impacted testing during the end of the second quarter and the majority of the third quarter. It is important to note that testing data can serve at best as a limited indicator of

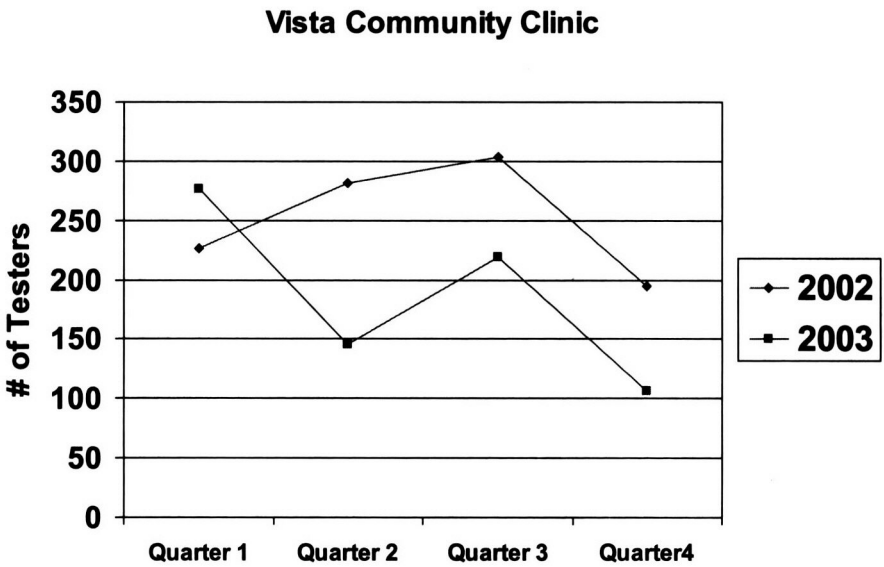

FIGURE 3. Total number of HIV tests conducted at Vista Community Clinic.

campaign impact. Clinic testing numbers are significantly influenced by external factors such as the migration of farmworkers, access to the target population, and staffing levels for outreach which promotes HIV testing. Figures 1–4 include total number of tests conducted at each clinic site. During the active period of the campaign when radio spots were airing in the catchment areas, half the sites experienced an increase in the number of monthly tests. The majority of the sites experienced an increase in testing during 2003, campaign period quarters 2 and 3, April to September, compared with quarter 4.

A total of 429 media exposure surveys were completed by clinic staff from June 10 through October 31, 2003. The results of the media survey indicate that approximately 30% (127/429) of those who came in for testing and agreed to be surveyed recalled seeing or hearing an advertisement about HIV testing in the last month. Of those who recalled seeing or hearing an advertisement, 59% (75/127) indicated radio as the media exposure mechanism. Twenty–eight percent (36/127) were able to describe the *Tú No Me Conoces*advertisement either by name or by the phase, *Yo soy la persona.* When asked in what language they recalled seeing or hearing the ad, 62% (61/127) recalled Spanish. In spite of the fact that all advertisements were done in Spanish, 15% of the respondents reported hearing the ads in English.

Of those who responded, 81% (61/75) identified the U.S. as the country where they heard the advertisement. Twelve percent identified Mexico and 7% identified both the U.S. and Mexico as the county where they heard the advertisement. Of those who completed the media exposure survey and were tested for HIV, 2.8% (12/429) tested HIV–positive. This rate is almost equal to the San Diego County number of HIV–positive tests in Latinos as a proportion of all HIV tests among Latinos, currently at 2.7% (County of San Diego, 2006). Those who tested positive were linked

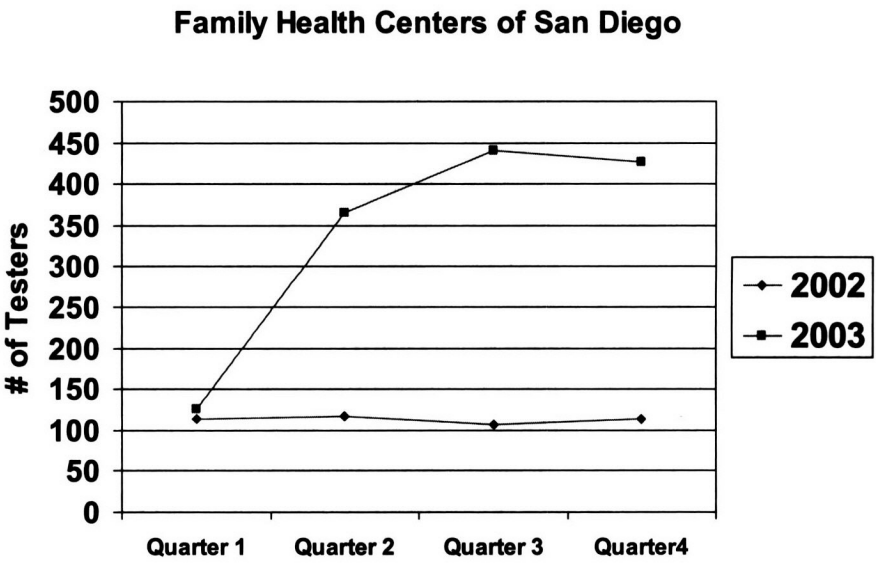

FIGURE 4. Total number of HIV tests conducted at Family Health Centers of San Diego.

into case management and primary care services. The total cost of the campaign was $93,755.

DISCUSSION

Based on the 8–week social marketing program, *Tu No Me Conoces*, which used brochures, a toll–free number, radio advertisements, and a Web site to promote HIV testing in high–risk Latino groups, an increase in HIV testing was documented at partner clinics. We also observed that yearly seasonal trends for testing among some of our partner clinic sites remained consistent even during the campaign. This seasonal fluctuation of testing, evident in both rural and urban areas, has important implications for promoting testing behavior in specific regions. Future outreach and promotional efforts should be attuned to these changes in order to more effectively target communities. In our rural partner clinic, for example, there are seasons where the migrant farm worker population residing in the regions is higher than at other times.

Because there are many factors that affect testing behavior (e.g., seasonal fluctuations, other initiatives to promote testing), we cannot attribute the observed increase or subsequent decrease in testing behavior to our campaign. Other studies have found positive results when using a social marketing campaign. Conner et al. (2005) developed a culturally sensitive HIV prevention social marketing campaign for gay and bisexual Latino men living in the Southern California region. The campaign included a Web site, phone cards, postcards, and ads in publications read by the targeted population to recruit Latinos men for an HIV prevention program. One of the challenges of public health media campaigns is that their effects are most often short lived. The immediate impact of our campaign, however, was evident. The study found that the campaign was successful in attracting the attention of the target population and helping to build interest in and contacts with the HIV prevention program, thus improving

the program capacity. Zúñiga and others (1999) found that Latino parents responded positively to a social marketing message created for Spanish–language radio to promote timely infant immunization messages and that many parents reported a high level of message recall.

Of those who were HIV tested, and who recalled an HIV message ($n = 127$), 28% identified the radio campaign by name. Although the benefits of social marketing campaigns are short lived unless they are sustained through other public health education efforts, based on message recall, we suspect that the 'shock value' of bringing attention to potential risk for segments of the population who may not realize they are at risk is very important. It is worth noting that survey respondents identified parts of the radio campaign that specifically addressed partner infidelity. This is particularly true for Latinas, who are increasing in numbers of HIV/AIDS cases in the U.S.. Suspected infection through heterosexual contact with partners who participate in high–risk behavior is a challenging and emotionally charged issue for many females. This may be particularly difficult in many Latino cultures where *machismo* (sense of manliness) may play a role in Latina's self–efficacy to be conscious of her risk and take measures to find out if she is positive. In a qualitative study with Latinos and Latinas living with HIV, Zúñiga et al. (2006) documented the potential negative role of the male spouse on the female spouse's access to care and social services. Gender and other important facets of the HIV/AIDS epidemic (including stigma) continue to hinder testing and prevention of HIV transmission. It is estimated by the United Nations Program on HIV/AIDS that of the estimated 38.6 million persons worldwide living with HIV, a majority do not know that they are infected (UNAIDS/WHO, 2006).

Other agencies attempting to develop, implement, and evaluate an HIV–testing social marketing campaign may benefit from the lessons learned from our experience with the *Tú No Me Conoces*campaign. First, community involvement and targeted populations' input is imperative to developing a campaign that will move the targeted group from precontemplation to contemplation of HIV/AIDS risk. That is, bringing one's perception of potential risk for HIV infection from a point where the person is not considering his or her risk (precontemplation) to a point where the risk of infection is now being considered (contemplation), and mass media messages may play a role in helping the person to prepare for getting tested (e.g., by learning where to get tested). Based on the feedback from the focus groups, it was clear that these at risk population were ready to hear an edgier and bolder campaign compared with the standard messages used in previous campaigns. Future campaigns should consider the use of Spanish–language radio stations and the Internet as viable ways of reaching traditionally hard-to-reach populations, such as transborder populations. In their study of cognitive escape, Internet use and sexually risky behavior among MSMs, McKirnan, and Shams-Tolou (2006) found that Internet use was highest among White, more affluent and younger men. However, the increased sexual risk behavior for men who found partners through the Internet did not vary by their age, ethnicity, socioeconomic status, or HIV status. Given the increase in Internet access among Latinos (Arbitron, 2004), social marketing campaigns that use the Internet have the potential to reach beyond borders and around the world with public health messages.

It is important that persons who operate a toll–free number promoting HIV-testing should be HIV testing certified staff in order to provide real–time information to persons who want to get tested. Having information on clinic addresses and hours of operation is not sufficient. We observed that if the HIV–testing staff were able to make a connection with the individual, this gave the individual a more personal and encour-

aging entry into the testing system. Another important observation is that some callers to the toll–free line requested referrals to clinics outside of their communities presumably because of concerns about confidentiality and being seen by someone they know at a testing site.

STUDY LIMITATIONS

Our capacity to monitor closely the impact of the campaign on testing overall in the San Diego region is limited to the four clinic sites who were willing to administer media exposure surveys to clients who came in for testing. Although we observed an increase in testing in these clinics during the campaign period, with a corresponding decrease in testing once the campaign was completed, we do not have sufficient information to determine whether our campaign indeed contributed to these changes in testing patterns. There were, as well other HIV–related media activities during this time, and we are also limited by potential recall bias. Nonetheless, the observation that 28% of persons who recalled a media message were able to explicitly identify our radio message is not without importance in terms of potential impact. We are also limited in our ability to understand the extent to which the campaign may have contributed to an increased awareness of risk in the various Latino populations at risk for HIV. From a binational perspective, future work should include attempts to measure the impact of the campaign on both sides of the border. As with all social marketing efforts, the potential impact on behavior can only be expected while the campaign is active and additional public health efforts are needed to reinforce the testing messages. Although we are unable to locate published findings on a comparable social marketing campaign in the U.S. border region with Mexico, preliminary call tracking and testing data available from a another SPNS site in Harlingen, Texas, that conducted an 8–week television, radio and print social marketing campaign targeting Latina women in July and August 2002 (Smith, Cantu, Cantu, & Losoya, 2003) provides a frame of reference for campaign responses we documented in the current study. Colleagues in Harlingen indicated that a total of 30 persons called in as a response to Spanish- and English–language radio messages and that 7 persons came in for testing who had been exposed to radio messages (period of measurement: July–December 2002); television advertisement proved to promote the largest proportion of all calls and testing activity.

CONCLUSIONS

Our campaign has generated interest with other community health centers in the U.S.–Mexico border region. Because the campaign was designed to have broad appeal to different Latino audiences and is particularly suitable in the U.S.–Mexico border context in which it was developed, the opportunity to use it with other Latino populations in the U.S. and Latin America has potential. Improved evaluation of the impact of this campaign may be sought through random–digit-dialing sampling framework; however, this does require substantial funding considerations.

Future studies should conduct a cost-effectiveness analysis that includes the indirect societal benefits of increasing awareness regarding HIV risk behavior, potential infections averted in HIV–negative persons and reduction in the risk of reinfection for HIV–positive individuals, and decreasing the stigma associated with discussing the risk of HIV infection between monogamous (or perceived monogamous) partners. Campaigns for Latinos need to account for the fact that social norms and mores within the Latino culture often differ from those of the dominant culture. Studies have

shown that cultural values such as *machismo* may prevent the acknowledgment of homosexuality (Diaz, 1997; Suarez–Al–Adam, Raffaelli, & O'Leary, 2000) and studies conducted through the CDC (2000) reveal that many Latino MSM identify themselves as heterosexual, and as a result, may not relate to prevention message created for White gay men. Bearing in mind the message-recall specification from survey participants, we believe that this nature of campaign may indeed be a step in the right direction to the creation of population specific culturally and linguistically competent social marketing campaigns to promote HIV testing in populations who may not suspect they are at risk.

REFERENCES

Almendarez, I.S., Boysun, M., & Clark, K. (2004). Thunder and lightning and rain: A Latino/Hispanic diabetes media awareness campaign. *Family and Community Health, 27*(2), 114–122.

Anderson, R.M., Hager, M., Su, C., & Urban, N. (2002). Analysis of the cost–effectiveness ofmammography promotion by volunteers in rural communities. *Health Education and Behavior, 29*(6), 755–770.

Arbitron. (2004). *Power of Hispanic consumers: A compelling argument for reaching out to Hispanic Consumers.* [Report]. Retrieved December 11, 2006, from http://www.arbitron.com/downloads/hisp_consumer_study_2004.pdf

Bertrand J.T., & Anhang, R. (2006). The effectiveness of mass media in changing HIV/AIDS–related behaviour among young people in developing countries. *World Health Organization Technical Report,* Series 938, 205–241.

Branson, B.M., Handsfield, H.H., Lampe, M.A., Janssen, R.S., Taylor, A.W., Lyss, C.B., et al. (2006). Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health–care settings. *Morbidity and Mortality Weekly Report, 55*(RR14), 1–17.

Brouwer, K.C., Strathdee, S.A., Magis–Rodríguez, C., Bravo–García, E., Gayet, C., Patterson, T.L. et al. (2006). Estimated numbers of men and women infected with HIV/AIDS in Tijuana, Mexico. *Journal of Urban Health: Bulletin of the New York Academy of Medicine, 83*(2), 299–307.

Center for Disease Control and Prevention. (2000). HIV/AIDS among racial/ethnic minority men who have sex with men—United States, 1989–1998. *Morbidity and Mortality Weekly Report, 49,* 4–11.

Center for Disease Control and Prevention. (2003). Late versus early testing of HIV – 16 sites, United States, 2000 – 2003. *Morbidity and Mortality Weekly Report, 52*(25), 581–586.

Conner, R.F., Takahashi, L., Ortiz, E., Archuleta, E., Muniz, J., & Rodriguez, J. (2005). The Solaar HIV prevention program for gay and bisexual Latino men: Using social marketing to build capacity for service provision and evaluation. *AIDS Education and Prevention, 17*(4), 361–374.

County of San Diego, Health and Human Services Agency, Public Health Services. (2006). *HIV/AIDS epidemiology report 2006.* San Diego, CA: Author. Retrieved December 11, 2006, fromhttp://www2.sdcounty.ca.gov/hhsa/documents/HCT_SDC.pdf)

Diaz, R. (1997). Latino gay men and psycho–cultural barriers to AIDS prevention. In M.P. Levin, P.M. Nardi, & J.H. Gagnon (Eds.), *Changing times: Gay men and lesbians encounter HIV/AIDS.* Chicago: University of Chicago Press.

Elder, J.P., Geller, E.S., Hovell, M.F., & Mayer, J.A. (1994). *Motivating health behavior.* New York: Delmar.

Erbelding, E.J. (2006). Making HIV testing routine: New CDC guidelines to diminish barriers to diagnosis. *The Hopkins HIV Report, 18*(4), 8–11.

Guzmán, B. (2001). *The Hispanic population: Census 2000 brief.* Washington, DC: U.S. Census Bureau. Retrieved December 11, 2006, from http://www.census.gov/prod/2001pubs/c2kbr01–3.pdf#search='Census%202000%20Brief%20Hispanics%20in%20the%20US'

Idemyor, V. (2005). The 2004 International AIDS Conference and how to globally counter HIV/AIDS. *HIV Clinical Trials, 6*(1), 43–49.

Kane, T.T., Gueye, M., Speizer, I., Pacque–Margolis, S., & Baron, D. (1998). The impact of a family planning multimedia campaign in Bamako, Mali. *Studies in Family Planning, 29*(3), 309–323.

Lashuay, M.A., Tjoa, T., Zúñiga de Nuncio, M.L., Franklin, M., Elder, J.E., & Jones, M.

(2000). Exposure to immunization media messages among African American parents. *Preventive Medicine, 31, 522–528.*

Levy, V., Prentiss, D., Balmas, G., Chen, S., Israelski, D., Katzenstein, D. et al. (2007). Factors in the delayed HIV presentation of immigrants in Northern California: Implications for voluntary counseling and testing programs. *Journal of Immigrant Health, 9,* 49–54.

MacKellar, D.A., Valleroy, L.A., Secura, G.M., Behel, S., Bingham, T., Celentano, D.D., et al. (2005). Unrecognized HIV infection, risk behaviors, and perceptions of risk among young men who have sex with men: Opportunities for advancing HIV prevention in the third decade of HIV/AIDS. *Journal of Acquired Immune Deficiency Syndrome, 38*(5), 603–614.

Magis–Rodriguez, C., Brouwer, K.C., Morales, S., Gayet, C., Lozada, R., Ortiz–Mondragon, R., et al. (2005). HIV prevalence and correlates of receptive needle sharing among injection drug users in the Mexican–U.S. border city of Tijuana. *Journal of Psychoactive Drugs, 37*(3), 333–339.

McKirnan, D., Houston, E., & Shams–Tolou, M. (2006). Is the web the culprit? Cognitive escape and Internet sexual risk among gay and bisexual men. *AIDS and Behavior, 9084–9088. [Online publication]. Retrieved December 11, 2006, from http://www. springerlink.com/ content/ d8860512621qv431/*

Morahan–Martin, J.M. (2004). How internet users find, evaluate, and use online health information: A cross–cultural review. *Cyberpsychology and Behavior, 7,* 497–510.

Novelli, W.D. (1990). Achieving black belt excellence in marketing health care. *Journal of Health Care Marketing, 10*(4), 2–7.

Prochaska, J.O., & DiClemente, C.C. (1982). Transtheoretical therapy: Towards a more integrative model of change. *Psychotherapy, Theory, Research and Practice, 19, 276–288.*

Qiang, X., Osmond, D.H., Tholandi, M., Pollack, L.M., Zhou, W., Ruiz, J.D., et al. (2006). HIV prevalence and sexual risk behaviors among men who have sex with men. *Journal of Acquired Immune Deficiency Syndrome, 41*(2), 238–245.

Ruiz, J. (2002, February). HIV prevalence, risk behaviors, and access to care among young Latino MSM in San Diego, California and Tijuana, Mexico. Paper Presented at the Fifth Annual Conference on AIDS Research in California, 19th Annual AIDS Investigators' Meeting, Sacramento, CA. Retrieved December 11, 2006, from http://uarp.ucop.edu/resources/source/ Plenary–Ruiz.pdf

Salinas, D. (2006). Cruzan 42 mil a EU cada día a trabajar. *Frontera.* Retrieved December 11, 2006, from http://www.frontera.info/ edicionenlinea/nota.asp?NumNota=100601

San Diego Association of Governments. (2003). *San Diego-Baja California Land Ports of Entry. Fact Sheet.* Retrieved August 18, 2007 from, http://www.sandag.org/uploads/publicationid/publicationid_1184_5148.pdf

San Diego Association of Governments, California Department of Transportation. (2006). *Economic impacts of wait times at the San Diego–Baja California Border: Final report.* San Diego, CA: Author. San Diego Association of Governments. Retrieved December 11, 2006, from http://www.sandag.org/programs /borders/binational/projects/2006_border _wait_impacts_execsum.pdf

Smith, C.R., Cantu, E., Cantu, Y., & Losoya, G. (2003, August). *Proyecto juntos.* Paper presented at the HRSA SPNS U.S./Mexico Border Health Initiative All Grantees Meeting. El Paso, TX. Retrieved December 15, 2006, from http://casr.ou.edu/rec/pdf/ 08–13–03_ VAC.pdf

Suarez–Al–Adam, M., Raffaelli, M., & O'Leary, A. (2000). Influence of abuse and partner hypermasculinity on the sexual behavior of Latinas. *AIDS Education and Prevention, 12,* 263–274.

UNAIDS/WHO. (2006). *AIDS Epidemic Update: December 2006.* Retrieved August 17, 2007 from, http://data.unaids.org/pub/EpiReport/ 2006/2006_EpiUdate_en.pdf

U.S. Department of Transportation, Research and Innovation Technology Administration, Bureau of Transportation Statistics, Border Crossing/Entry Data; based on data from U.S. Department of Homeland Security, Customs and Border Protection, OMR database, http://www.transtats.bts.gov/bordercrossing .aspx

Valente, T.W., Paredes, P., & Poppe, P.R. (1998). Matching the message to the process: the relative ordering of knowledge, attitudes, and practices in behavior change research. *Human Communication Research, 24*(3), 366–385.

Windsor, R., Clark, N., Boyd, N.R., & Goodman, R.M. (2004). *Evaluation of health promotion, health education, and disease prvention programs* (3rd ed.). New York: McGraw–Hill.

Zuniga de Nuncio, M.L., Price, S.A., Tjoa, T., Lashuay, N., & Elder, J.P. (1990). Pretesting Spanish-language educational radio messages to promote timely and complete infant immunization in California, *Jounal of Community Health, 24*(4), 269–283.