



# Effectiveness of HIV Prevention Social Marketing With Injecting Drug Users

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Social marketing involves applying marketing principles to promote social goods. In the context of health behavior, it has been used successfully to reduce alcohol-related car crashes, smoking among youths, and malaria transmission, among other goals. Features of social marketing, such as audience segmentation and repeated exposure to prevention messages, distinguish it from traditional health promotion programs. A recent review found 8 of 10 rigorously evaluated social marketing interventions responsible for changes in HIV-related behavior or behavioral intentions. We studied 479 injection drug users to evaluate a community-based social marketing campaign to reduce injection risk behavior among drug users in Sacramento, California. Injecting drugs is associated with HIV infection in more than 130 countries worldwide. (*Am J Public Health*. 2010;100:1828–1830. doi:10.2105/AJPH.2009.181982.)

## KEY FINDINGS

- A 21-month multicomponent HIV prevention social marketing campaign succeeded in reaching a majority of the estimated 7000 heroin users in Sacramento, California.
- Exposure to HIV prevention messages with small posters and a newsletter significantly reduced the community-wide prevalence of HIV-related injection risk behavior.
- Social marketing may be a cost-effective strategy for controlling the spread of HIV among injection drug users.

We describe and report the results of a social marketing campaign that targeted an estimated 7000 heroin users in Sacramento, California.

The 4 components of the campaign included what has been variously called convenience advertising or “narrowcasting,” which involved the placement of small posters with HIV prevention messages in venues frequented by injection drug users (IDU). The San Francisco–based social marketing firm Better World Advertising designed and produced the posters. The venues included public restrooms, donut shops, cash-checking services, motels, and convenience stores. Outreach workers employed by Harm Reduction

Services, a community-based organization, identified the venues in the course of ethnographic mapping of injection drug use in Sacramento. Seven different posters were placed at approximately 50 locations over a period of 21 months before the evaluation.

The second component of the campaign involved distributing *User News*, a newsletter providing HIV prevention information and other news of interest to Sacramento’s drug-injecting community. The quarterly newsletter was created by the Harm Reduction Services outreach team in collaboration with Better World Advertising. Outreach workers distributed an estimated 4000 copies of 6 issues of the newsletter in the same venues identified during ethnographic mapping.

The third component involved the late night broadcast of *User Friendly TV*, a television program for IDUs shown on a public access channel. The 50-minute program, produced by Emmy award–winning producer Joyce Mitchell, reported on risk factors for HIV/AIDS, flesh-eating bacteria, vein care, and syringe exchange. Twenty-five episodes of the show were each shown twice during the campaign.

The fourth and final component involved distributing giveaways, including an HIV

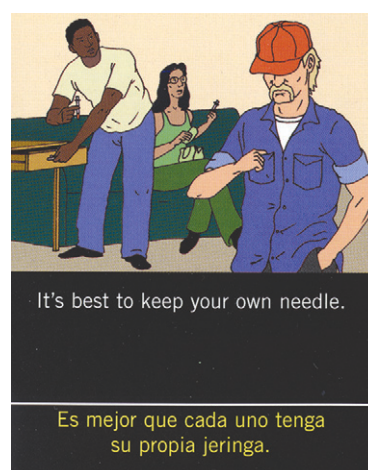
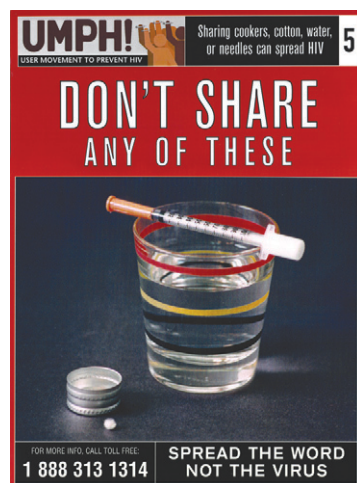
prevention booklet in cartoon format and a “stress grip” emblazoned with 5 prioritized prevention messages that were also disseminated via the other components. Outreach workers distributed 4000 copies of the booklet and the stress grip as part of the campaign. Better World Advertising produced the giveaways.

Figure 1 illustrates aspects of the campaign’s 4 components.

## EVALUATION

Evaluation of the social marketing campaign involved 2 interviewer-administered waves of surveys of approximately 500 IDUs each in Sacramento and a comparison site (San Diego, CA) before and after the campaign was implemented in Sacramento. The survey waves, which each took 6 to 9 months to complete, were conducted in street settings (a mobile van, parks, coffee houses, and other places) using targeted sampling techniques<sup>1</sup> designed to produce representative samples of heroin injectors at both sites.

A sampling frame derived from social indicator data was used to develop recruitment quotas at each site by zip code, gender, and ethnicity. The follow-up surveys conducted in



**FIGURE 1—The social marketing campaign featured (a) posters, (b) a newsletter, (c) a television show, (d) stress grips, and (e) a cartoon from a prevention booklet: Community Mobilization Project, Sacramento, California, 1999–2000.**

Sacramento assessed the effectiveness of the social marketing campaign as well as other parts of the community-level intervention in Sacramento that did not prove to be effective. These included small-group empowerment sessions and health-risk assessments and HIV testing and counseling conducted with 1750 drug users. The surveys showed a decrease in the proportion of IDUs at low versus high risk of acquiring HIV from injection practices from 67.4% to 61.0%

( $P = .02$ ) from baseline to follow-up in San Diego but no change in injection risk among IDUs in Sacramento during the same period (47.5% and 47.6% were at low risk at baseline and follow-up, respectively). The rationale for the outcome measure used is described elsewhere.<sup>2</sup>

The surveys for this project were conducted at a time when widespread availability of antiretroviral therapy was contributing to a relapse to unsafe sexual practices among gay men, a

phenomenon associated with what has come to be known as “treatment optimism” in that HIV has become a treatable chronic (as opposed to fatal) condition, and a community-level HIV prevention intervention targeting such men appears to have been effective in staving off unsafe sexual behaviors associated with this phenomenon.<sup>3</sup> Although a similar trend has been observed in injection risk behavior, in 1 study it was traced not to a belief in reduced transmissibility of

HIV as a result of antiretroviral therapy but to “safer injection fatigue,” that is, reduced willingness to implement safer injection recommendations.<sup>4</sup>

Analysis of follow-up data from Sacramento indicated that 56% of a sample of 479 IDUs had seen a prevention-related poster, 45% had seen 2 or more copies of the newsletter, 29% had seen the television show, and 41% had seen the stress grip. The sample averaged 41 years of age, was 60% male,

and was 25% African American, 24% Hispanic, 45% non-Hispanic White, and 6% other.

Table 1 reports a multivariate logistic regression analysis of all variables shown in univariate analysis to significantly predict injection risk behavior, including exposure to different features of the campaign (posters, newsletters, TV show, and stress grip) as well as the only part of the community intervention (HIV prevention social gatherings) that had a significant univariate association. The regression also adjusted for the use of syringe exchange and socially desirable response tendency.<sup>5</sup> Analyses showed that exposure to the narrowcasting posters and IDU newsletter significantly increased the odds of postintervention low-risk injection status and that there was a trend in HIV risk reduction for exposure to the TV show.

## DISCUSSION

To our knowledge, this research was the first to show the effectiveness of a social marketing approach to preventing HIV among IDUs. The study, however, had several limitations. Although the analysis showed that exposure to posters and the newsletter was associated with decreased injection risk, it was not clear whether these interventions succeeded in blunting an upward trend in risk behavior such as that observed at the comparison site (San Diego). In addition, it is uncertain whether the behavioral effects observed would translate into the reduction of HIV-related morbidity and mortality. The study's findings were limited further by the 2-city quasi-experimental design. Among the obvious next steps would be to replicate our

results at multiple sites, perhaps using a time-series crossover research design. Should our findings be replicated, however, social marketing would appear to be a cost-effective strategy to prevent the spread of HIV among IDUs. The cost of the ethnographic mapping of injection drug use, producing and erecting the posters, and producing and distributing the newsletter was estimated to have been \$90 000, which comes to only a fraction of the lifetime cost of treating a single HIV infection.

## About the Authors

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*This article was accepted on February 8, 2010.*

## Contributors

D. R. Gibson conceptualized the study and supervised all aspects of its implementation. G. Zhang performed data analyses. D. Cassidy supplied theoretical background concerning social marketing. L. Pappas was responsible for creating posters, newsletters, and project giveaways. J. Mitchell created the television show. S. M. Kegeles helped to conceptualize the study. All authors helped to interpret findings and reviewed drafts of the article.

## Acknowledgments

This project was supported by the National Institute of Mental Health (grant MH42459).

The authors thank Eric Reininga, Peter Simpson, and the staff of Harm Reduction Services, Sacramento,

**TABLE 1—Multivariate Predictors of Postintervention Low-Risk Injection Status (n = 479): Community Mobilization Project, Sacramento, CA, 1999–2000**

Predictor Variable	AOR (95% CI)	P Value <sup>a</sup>
Seen poster	1.66 (1.12, 2.46)	.006
Seen newsletter	1.48 (0.93, 2.33)	.046
Seen TV show	1.36 (0.88, 2.11)	.086
Seen stress grip	1.04 (0.70, 1.56)	.423
Attended social gathering	1.58 (0.82, 3.07)	.088
Used syringe exchange, past 30 d	2.07 (1.39, 3.07)	<.001
Social desirability	1.14 (1.03, 1.26)	.007

Note. AOR = adjusted odds ratio; CI = confidence interval.

<sup>a</sup>By 1-tailed test of the hypothesis that features of the social marketing campaign were effective in decreasing HIV-related injection risk behavior.

California, for their help in creating and implementing this project. We also thank Lynell Clancy for her help and advice on implementing the intervention and surveys in Sacramento, and Michele Ginsberg, Alfredo Velasco, and Steven Hart for planning and supervising the surveys in San Diego.

## Human Participant Protection

The institutional review board of the University of California, Davis, approved this research. All participants provided written informed consent.

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