

# 3.0 USING MEDIA TO ADDRESS ADOLESCENT SEXUAL HEALTH: LESSONS LEARNED AT HOME

SARAH KELLER, PH.D.



## INTRODUCTION

While the international arena has provided a fruitful landscape of health campaigns and evaluations, less data is available regarding the effectiveness of reproductive health campaigns at home. The reasons for this are plentiful and stem in part from a media environment that is more completely privately owned in the United States, and less receptive to externally mandated educational programming than in many developing nations where TV and radio channels are often government owned. Instead, private media markets have been more receptive to “product placement” types of health messages, inserted into existing programming, and a wider breadth of new technology interventions. The attempts to evaluate what are known as “embedded messages” and new technology approaches have so far proven a bit more difficult to do, and are potentially less well funded than interventions associated with large-scale donor programs overseas.

Nevertheless, a growing body of evidence shows that health communication campaigns can be effective at changing health attitudes and behavior in the United States and it contributes to educators’ confidence that

mass media can effectively be used to promote healthy sexual behaviors among adolescents.<sup>[1]</sup> A review of previous campaigns reveals lessons for how to design successful campaigns as well as new approaches that look promising but need further evaluation.<sup>[2; 3]</sup>

This chapter reviews mass media interventions designed to promote sexual health in the United States. Interventions were included that used five types of media strategies: (1) **public service announcements** (PSAs)<sup>†</sup>; (2) **entertainment-education** (E-E); (3) **social marketing**; (4) **media advocacy**; and (5) **new media technologies**. While new media technologies, such as Internet and cell phones, provide alternate media channels to TV, radio and print, they also involve new and interactive ways of communicating with audiences and involve new strategies for health communication that are unfolding as we write this report. Because of their interactive nature and increasingly ubiquitous use by adolescents and young adults, harnessing the power of new media technologies also is being seen as a valuable strategy for engaging youth in sexual health discussions and fostering positive decision-making skills.

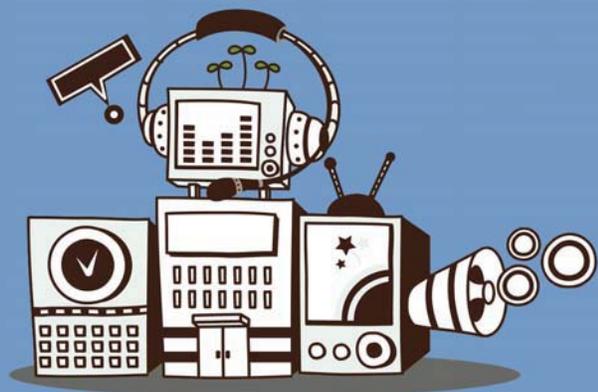
<sup>†</sup> Bold, underlined terms are defined in the Glossary (see page 126).

## METHODS

To identify relevant interventions, online academic journal databases were searched for studies conducted to evaluate the impact of mass media interventions to promote sexual health among U.S. adolescents. Most identified studies described interventions conducted in the past several decades (although a time period was not explicitly specified). Interventions that were classroom-based or solely interpersonal in nature were also excluded, except in cases where classrooms (or small groups) were used to experimentally test media materials that could later be disseminated on a mass basis. Databases searched included Academic Search Premiere, the General Health Reference Center, Medline, PsychInfo, Lexus Nexus, and Expanded Academic Index. Keywords used included any combination of the following: “sexual risk,” “sexuality education,” “sexual health,” “safe sex,” “youth health,” and “media,” “education,” “communication,” “messages,” “health communication,” and “mass media,” “social marketing,” “evaluation,” “campaigns,” and “media advocacy and health.” Some of the journals that included the most relevant articles were: *Journal of Health Communication*, *Journal of Adolescent Health*, *Health Education & Behavior*, *AIDS Education and Prevention*, and the *American Journal of Public Health*. Websites of organizations known to be conducting work on adolescents’ sexual health also were searched for unpublished documents ([www.cdc.gov](http://www.cdc.gov), [www.kff.org](http://www.kff.org), [www.advocatesforyouth.org](http://www.advocatesforyouth.org), [www.evolve.com](http://www.evolve.com), [www.mtv.com](http://www.mtv.com), [www.jhuccp.org](http://www.jhuccp.org), [www.usc.edu](http://www.usc.edu)).

To be included in the review, the interventions had to be focused on reducing sexual risk among young people (ages 12-24); be located in the United States; report some evaluation results; and employ either mass media news or entertainment content (e.g., television, radio, magazines, outdoor) or new media (e.g., Internet, cell phones).

Although the focus of this chapter is on adolescents and young adults, some interventions designed for a national adult and youth audiences were included so long as they were evaluated with adolescents and young adults. In addition, one major national campaign from a non-sexual health area—the **truth**<sup>®</sup> campaign for tobacco control—as included because of its exemplary design and evidence of success with adolescents. Finally, some of the innovative interventions using new media technologies have not yet reported conclusive evaluation data but were included to provide an idea of some novel approaches on the horizon.



Echoing the lessons learned from the previous chapter, this review calls for designing campaigns that are theoretically informed, involve audiences in campaign design, focus on high-risk audiences, promote new behaviors rather than cessation of old behaviors, achieve high levels of message exposure, use new technologies, use media advocacy (to influence mainstream news coverage and policy-makers), use sound evaluation methods, and plan for sustainability.

## MASS MEDIA AS SOURCES OF SEXUAL HEALTH INFORMATION

The mass media (e.g., TV, magazines, movies, Internet) can be important sources of sexual health information. In one national survey conducted in 1997, three-quarters of adult men and women said they considered magazines an important source of information on such topics as birth control, sexually transmitted infections (STIs), and HIV/AIDS. Magazines appear to be an especially important information source for teens. Of the seven in ten teenage girls who reported reading magazines regularly, half said they use magazines to find information on sex, birth control, or ways to prevent STIs. Two-thirds said this is information they don't get from other sources.<sup>[4,5]</sup> More recent studies in the United Kingdom show that teenagers today still use magazines for sexual health information,<sup>[6]</sup> although it is likely that some of that information seeking is shifting to the Internet.<sup>[7]</sup>

Not all of what adolescents can get from the media about sex can be considered sexually healthy content, however. Content analyses have found ample sexual information in mainstream teen and women's magazines—but little of it portrays sex in a

way that is accurate or complete enough to promote sexual health.<sup>[8-12]</sup> The general lack of talk about or portrayals of concerns, cautions, contraception, and consequences of sex in the media may make it more likely that young media consumers will learn risky rather than safe sexual behavior from the media. Teenagers who frequently view portrayals of glamorous, casual, risk-free sex among sexually objectified women and irresponsible men may gradually become *cultivated* to adopt similar beliefs about sex in the real world.<sup>[5]</sup> Such a potentially unhealthy sexual media environment makes the need for alternative media messages about sexually healthy behavior all the more important.

## SEXUAL HEALTH MASS MEDIA HEALTH INTERVENTIONS IN THE UNITED STATES

This literature review identified 20 interventions from the United States that used the media to address adolescents' sexual and reproductive health issues. Table 3-1 describes the interventions and summarizes the relevant findings. Of the interventions, one used media advocacy, three used public service announcements (PSAs), four used entertainment-education (E-E), and 12 used new media technologies.

### PUBLIC SERVICE ANNOUNCEMENT CAMPAIGNS

PSAs traditionally have been used in public health mass media campaigns for decades, both domestically and abroad. Evaluating their impact has proven difficult, in part because of the multiplicity of factors affecting public health behavior in a large social context. (The same can be said for evaluating all mass media interventions). These four examples represent some of the best documented PSA efforts targeting teen sexual health, with one example drawn from a youth anti-smoking campaign.

## Two-City Safer Sex Campaign

One of the most impressive trials of a safe sex PSA campaign was conducted in Lexington, KY with Knoxville, TN as a comparison city. The “Two-City Safer Sex Campaign” used 10 televised PSAs, developed through intensive formative research with youth (40 sets of focus groups), to increase safer sexual behavior among young adults who were at risk because of high levels of sensation-seeking and impulsive decision-making. A composite risk variable (called Sensation-Seeking/Impulsive Decision-Making or SSIDM) was used to segment the audience. The SSIDM combined two scales—sensation-seeking, e.g., “I like to do frightening things,” and impulsivity, e.g., “I do the first thing that comes into my mind.” Messages were tailored to appeal to young people who exhibited high degrees of SSIDM, based on advice from Palmgreen and Donohew,<sup>[13]</sup> who suggest that the effectiveness of health messages will increase if they target high sensation-seekers and impulsive decision-makers with fast-paced messages that feature drama, intensity, emotion, and novelty.

Outcome analyses indicated a significant 5-month increase in condom-use self-efficacy, behavioral intentions, and condom use among the target group in the campaign city. The comparison city showed no increases. An overall 13 percent increase in safer sex acts was estimated as a result of the campaign.<sup>[14]</sup>

## It’s Your Sex Life

Another promising effort resulted from the collaboration of MTV and the Kaiser Family Foundation called “It’s Your Sexlife.org.” The campaign, which continues today as “Think MTV,” includes special programming on MTV, public service messages, and a comprehensive sexual health website for youth ([www.think.mtv.com](http://www.think.mtv.com)). A 2003 survey of MTV viewers (ages 16 to 24) found that of those who had seen the campaign, three-fourths said they were more likely to take a relationship seriously and three-fourths were more likely to use a condom if having sex. A Kaiser Family Foundation

report about the campaign showed 822,000 calls were completed to a hotline through MTV. Of these, 336,000 calls were transferred to the Centers for Disease Control and Prevention (CDC) or Planned Parenthood Federation of America, for more information about HIV/AIDS and sexual health. Participants in a 2003 survey to evaluate the campaign reported that after seeing the campaign ads they were more likely to use condoms (73 percent), wait to have sex (60 percent), talk with a partner about safe sex (49 percent), or talk with a parent about sexual risks (28 percent).<sup>[18]</sup>

## Talk to Your Kids About Sex: Everyone Else Is

“Talk to your kids about sex: Everyone else is,” was a PSA campaign conducted in 32 counties in North Carolina. The campaign, which used radio, TV, and billboard ads, was designed to promote parent-child communication. Paid TV PSAs were aired in 22 counties, radio PSAs were aired in 21 counties, and billboards were displayed in six counties for nine months. The counties varied from no exposure to exposure to all three types of media. To assess the impact of the campaign, a sample of 1,132 parents of adolescents living in the 32 counties completed a post-exposure telephone survey. A positive association was found between campaign exposure and self-reported frequency of talking to children about STIs, teen pregnancy, and contraception. Exposure to each component of the mass media campaign was associated with parents recently having talked to their adolescent children about sex and with intentions to talk to their children in the next month.<sup>[19]</sup>

## truth®

Some of the most impressive behavior change data in association with a domestic mass media campaign lie in the tobacco control arena. In early 2000, the American Legacy Foundation launched the national **truth**® campaign, the first national anti-smoking campaign to discourage tobacco use among youths. Researchers used data from the Monitoring the Future survey, an ongoing, federally-funded study of the behaviors, attitudes,

and values of American secondary school students, college students, and young adults, in a pre/post quasi-experimental design to relate trends in youth smoking prevalence to varied doses of the **truth**<sup>®</sup> campaign in a national sample of approximately 50,000 students in grades 8, 10, and 12, surveyed each spring from 1997 through 2002. They found that the campaign accounted for a significant portion of the decline in youth smoking prevalence. Smoking prevalence among all students surveyed declined from 25.3 percent to 18.0 percent between 1999 and 2002, and the campaign apparently accounted for approximately 22 percent of this decline.<sup>[20]</sup>

The Massachusetts Tobacco Control Program also conducted a statewide version of the **truth**<sup>®</sup> campaign. Scholars at two Boston universities demonstrated that exposure to Massachusetts **truth**<sup>®</sup> TV ads was associated with reductions in progression to smoking among young teens. Younger adolescents (ages 12 to 13 at baseline) who reported exposure to TV antismoking ads were half as likely to progress to habitual smoking by the time they reached ages 17 to 18 as compared to teenagers who did not see the campaign.<sup>[21, 22]</sup>

Both the national and statewide **truth**<sup>®</sup> anti-smoking campaigns succeeded by using social marketing tactics that are often summarized as the four Ps (product, place, price, and promotion).<sup>[17]</sup> In the **truth**<sup>®</sup> campaigns, the *product*/action was “to be cool” by attacking adults who want to manipulate teens to smoke. The campaign reduced the *price* of the behavior (attacking adults) by selecting adults everyone agreed had been manipulative, such as tobacco industry insiders. They created *places* for adolescents with bus caravans and the founding of local “**truth**<sup>®</sup> chapters.” The campaign also used *promotion* that went beyond traditional PSAs by having adolescents directly confront the tobacco industry and then publicizing this teen “terrorism” in the popular media. The campaign also conducted surveys of its target audience, which identified important micro-market segments (e.g., south Florida Hispanics) where impacts were lagging, and where new ideas were needed.<sup>[20]</sup>

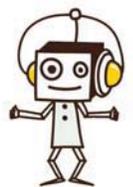
Vallone<sup>[23]</sup> suggested the **truth**<sup>®</sup> campaign was successful because: (1) it was positioned as a brand to compete with tobacco brands that teens around the world use for self-expression; (2) it directed teens to rebel against the tobacco industry; (3) it exposed the lies of the industry; (4) messages were never preachy; (5) smokers were never condemned; and (6) tactics appealed to sensation-seeking teens.

## ENTERTAINMENT-EDUCATION

The entertainment-education (E-E) strategy involves incorporating an educational message into popular entertainment content to raise awareness, increase knowledge, create favorable attitudes, and ultimately motivate people to take socially responsible action in their own lives. Despite the popularity of new media technologies, television remains the primary medium for E-E in the United States. Over the years, the E-E strategy has been applied in a variety of ways to highlight a number of social and health issues in entertainment programming, including substance abuse, immunization, teenage pregnancy, HIV/AIDS, cancer, and other diseases.<sup>[24]</sup>

Characters in films and television, whom loom larger than life for most viewers, are believed by the organizers of E-E efforts to be particularly effective for spreading health messages. To be most effective, however, audiences need to be able to identify with and relate to the characters on the screen. When viewers see a character they relate to who is dealing with a troubling issue or suffering pain, they remember it and talk to others about it.<sup>[25]</sup> Social psychologists have established that people can vicariously learn healthy (or unhealthy) social behavior through behavior modeling in mass media.<sup>[24, 26-31]</sup> A few studies provide evidence that sexual health messages embedded in mainstream TV shows in the United States have been effective (e.g., emergency contraception<sup>[32]</sup>; knowledge and use of an AIDS hotline<sup>[33]</sup>).

The insertion of sexually responsible messages in entertainment media is a potentially powerful way of affecting sexual behavior because the “selling” of a particular behavior is not as obvious as it may be in a PSA and, thus, audiences may not be as likely



# CASE STUDY:

## A TELEVISED TWO-CITY SAFER SEX MASS MEDIA CAMPAIGN TARGETING HIGH-SENSATION-SEEKING AND IMPULSIVE-DECISION-MAKING YOUNG ADULTS

**OVERVIEW:** A televised PSA campaign aimed at increasing safe sex beliefs and behaviors in young adults (ages 18 to 23) was implemented in Lexington, KY.<sup>[14]</sup> The campaign was evaluated using a comparison city—Knoxville, TN. The goal of the PSA campaign was to increase condom use among young adults exposed to the campaign. Researchers used audience-segmentation and message-tailoring techniques to create and tailor messages that were persuasive with sensation seekers and impulsive decision makers.

PSA messages were developed through formative research with three waves of focus groups drawn from the target audience. The campaign developed some original scripts, and borrowed others from the Kaiser Family Foundation. Two theoretical frameworks were used to guide the development of the campaign (for more information on Health Behavior Theories please see page 124). The first theoretical framework was used to divide the target audience into segments for analysis based on the participants' sensation-seeking and impulsive decision-making behavior, based on research that showed these two personality traits were most highly correlated with sexual-risk taking.<sup>[15]</sup> The second framework consisted of theoretical concepts drawn from Theory of Reasoned Action<sup>[16]</sup> and Social Cognitive Theory,<sup>[17]</sup> based on research showing that social norms, self-efficacy and preparatory behaviors (e.g., carrying condoms and communicating about condom use) were most highly correlated with heterosexual safe sex behavior.

The 10 resulting safer sex PSAs aired from January through April 2003 in Lexington, KY, during programs known to be popular with the target audience, using a combination of paid and donated time (with a 1:1 match of donated to paid airtime negotiated with the stations).

In order to evaluate the impact of the PSA campaign on attitudes and behaviors, a 21-month controlled time-series evaluation design was used. Knoxville, TN was selected as the comparison city because it is demographically similar to Lexington, KY. No PSAs were aired in Knoxville. Starting eight months before the PSAs were shown self-administered interviews were conducted with independent cross-sectional samples of 100 young adults in each community. The surveys continued during the three months of the campaign and for 10 months after the campaign on a monthly basis. Participants were recruited through random-digit-dialing.

**FINDINGS:** The results were analyzed separately for the target groups. Participants who reported high sensation-seeking and impulsive decision making behavior were considered to be high-risk young adults while those who reported low sensation-seeking and impulsive decision making behavior were considered to be low-risk young adults. Overall, 85 percent to 96 percent of respondents in Lexington recalled seeing at least one PSA, and there was an average of 22 exposures per respondent. The PSA campaign had no significant impact on low-risk young adults. Among high-risk young adults (the target audience), the campaign was found to increase condom-use beliefs and behaviors. Specifically, high-risk youth in Lexington were found to have increased condom use during the campaign and in the three months following the campaign, while there was no such change in the comparison city. They were also found to have increased condom self-efficacy and intentions to use condoms.

Analyses to determine the effect size of the campaign suggests that, on average, condom use among the target audience increased 13 percent. This would account for 181,224 fewer unprotected intercourse occasions among the target group than would have taken place without such a campaign. However, the evaluation also indicates, that while the effects of the campaign were very positive, they were also short lived. Thus a continuing campaign presence might be necessary to reinforce and sustain the behavior changes that occurred.



to resist the message. These messages also are more likely to reach and attract attention, compared to PSAs that are rarely shown at strategic times and are not aired frequently enough. Embedded message strategies may also be more practical than overt persuasive attempts (e.g., PSAs) in countries, such as the United States, that have sophisticated media markets where viewers have a variety of media options and may change channels or fast forward through advertisements. Dramatic or comedic formats also provide time for developing more complex messages than is possible in 10- or 30-second PSAs, although in the United States sustained storylines about sexual health topics have been rare.

### The Media Project

The Media Project, an initiative of Advocates for Youth, provides entertainment-industry professionals with the most up-to-date, socially relevant, and accurate information about sexual health issues. The Media Project, located in the heart of Hollywood, has collaborated with such popular television shows as *ER*, *Girlfriends*, *Grey's Anatomy*, *the George Lopez Show*, *Judging Amy*, and *Law & Order: SVU*, among many others. A similar effort, *The Latino Media Initiative*, was created in 2001 to provide information, resources, referral, storyline ideas, and script review for writers and producers of Spanish language television. Staff work with writers and directors of television shows produced in the United States, Venezuela, Chile, Mexico, Colombia, and Peru to bring accurate sexual health information and responsible sexual health images to Spanish-speaking television audiences in Latin America and the United States.

The Media Project uses several tactics to achieve its objective of inserting sexual health information into mainstream programming and films:

- A telephone helpline provides prompt assistance in researching sexual and reproductive health issues for television and film writers, producers, and directors.
- Tailored meetings with producers, writers and network executives are conducted to systemati-

cally identify television shows that may benefit from Media Project assistance.

- Informational briefings are conducted to present entertainment industry professionals with in-depth information on “hot” topics in teen sexual health. The briefings give Hollywood’s writers, producers, and directors opportunities to speak directly with young people and other experts regarding adolescent sexual health.
- In partnership with the UCLA School of Public Health, the Project established the Entertainment Resource Professionals Association ([www.entertainmentresource.org](http://www.entertainmentresource.org)), which fosters online knowledge sharing and increases the level of expertise among all members who promote health and social messages to writers, executives, producers, and directors.
- It conducts the SHINE (Sexual Health IN Entertainment) Awards to honor those in the entertainment industry who do an exemplary job of incorporating accurate and honest portrayals of sexuality into their programming.

### ER

On the popular TV program *ER*, the Media Project helped insert a storyline about a girl who was date raped and treated with emergency contraception. Although the scene aired for less than a minute, viewers’ knowledge of emergency contraception increased 17 percent immediately after viewing. Between March 1997 and April 2000, the Kaiser Family Foundation conducted 10 national random-sample telephone surveys of more than 3,500 regular *ER* viewers aged 18 and older (300 to 500 participants per survey). Many *ER* viewers demonstrated significantly increased awareness about specific health issues that were addressed on the show. After the episode on emergency contraception, awareness of the pill rose from 50 percent to 67 percent. Among those who had heard of emergency contraception, one in five (20 percent) said they had learned about it on *ER*.<sup>[32; 34]</sup> After an episode about human papilloma virus (HPV) aired on *ER*, the proportion of viewers who had heard of HPV nearly doubled (from 24 percent to 47 percent), and the proportion who could correctly define HPV tripled



(from 9 percent to 28 percent).<sup>[34]</sup> In most cases, however, viewers' awareness of the sexual health issues decreased over time. In the case of emergency contraception, a repeat survey conducted 10 weeks later showed that awareness had fallen back to 50 percent. These results underscore the advice that health-related messages must be repeated over time for viewers to retain the information.<sup>[34]</sup>

### The Bold and the Beautiful

With the help of the CDC, the executive producer of the daytime drama *The Bold and the Beautiful* developed an HIV/AIDS storyline, and CBS aired PSAs following two different episodes with key HIV plot scripts. The first PSA generated a total of 1,426 calls to the CDC's national HIV/AIDS hotline during the soap opera time slot, compared to 88 calls the previous day and 108 calls the day following the episode. Ten days later, when the PSA was shown again, the call volume spiked even higher to 1,840 calls originating during and shortly after the episode (in comparison to 94 calls the day before and 234 calls the day after the HIV episode).<sup>[33]</sup>

### Friends

Sometimes cooperating with Hollywood screenwriters and producers can compromise a health message, however. An episode about condom effectiveness on the sitcom *Friends*, for example, left some viewers with the impression that condoms were ineffective. As part of the season's main story line, Rachel, a regular character on the show, experienced an unplanned pregnancy as a result of a single night of sex with Ross, another main character and her former boyfriend. In the episode, Rachel tells Ross about the pregnancy for the first time. Ross responds with disbelief and exclaims "but we used a condom!" The statement that "condoms are only 97 percent effective" is said in this scene and a subsequent one. Thus, the possibility of condom failure and the resulting consequence of pregnancy were unintentionally communicated to a large adolescent audience in a vivid way.

A national sample of 506 adolescents ages 12 to 17 who had been regular viewers of *Friends* were surveyed by telephone to assess the effects of the episode on condom knowledge and beliefs. The post-test survey found that, among teens who had viewed the episode, two-thirds remembered that the specific storyline depicted an unplanned pregnancy caused by condom failure.

Nevertheless, many viewers received the intended message that condoms are effective. Four out of 10 teens who reported watching the *Friends* episode watched it with a parent or adult, and 10 percent of them talked with an adult about the effectiveness of condoms as a result of the episode. Almost half who discussed the episode with an adult recalled the characters describing condoms as being 95 percent or more effective. Compared with teens who watched alone or with another youth, teens who watched with a parent or adult were twice as likely to say they learned something new about condoms from the episode (38 percent versus 15 percent), as well as to recall that condoms were said to be between 95 percent and 100 percent effective (40 percent versus 20 percent). A follow-up survey 6 months later found that 30 percent of the teens who watched the episode about condom efficacy rated condoms as 95 percent to 100 percent effective compared to only 18 percent of the teens who did not view the episode.<sup>[35]</sup>

### The Know HIV/AIDS Campaign

Several efforts have combined PSA mass media campaigns with embedded storylines in existing programming. U.S. media corporation Viacom and the Kaiser Family Foundation, for example, launched one of the most ambitious HIV/AIDS media campaigns ever conducted in this country, in which they used many of the communication tools honed by Madison Avenue and Hollywood to fight the epidemic. The "KNOW HIV/AIDS Campaign" produced PSAs, print and outdoor advertising worth \$120 million. In 2003, Viacom issued a directive to the producers of its television shows to include storylines in their popular dramas

and comedies that would raise AIDS awareness and encourage prevention, counseling, and testing. An in-house report showed that one component of the campaign, called “Rap It Up,” on Black Entertainment Television (BET) and other networks targeting African Americans, influenced self-reported awareness and intentions to practice safe sex among the target audience of youth ages 18 to 24.<sup>[36]</sup>

## MEDIA ADVOCACY

Even if, or perhaps especially because, resources for media interventions are limited, media advocacy should be used to maximize campaign effectiveness. Putting sexual health issues on media news agendas—and keeping them there—is an important tool for tackling youth sexual health behavior. Media advocacy, or **earned media**, is often called “uncontrolled publicity” by public relations professionals because news media coverage about an organization has the advantages of being free, reaching a large audience, and enjoying third party credibility. At the same time, it is less controllable than materials written or produced by a youth-serving sponsoring agency. News coverage of health issues can be an important factor in setting the agenda for policy change and can influence individual decisions, as well as community-wide decisions. This broader context for decision-making is an important component of multi-level interventions that are grounded in a socio-ecological model of behavior change.<sup>[37-39]</sup> Media advocacy also may be an important way to address policy makers who make critical decisions affecting young people’s access to sexual health information and services.

Media advocacy can be conducted in a variety of ways. As volume appears to be the driving factor, media advocacy may be best targeted toward generating events and highlighting issues likely to increase and sustain news attention. One example from the tobacco-control domain helps illustrate the potential power of getting the health topic covered in the news media. An extensive content analysis of news coverage of tobacco conducted conjointly with a survey of adolescent attitudes toward smok-

ing showed that coverage increased perceived risk and lowered self-reported recent smoking behavior among adolescents.<sup>[40]</sup> The content analysis examined 8,390 newspaper articles on tobacco issues published by 386 daily newspapers between 2001 and 2003 in Monitoring the Future survey communities. Associations between news and youth outcomes were assessed for 98,747 youth participating in the nationally representative school-based annual surveys. Each 10-article increase in newspaper coverage of tobacco-related issues over the five month period was associated with a four percent increase in odds of perceiving great harm from smoking (Odds Ratio [OR] = 1.04,  $p < 0.01$ ), a four percent increase in disapproving of smoking (Odds Ratio [OR] = 1.04,  $p < 0.05$ ), a six percent decrease in odds of perceiving most or all friends smoke (0.94,  $p < 0.01$ ), and a seven percent decrease in self-reported smoking in the past 30 days (Odds Ratio [OR] = 0.93,  $p < 0.001$ ). No consistent association was found between the content or prevalence of coverage and youth smoking outcomes.<sup>[40]</sup>

News stories created in partnership with local TV or radio stations also can be used to highlight embedded messages in entertainment programming. The Kaiser Family Foundation and the Johns Hopkins University School of Hygiene and Public Health, in collaboration with the NBC News Channel and the prime time drama *ER* developed a new model that linked health messages on *ER* with 90-second news segments broadcast after the episode in local newscasts. From 1997 to 2001, “Following *ER*” featured interviews with medical experts and real people who had experienced the health issue addressed in the show. Each segment also offered access to additional information through a toll-free telephone number or online resources displayed on-screen. Stations at 37 of the top 40 media markets in the country aired the segments as a tie-in to *ER* during their 11 p.m. newscasts on Thursday nights, immediately following *ER*.<sup>[41]</sup>

## NEW MEDIA TECHNOLOGIES

New media technologies (also called digital media) are expanding perhaps more rapidly than public health advocates can figure out how to use them, but one thing is clear: young audiences are frequent users, and often use them for sexual health information. In one study of sex and age differences in the use of Internet health information, for example, 41 percent of the young respondents said they had changed their behavior because of health information they found online, and almost half had contacted a health care provider as a result.<sup>[7]</sup> Other new media technologies include text messaging on cell phones, MP3 players, blogs or chat rooms on web sites, and Internet social networking sites such as Facebook or MySpace, where many users can simultaneously create and communicate on the same web pages.

Unfortunately, the Internet is also a source of sexual risk. As Michael Rich outlines in Chapter 1, the Internet provides young people unprecedented access to sexually explicit images that rarely include depictions of safer sexual behaviors, and sexual predators have greater access to young people than they ever have before. Studies also have shown that sex partners who meet online engage in higher-risk sexual behaviors, and are therefore at higher risk of acquiring STIs, than do partners who meet through conventional means.<sup>[42; 43]</sup> A majority of men questioned about barebacking (having unprotected anal sex), for example, cited the Internet as a major factor in the rise of this sexual activity because men are able to meet partners online and discuss sexual preferences in a relatively anonymous fashion<sup>[44]</sup>. Concern is growing, particularly among parents, that the rapid increase in Internet use may expose adolescents to risky sexual material.

Despite the potential risks, the Internet and other new media technologies provide valuable opportunities to engage audiences in online sexual health education.<sup>[45; 46]</sup> The Internet creates unique educational opportunities for people to obtain sexual health information in a way never available before

and also provides an open forum for comparing and sharing experiences related to sex and sexuality. One online survey of more than 4,000 men of all ages who have sex with men found that most (75 percent) said that health workers should be allowed in online chats, 78 percent said they would click on a banner to find out about sexual health, and 81 percent said they would find out what a health worker had to say if they met one in a chat.<sup>[43]</sup>

Only a handful of small-scale new media interventions have been evaluated, however. These evaluations have focused on interventions that included computer-assisted instruction (CAI) in classrooms and stand-alone videos. Although the success of these interventions was assessed only in small settings, the health content could be widely disseminated through DVDs or websites.

### Computer-Assisted Instruction Programs

Randomized control trials showed increased HIV knowledge, intention to practice safe sex, and reduced condom failures in response to five CAI programs: (1) “AIDS Interactive” an information-motivation-skills-based program; (2) a Motivational interviewing Program; (3) “Reducing the Risk;” (4) “What Could You Do?” and (5) “Project LIGHT”.

<sup>[47; 48; 50-52]</sup>

- **AIDS Interactive.** This study evaluated a computer-delivered program using stories, role models and demonstrations to provide information about HIV prevention.<sup>[47]</sup> Social learning and social cognitive theories served as the basis for the content.<sup>[28]</sup> A group of 152 college students were randomized to receive the CAI, a lecture or no intervention. The participants in the CAI group scored significantly higher in HIV knowledge and intentions to practice safe sex with their current partner.
- **Computer-Delivered Intervention.** This theory-based, individually tailored HIV risk-reduction intervention was tested in a randomized trial with 157 college students.<sup>[48]</sup> The intervention content

and delivery were based on the Information-Motivation-Behavioral Skills Model of Health Behavior Change and used Motivational Interviewing techniques. Participants completed a baseline assessment of HIV prevention information, motivation, behavioral skills and behavior; attended two brief computer-delivered intervention sessions; and completed a follow-up assessment. Compared to the control group, which received a nutrition tutorial, students who interacted with the computer-delivered HIV/AIDS risk reduction intervention exhibited a significant increase in risk reduction behavior, including having condoms available. The treatment group also displayed greater condom-related knowledge at a 4-week follow-up session and sexually active students reported significant increase in condom use.

- **Reducing the Risk.** This program involved a computer-based intervention designed to change perceived threat, perceived efficacy, attitudes, and knowledge about pregnancy, STI, and HIV prevention in rural adolescents. The intervention, which was guided largely by the Extended Parallel Process Model (EPPM), was implemented and evaluated in nine rural high schools using a pretest/posttest control-group design. The EPPM, developed by Witte, Myer, & Martell,<sup>[49]</sup> asserts that individuals are not likely to change their health behaviors unless they perceive a health threat that is both personally relevant and severe, and they perceive a recommended solution to be effective and easy to do. More than 91 percent of students in the treatment group completed at least one of the six computer-based activities. Analyses revealed that students in the treatment group outperformed students in the control group on knowledge, condom self-efficacy, attitudes toward waiting to have sex, and perceived susceptibility to HIV. These results suggest that computer-based programs may be a cost-effective and easily replicable means of providing teens with basic information and skills necessary to prevent pregnancy, STIs, and HIV.<sup>[50]</sup>

- **What Could You Do?** Downs and colleagues<sup>[51]</sup> conducted a longitudinal randomized study to evaluate the impact of “What Could You Do?” an interactive video intervention aimed at increasing 300 urban adolescent girls’ knowledge about STIs, and reducing self-reported sexual risk behavior and STI acquisition. The video provides a cognitive rehearsal session where teenagers can apply generic points they have learned to actual situations. When the teenager chooses a low-risk behavior for the girl in the video (refraining from sex or using a condom), the video then shows the boy trying to pressure her while the girl remains steadfast in her decision—reinforcing the healthy decision. When a high-risk option is chosen (having unprotected sex), no reinforcement is provided. To reinforce the intervention’s messages, all teens are eventually directed to a portion in the video where the girl chooses to bring a condom with her and refuses to have sex without it.

Self-report assessments revealed that those assigned to the interactive video were significantly more likely to be abstinent in the first three months following exposure to the intervention and experienced fewer condom failures in the following three months, compared to controls. Six months after enrollment, participants in the video condition were significantly less likely to report having been diagnosed with an STI.<sup>[51]</sup>

- **Project LIGHT.** Lightfoot, Comulada & Stover<sup>[52]</sup> evaluated a computerized version of Project LIGHT (Living in Good Health Together), an intervention targeted at high-risk adults and adolescents that has a track record of increasing condom use. Researchers examined sexual behavior among high-risk adolescents in three conditions: (1) computer-based, (2) small groups, and (3) control. They found that the computerized version was even more effective than the small groups. Adolescents in the computerized intervention were significantly less likely to engage in sexual activity and reported significantly fewer partners in the following three months than those in the other two conditions.

Although these studies indicate much promise from computer-based interventions, it remains unclear precisely which attributes of such programs are necessary for success. Health researchers still need to study the design components (e.g., navigability, interactivity, graphic elements) to determine which achieve the highest effects among each audience.

Impact data are rare, but several content analysis studies have looked at safe sex website design.<sup>[53-55]</sup> Although many websites are targeting safe sex messages to teenagers, they do little tailoring by sexual orientation and almost no tailoring by other audience characteristics. This tailoring could be done by using data provided by website users.<sup>[55]</sup> Many sites promote condom use and abstinence but few discuss other strategies, such as reducing the number of partners, reducing casual sex, or delaying first intercourse.<sup>[53; 55]</sup> Almost all websites examined attempted to raise the threat of STI/HIV rather than change behavior through shifting social norms or positive appeals, although a significant number of sites did address self-efficacy for both condom use and negotiating safe sex. The interactivity, or individual tailoring, of safe sex websites for teenagers, in general, remains low. However, other new media technologies offer much more interactivity.

### Interactive New Media Technologies

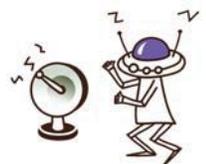
Several promising efforts are using highly interactive new media technologies to address sexual risk. Although most such efforts have not yet been evaluated, it is important to discuss them as new opportunities for interventions. New websites on the Internet, like YouTube, Facebook, and MySpace, allow users from all over the globe to share videos, messages, images, chats, threaded discussions, and games.

- **Evolve Campaign.** This Internet campaign, sponsored by Trojan and designed to increase the social acceptability of condoms, is a good example of how the Internet and social networking sites

might be used to promote sexual health. In the first year, Trojan placed “Evolve” video advertisements on YouTube and attracted 100,000 viewings, with another 400,000 viewing the ads on [www.trojanevolve.com](http://www.trojanevolve.com). In the online video clips, women in a bar are surrounded by anthropomorphized, cell-phone-toting pigs. One shuffles to the men’s room, where, after procuring a condom from a vending machine, he is transformed into a handsome man in his 20s. When he returns to the bar, a fetching blond who had been indifferent now smiles at him invitingly. The ads were also aired on TV, yet, it is important to note that even with such highly produced advertisements ready to pay for airtime, two TV networks (CBS and Fox) refused to run the ads nationally and some local ABC and NBC stations refused to air them.

The campaign now has more than 48,000 “friends” on MySpace, and many more on Facebook.

- **Stay Teen.** In another effort to harness the power of the Internet, The National Campaign to Prevent Teen and Unplanned Pregnancy partnered with MySpace to produce the “Stay Teen” PSA contest. In its first month the contest attracted 100,000 page views and 8,000 friends.
- **Pause Campaign.** This effort, a partnership of the Fox Networks Group, MySpace.com, and the Kaiser Family Foundation, asks teenagers to pause before they make important health decisions about sex, online safety, substance use, and other health topics.
- **SexInfo.** Another innovative new media intervention capitalizes on young people’s frequent use of cell phones. Internet Sexuality Information Services, Inc. (ISIS-Inc), a non-profit dedicated to online sexuality education based in Oakland, CA, partnered with the San Francisco Department of Public Health to develop a sexual health text messaging service for youth. SexInfo, which answers commonly asked questions such as what to do if a condom breaks, was inspired in part by a similar



project at a London clinic ([https://ssl15.lon.gb.securedata.net/brook.org.uk/submission/BRK\\_Text.asp](https://ssl15.lon.gb.securedata.net/brook.org.uk/submission/BRK_Text.asp)). The intervention asks teens to use their cell phones in a manner similar to when they vote for their favorite “American Idol” contestant. Urban youth can also use the service to send in reports of partners who may be infected with an STI, partners who may be cheating, or concerns about unprotected sex. The youth use single digits to alert the health department and solicit advice.

If a cell phone user sends the text message “sex-info” to one of two phone numbers set up by the health department, the system will send back a reply asking the user to choose one of several categories that matches his or her question. Preliminary data show that 4,500 callers used the service during the first 25 weeks. Of these, 2,500 led to referrals and requests for more information. The most popular call requests were: “A1 if ur condom broke;” “C3 to find out about STIs;” and “B1 if u think ur pregnant”.<sup>[56]</sup>

To assess the demographic characteristics of SexInfo users, the San Francisco health department conducted surveys in 2006 of a convenience sample of 322 patients aged 12 to 24 at clinics to which SexInfo users were most commonly referred. Consistent positive associations were found between demographic risk factors for STIs and campaign awareness. Overall, 11 percent of the clinic patients reported awareness of the campaign.

- **InSPOT.** ISIS-Inc also launched a website ([www.inSPOT.org](http://www.inSPOT.org)) that enables people with STIs to send anonymous email warnings to their partners that could help slow a rise in new infections. The site uses the E-Card model to send messages to notify people that they may have been exposed to an infection (e.g., “Sometimes there are strings attached. I got diagnosed with STIs since we were together. Get checked out soon.”). The site also offers information about getting tested and treatment.<sup>[57]</sup> Initially employed in San Francisco,

InSPOT is now available in ten U.S. states, nine cities, and three locations outside the United States, including Ottawa, Toronto, and Romania.

- **Talking Sex Together Campaign.** The Iowa Network for Adolescent Pregnancy Prevention, Parenting, and Sexual Health launched the “TxT-Talking Sex Together Campaign” in February 2008, but has not yet reported any evaluation data. The campaign encourages teens to communicate messages of abstinence, teenage pregnancy avoidance, and safer sex through text messaging. To facilitate conversations among teens, the campaign invites teens to develop and send euphemisms that deliver important messages about sex. A teen might, for example, text her friend who is on a date and remind her to ZIU or “zip it up” in the heat of the moment. The teen, thus, signals to her friend that she has peer support and reminds her to make smart decisions.

To increase participation in the TxT campaign, schools and youth programs with the greatest number of unique euphemism entries will receive a prize from a local radio station. Radio PSAs, posters, laminated cards, screen savers for computers, and advertisements for student newspapers are being distributed to help schools spread the word about the TxT campaign.<sup>[58]</sup>

By allowing teenagers to create and send their own messages, the TxT campaign and other like it are using media in a new way, a way that empowers and involves the audience more actively than some of the more traditionally delivered media campaigns. Given the newness of the ventures, we still have much to learn about which techniques and strategies are most effective in generating attention and, ultimately, safe sexual behavior.

Other new media ventures for sexual health include:

- The Midwest Teen Sex Show ([www.midwestteensexshow.com/](http://www.midwestteensexshow.com/)), a video podcast about various sex topics produced by adolescents.

- The “Morph Monkey Facebook” is a new application from the American Social Health Association that aims to spread Chlamydia information on Facebook. Users can select pictures of their friends to see what their combined child will look like. As the user begins to morph the images, a pop-up box informs the user that he or she has given the friend Chlamydia.<sup>[59]</sup>
- In Summer 2008, the Internet Sexuality Information Services (ISIS, Inc) teamed up with the University of Colorado and Columbia University to launch “In Brief,” a competition for youth to design their own STI/HIV prevention messages for underwear.<sup>[60]</sup>
- Mobile phones are being used to deliver results from STI tests, offer coupons, remind patients to take their medicines, and help diagnose infections.<sup>[61]</sup>

Additional initiatives are also underway, according to sex and technology experts at the CDC. Sexual health educators are contemplating and creating new sexual health applications for the iPhone, Facebook, and Twitter, a service that lets people send mass text and instant messages to their friends.

## LESSONS LEARNED AND RECOMMENDATIONS

A number of lessons can be learned and recommendations drawn from the U.S.-based media interventions for adolescent sexual health reviewed here. Perhaps the first and most poignant recommendation is that more needs to be done—both in terms of the kinds and characteristics of the interventions and how they are evaluated.

### USE THEORY WHEN DESIGNING THE INTERVENTION

Only 10 of the 20 studies in this review explicitly used a theoretical design in their formation.<sup>[14; 34; 36; 47-49; 51-52]</sup> Self-efficacy, the feeling that it is possible to perform a desired behavior, and social support

for behavior change are two theoretical constructs that have been shown to be important for behavior change in other studies as well as the ones reviewed here. Self-efficacy is found in many of the most frequently used theories, including Social Cognitive Theory, the Health Belief Model, and the Transtheoretical Model.<sup>[28; 62-63]</sup> Social support specific to reducing risk behavior is associated with increased self-efficacy. The powerful effects of building behavior-specific self-confidence was exemplified by the computer-based HIV-risk reduction program that used Information-Motivation-Behavioral Skills Model of Health Behavior Change and used Motivational Interviewing techniques.<sup>[48]</sup> The use of technology to build social support was demonstrated by the Trojan Evolve campaign’s successful dissemination on MySpace and Facebook.

Both self-efficacy and social support can and should be addressed in media interventions. Social support for healthy sexual behavior change increases the likelihood of individual change in response to a media message or intervention.<sup>[63]</sup>

### INVOLVE THE AUDIENCE, SEGMENT IT APPROPRIATELY, AND TAILOR MESSAGES

Other lessons for campaign design include the need to foster audience participation and tailor messages to address different audience segments according to social identities and risk levels. Fifteen of the interventions included in this review involved the audience in some way, either through formative research in media message design or in the dissemination of messages (see Table 3-1). Alstead,<sup>[64]</sup> among others, showed how audience involvement in campaign design and message delivery can enhance a project’s effects. Audience involvement increased effectiveness in Alstead’s review by giving people a sense of ownership over health messages, and therefore, more investment in a program’s success. Audience involvement in messages design and campaign planning increases a campaign’s ability to use formats, channels, and strategies that are likely to resonate with the target

# CASE STUDY:

## SEXINFO: A SEXUAL HEALTH TEXT MESSAGING SERVICE

**OVERVIEW:** In 2006, the San Francisco Department of Public Health (SFDPH) collaborated with the Internet Sexuality Information Services, Inc. (ISIS-Inc) to develop a sexual health text messaging service with the goal of decreasing STI rates among adolescents in San Francisco, CA.<sup>[56]</sup> The service was modeled after a similar service in the UK.

SEXINFO, which is targeted to urban African-American adolescents age 12 to 24, provides basic facts about sexual health and relationships, along with referrals to youth-oriented clinics and social services. In order to participate, youth text the word “SEXINFO” to a 5-digit number and receive a phone tree with different codes for different information. For example, teens can text B2 if they think they are pregnant to get information about where to find the nearest clinic. There is also a website where parents, participants, and others can see sample messages online [www.sextextsf.org](http://www.sextextsf.org).



Focus groups with youth were conducted to discuss the feasibility of the service and to help determine the most appropriate ways to market the service. Text scripts were developed by health educators at ISIS-Inc. based on the focus group discussions. A group of community organizations also met regularly to provide guidance on the project. The organizations included clinic staff, high school health programs, juvenile probation departments, and clergy from a large African-American congregation.

In order to let youth know about the service, SFDPH and ISIS-Inc worked with the Youth

United Through Health Education program (run by SFDPH) to develop and test promotional materials. The materials included posters, palm cards, bus shelter ads, and banner ads on Yahoo!. A press release was also picked up by local newspapers, television, and radio.

The program, which costs about \$2,500 a month, aims for the text messaging process to take about 1 to 2 minutes, and most messages end with the distribution of a phone number that users can call for more information ([www.sexinfoSF.org](http://www.sexinfoSF.org)). The service is now being replicated in Washington, D.C. ([www.realtalkdc.org](http://www.realtalkdc.org)).



**FINDINGS:** A preliminary evaluation to determine the number of youth using the service and the most frequent requests through the service has been conducted. More than 4,500 inquiries were sent in the first 25 weeks of the service, and 2,500 of those inquiries led to information and referrals. The top three messages accessed were related to (1) information about what to do if the condom broke; (2) finding out about STIs; and (3) information about pregnancy.

An evaluation was also conducted to determine who was using the service. According to surveys based on a convenience sample, 11 percent of respondents reported awareness of the campaign. African-American youth were

more likely to report awareness of the campaign as were youth living in the target areas. Younger youth (ages 12 to 18) were more likely than older youth (ages 19 to 24) to report awareness of the campaign as were youth with the least expensive cell phone provider compared to those with the most expensive cell phone provider.



audience. The **truth**<sup>®</sup> campaign’s use of “cutting edge” ads to target youth is a good example.<sup>[20]</sup>

Commercial marketing techniques, such as direct mail campaigns that address specific recipients, have demonstrated the value of audience segmentation and targeting through formative research. These techniques need to be replicated in sexual health campaigns.<sup>[14]</sup> The ultimate purpose of segmentation is to divide heterogeneous audiences into more homogenous subgroups whose preferences will be similar enough so that campaign messages will be maximally effective when targeted to that subgroup.<sup>[65]</sup> Many variables can be used to segment, including race/ethnicity, gender, age, risk level, and sensation-seeking attributes.

Bushley and colleagues,<sup>[66]</sup> for example, showed the effectiveness of targeting in recruiting young women for an HPV vaccine study with a campaign designed specifically to address Hawaii’s diverse culture. The Kaiser Family Foundation<sup>[36]</sup> achieved success by specifically targeting African-American youth in its “Rap it Up” campaign.

Because few efforts have targeted young adolescents, and because sexual risk behaviors often begin in pre- and early adolescence, media efforts also need to be designed to speak to younger audiences with age-appropriate messages.

### **FOCUS ON HIGH-RISK YOUTH**

A focus on high-risk youth also may be productive. Interventions are more likely to achieve measurable effects if they steer clear of health beliefs or behavior areas that are already close to desirable levels at baseline. For example, the King County, WA, condom promotion campaign showed little change in promoting condom efficacy, probably due to the community’s high level of condom use at baseline (75 percent).<sup>[64]</sup> The “Two-City Safer Sex” campaign conducted focus groups with high-sensation seekers before designing messages and targeted those youth specifically.<sup>[14]</sup> The “KNOW HIV/AIDS” campaign partnered with the Black

Entertainment Television (BET) network to reach African-American audiences with messages about safe sex and HIV prevention because black youth are typically at higher risk of acquiring HIV than are white youth.<sup>[36]</sup> By targeting a high-risk population, the KNOW HIV/AIDS campaign increased its chances of effectiveness and efficiently channeled resources to those most in need.

### **PROMOTE THE ADOPTION OF NEW BEHAVIORS**

Focusing on a new behavior rather than trying to change an old habit may also increase effectiveness of media interventions. Similar to commercial marketing, where selling new purchases is easier than teaching lifestyle changes that involve abstention, health interventions that promote something new, be it a condom, nicotine patch, seat belt, or clinical test, are more likely to be effective than those that ask users to stop doing something, like having sex, smoking, or drinking.<sup>[1]</sup>

The types of health behaviors promoted by the interventions discussed here ranged quite a bit, with some of the actions being more concrete than others, including using a condom, engaging in parent-child communication, calling a hotline, text messaging a friend, or designing a slogan. In all, about 13 of the 20 interventions reviewed suggested some kind of new behavior rather than the cessation of an old one.

### **MAXIMIZE CAMPAIGN EXPOSURE**

No degree of targeting will achieve effects if the messages are not seen or heard. Although most of the sexual health interventions reviewed here used multiple channels, evaluations have not sufficiently analyzed which channels are most effective for various audiences, nor whether more channels are better than fewer. Recent evidence suggests, however, that significant changes can be achieved using only one channel, such as television or radio,<sup>[13; 67]</sup> if exposure of the target audience is high enough.



Because reach (the proportion of the intended audience exposed to the messages) and frequency (the number of times a desired recipient sees or hears a message) are important for media effects, process evaluation should be conducted to document exposure levels mid-stream to maximize reach. Nine of the 20 interventions reviewed here reported achieving high levels of exposure to their messages and were among the most effective interventions (see Table 3-1).

One advantage of E-E and media advocacy strategies is that most existing broadcast programs and news publications have high reach. Control over content lies outside the health educators' influence, however. Moreover, because of the high cost of commercial airtime and print placement, interventions that buy time or space often are limited to one-time messages or low repetition, and thus reduce the frequency with which an audience may view or hear the campaign's messages.

In a review of campaigns targeting a wide range of health behaviors, Snyder and Hamilton<sup>[1]</sup> found that average reach levels were surprisingly low (only 36 percent to 42 percent of intended audiences saw or heard the campaign messages). Some recent interventions, however, such as the "Two-City Safer Sex" campaign described above, have achieved higher reach levels of 85 percent to 96 percent by leveraging purchased time for additional donated air time.<sup>[14]</sup> When multiple channels are used, Derzon & Lipsey<sup>[68]</sup> recommend coordinating the various campaign components, to ensure consistency and reinforcement. Noar<sup>[69]</sup> recommends achieving higher saturation levels with one channel, such as TV, if finances allow, and it is clear that the target audience will be reached with that channel.

## **BUILD SUSTAINABLE PROJECTS**

A related issue is sustainability. One of the biggest barriers to effective public health media interventions is that they do not last long enough. Studies have consistently shown that the media's effects on health risk behaviors are short-lived.<sup>[14; 64; 70]</sup> Limited resources for media interventions have severely

hampered the ability to disseminate the kind of interventions that might achieve longer-term effects. Perhaps the best comparisons stem from the world of private marketing, where advertising campaigns are ongoing.

## **USE MEDIA ADVOCACY**

Media advocacy offers one solution to public health's typically limited budget. News coverage of sexual health issues may be particularly important during times of budget cuts when the public's exposure to explicitly formulated public health messages is reduced.<sup>[71]</sup> The news works both directly to inform the public and indirectly to shape notions of the importance of particular issues and events.<sup>[71; 72]</sup> News coverage also can provide various stakeholders, such as policy makers, with helpful perspectives on relevant causal factors and possible solutions.<sup>[73]</sup>

Media advocacy has become an important component of comprehensive public health communication programs with resources dedicated to working with newspapers as a key outlet for health messages.<sup>[74; 75]</sup> By working directly with the producers of local news, advocates seek to influence the level of consideration afforded to specific concerns and their potential solutions, and to counteract or reframe arguments proposed by opponents.<sup>[71]</sup>

## **USE NEW MEDIA TECHNOLOGIES**

New media technologies need to be explored more fully by sexual health educators and public health researchers. Internet, MP3, and cell phone technologies not only offer the potential of more cost-effective dissemination, but also the ability to reach a greater diversity of adolescent audiences (including young adolescents) in ways never before possible. Fifteen of the interventions examined here used new media technologies in an innovative way, beyond the simple presence of a less interactive website (see Table 3-1). Clinic waiting rooms offer one avenue for evaluating new technology interventions with randomized controlled trials, and may include the possibility of using behavioral markers for documenting effects among patients.

The promising new interventions still need to be stringently evaluated, and more broadly disseminated once success has been established.

## CONDUCT CAREFUL EVALUATIONS

The surprising lack of data on domestic media interventions for adolescents' sexual health is partly due to the lack of large-scale efforts. Many of the interventions reviewed here have been generated by local or regional groups, rather than on a national or multi-state scale. Yet, even with smaller-scale efforts, it is important to conduct evaluations that can assess whether the cost and time is valuable and to determine which campaign components are most important.

Only one study in this review of U.S.-based interventions, the "Two City Safer Sex Project," employed a field experimental approach,<sup>[14]</sup> and only five used randomized controlled trials: "AIDS Interactive," "What Could You Do?," "Project LIGHT," "Reducing the Risk," and a Motivational Interviewing Program, all of which were computer-based instruction disseminated in controlled environments.<sup>[47; 48; 50-52]</sup> Many of the interventions reviewed here included only a post-test or one-group only pre/post-test comparisons (e.g., "Know HIV/AIDS," and the E-E cases.<sup>[19; 32; 33; 36]</sup>)

Given the difficulty of conducting randomized controlled trials to assess the success of mass media interventions, more field experiments or quasi-experiments should be conducted, using time series analyses or pre/post-test control group designs.<sup>[56; 70]</sup>

The majority of the evaluations also relied solely on self-reports to document audience effects, but such measures are subject to social desirability bias. In the future, it would be helpful to include measures of actual sexual behavior, such as simple STI tests, to assess for safe sex behavior.

## CONCLUSIONS

It appears that much has been learned in recent years about how to conduct mass media interventions to promote adolescents' sexual health. Increasing evidence seems to confirm that, if designed according to the best practices identified here and elsewhere, media interventions have a good chance of achieving their intended effects. It is also clear, however, that we have more to learn. We are only just beginning to use the new media technologies in the interest of sexual health, we are not in agreement about the value of multiple channels, and more rigorous evaluations are needed, even though they are difficult and often costly.

Looking into the future, it will be exciting to learn how the newest interactive technologies are working in the sexual health arena, and how the best practices to date can be incorporated into these new approaches.



## REFERENCES

1. **Snyder, L. B. & Hamilton, M. A.** (2002). A meta-analysis of U.S. health campaign effects on behavior: Emphasize enforcement, exposure and new information, and beware the secular trend. In R. C. Hornik (ed.) *Public health communication: Evidence for behavior change* (pp. 357-384). Mahwah, NJ: Lawrence Erlbaum.
2. **Noar, S.,** (2006). A 10-year retrospective of research in health mass media campaigns; Where do we go from here? *Journal of Health Communication, 11*, 21-42.
3. **Randolph, W. & Viswanath, K.** (2004). Lessons learned from public health mass media campaigns: Marketing health in a crowded media world. *Annual Review of Public Health, 25*, 419-437.
4. **Kaiser Family Foundation** (1996). *Teens on sex: What they say about the media as an information source*. Menlo Park, CA: Henry J. Kaiser Family Foundation.
5. **Ward, L. M., Day, K.M., & Epstein, M.** (2006). Uncommonly good: Exploring how mass media may be a positive influence on young women's sexual health and development. *New Directions for Child and Adolescent Development, Summer* (112).
6. **Greenwood, C.** (2007). Lads' mags aid sex education. *Birmingham Post*, April 12, 2007, p. 7.
7. **Ybarra, M. L., & Suman, M.** (2006). Reasons, assessments, and actions taken: Sex and age differences in uses of Internet health information. *Health Education Research, July*.
8. **Hust, S., Brown, J.D., & L'Engle, K.** (2008). Boys will be boys and girls better be prepared: An analysis of the rare sexual health messages in young adolescents' media. *Mass Communication and Society, 11*: 1-21.
9. **Pardun, C. J., L'Engle, K. L., & Brown, J. D.,** (2005). Linking exposure to outcomes: Early adolescents' consumption of sexual content in six media. *Mass Communication and Society, 8*, 75-91.
10. **Signorelli, N.** (1997). Reflections of girls in the media: A content analysis across six media. Oakland and Menlo Park, CA: Children NOW and Kaiser Family Foundation.
11. **Walsh-Childers, K., Treise, D., & Gotthoffer, A.** (1997). *Sexual health coverage in women's, men's, teen, and other specialty magazines: A current-year and ten-year retrospective content analysis*. Menlo Park, CA: Henry J. Kaiser Family Foundation.
12. **Walsh-Childers, K., Gotthoffer, A., & Lepre, C. R.** (2002). From "Just the Facts" to "Downright Salacious": Teens' and women's magazine coverage of sex and sexual health. In J. D. Brown, J. R. Steele, & K. Walsh-Childers (Eds.), *Sexual teens, sexual media* (pp. 153-172). Mahwah, NJ: Erlbaum.
13. **Palmgreen, P. & Donohew, L.** (2003). Effective mass media strategies for drug abuse prevention campaigns. In Z. Slobada & W. J. Bukoski (Eds.), *Handbook of drug abuse prevention: Theory, science and practice* (pp. 27-43). New York: Kluwer Academic/Plenum Publishers.
14. **Zimmerman, R. S., Palmgreen, P. M., Noar, S. M., Lustria, M. L. A., Hung-Yi, L., & Horsewski, M. L.** (2007). Effects of a televised two-city safer sex media campaign targeting high-sensation-seeking and impulsive-decision-making young adults. *Health Education & Behavior, 34*, 810-826.
15. **Hoyle, R. H., Fejfar, M.C.; Miller, J.D.** (2000). Personality & Sexual Risk-Taking: A Quantitative Review. *Journal of Personality, 68* (6):1203-1231.
16. **Fishbein, M., & Ajzen, I.** (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.
17. **Bandura, A.** (1989). Perceived self-efficacy in the exercise of control over AIDS infection. In V.M. Mays, G.W. Albee, & S.S. Schneider (Eds.), *Primary prevention of AIDS: Psychological approaches* (pp. 128 - 141). Newbury Park, CA: Sage.
18. **Kaiser Family Foundation.** (2003b). *Reaching the MTV generation: Recent research on the impact of the Kaiser Family Foundation campaign on sexual health*. Menlo Park, CA: Henry J. Kaiser Family Foundation.
19. **DuRant, R.H., Wolfson, M., & Lafrance, B.** (2006). An evaluation of a mass media campaign to encourage parents of adolescents to talk to their children about sex. *Journal of Adolescent Health, 38*, 298-317.
20. **Farrelly, M., Davis, K. C., Haviland, M. L., Heaton, C. G., & Messeri, P.** (2005). Evidence of a dose-response relationship between "truth" antismoking ads and youth smoking prevalence. *American Journal of Public Health, 95*(3), 425-431.
21. **Siegel, M., & Biener, L.** (2000). The impact of an antismoking media campaign on progression to established smoking: Results of a longitudinal youth study. *American Journal of Public Health, 90*, 380-386.
22. **Biener, L., Harris, J.E., Hamilton, W.** (2000). Impact of the Massachusetts tobacco control programme: Population-based trend analysis. *British Medical Journal, 321*, 351-354.
23. **Vallone, D.** (2006). *Evaluation the truth campaign. Presented at Assessing the Effectiveness of Public Education Campaigns*, Washington, D.C.: Kaiser Family Foundation.

24. **Vaughan, P., Rogers, E., Singhal, A., & Swalehe, R.** (2000). Entertainment-education and HIV/AIDS prevention: A field experiment in Tanzania. *Journal of Health Communication, 5*, 81-100.
25. **Tannen, T.** (2003). Media giant and foundations team up to fight HIV/AIDS. *The Lancet, 361*, 1440-1444.
26. **Arnett, J. J.** (1995). Adolescents' uses of media for self-socialization. *Journal of Youth and Adolescence, 24*, 519-533.
27. **Aubrey, J. S., Harrison, K., Kramer, L., & Yellin, J.** (2003). Variety versus timing: Gender differences in college students' sexual expectations as predicted by exposure to sexually oriented television. *Communication Research, 30*, 432-460.
28. **Bandura, A.** (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
29. **Gerbner, G., Gross, L., Morgan, M., & Signorielli, N.** (1994). Growing up with television: The cultivation perspective. In J. Bryant & D. Zillman (Eds.), *Media effects: Advances in theory and research* (pp. 17-41). Mahwah, NJ: Erlbaum.
30. **Piotrow, P., Rimon, J. G., Winnard, K., Kincaid, L., Huntington, D., & Convisser, J.** (1990). Mass media family planning promotion in three Nigerian cities. *Studies in Family Planning, 21*, 265-274.
31. **Folb, K.** (2000). "Don't touch that dial!" TV as a—What!?!—positive influence. *SIECUS Reports, 28*(5), 16-18.
32. **Kaiser Family Foundation** (2003a). *Survey of ER Viewers: Summary of Results*. Menlo Park, CA: Henry J. Kaiser Family Foundation.
33. **Kennedy, M. G., O'Leary, A., Beck, V., Pollard, K., & Simpson, P.** (2004). Increases in calls to the CDC National STD and AIDS Hotline following AIDS-related episodes in a soap opera. *Journal of Communication, 54*, 287-301.
34. **Brodie, M., Foeh, U., Rideout, V., Bae, N., Miller, C., Flourney, R., & Altman, D.** (2001). Communicating health information through the entertainment media. *Health Affairs, 19*2-199.
35. **Collins, R., Elliott, M., Berry, S., Kanouse, D., & Hunter, S.** (2003). Entertainment television as a healthy sex educator: The impact of condom-efficacy information in an episode of Friends. *Pediatrics, 112*, 1115-1121.
36. **Kaiser Family Foundation** (2004). *Assessing public education programming on HIV/AIDS: A national survey of African Americans - BET Rap It Up*. Menlo Park, CA: Henry J. Kaiser Family Foundation.
37. **Laugesen, M., & Meads, C.** (1991). Advertising, price, income and publicity effects on weekly cigarette sales in New Zealand supermarkets. *British Journal of Addiction, 86*, 83-89.
38. **Pierce, J. P., & Gilpin, E. A.** (2001). News media coverage of smoking and health is associated with changes in population rates of smoking cessation but not initiation. *Tobacco Control, 10*, 145-153.
39. **Wallack, L.** (1994). Media advocacy: A strategy for empowering people and communities. *Journal of Public Health Policy, 15*, 420-436.
40. **Smith, K., Wakefield, M., Terry-McElrath, Y., Chaloupka, F., Flay, B., & Johnston, L.** (2008). Relation between newspaper coverage of tobacco issues and smoking attitudes and behavior among American teens. *Tobacco Control, 17*(1), 17-24.
41. Personal communication, **Vicky Rideout**, Vice President of the Kaiser Family Foundation and Director of the Foundation's Program for the Study of Entertainment Media and Health. June 19, 2008.
42. **McFarlane, M., Ross, M.W., & Elford, J.** (2004). The Internet and HIV/STD prevention. *AIDS Care, 16*(8), 929-930.
43. **Bolding, G., Davis, M., Sherr, L., Hart, G., & Elford, J.** (2004). Use of gay Internet sites and views about online health promotion among men who have sex with men. *AIDS CARE, 16*(8), 993-1001.
44. **Sherhoff, M.** (2005). *Without Condoms: Unprotected sex, gay men, and barebacking*. New York: Routledge
45. **Ross, M.** (2002). The Internet as a medium for HIV prevention and counseling. *Focus: A Guide to AIDS Research and Counseling, 17*(5), 4-6.
46. **Ross, M., Tikkanen, R., & Manson, S.** (2000). Differences between Internet samples and conventional samples of men who have sex with men: implications for research and HIV interventions. *Social Science and Medicine, 51*, 749-758.
47. **Evans, A.E., Edmundson-Drane, E.W., Harris, K.K.,** (2000). Computer-assisted instruction: An effective instructional method for HIV prevention education? *Journal of Adolescent Health, 26*, 244-251.
48. **Kiene, S. M., & Barta, W. D.** (2006). A brief individualized computer-delivered sexual risk reduction intervention increases HIV/AIDS preventive behavior. *Journal of Adolescent Health, 39*, 404-410.
49. **Witte, K., Myer, G., & Martell, D.** (2001). *Effective Health Risk Messages*. Newbury Park: Sage Publications
50. **Roberto, A., Zimmerman, R., Carlyle, K., Abner, E., Cupp, P., & Hansen, G.** (2007). The effects of a computer-based pregnancy, STD, and HIV prevention intervention: A nine-school trial. *Health Communication, 21*(2), 115-124.

51. Downs, J. S., Murray, P. J., de Bruin, W. B., Penrose, J., Palmgren, C., & Fischhoff, B. (2004). Interactive video behavioral intervention to reduce adolescent females' STD risk: A randomized controlled trial. *Social Science & Medicine*, 59(8), 1561-1573.
52. Lightfoot, M., Comulada, W. S., & Stover, G., (2007) Computerized HIV preventive intervention for adolescents: Indications of efficacy. *American Journal of Public Health*, 97(6), 1027-1031.
53. Keller, S., LaBelle, H., Karimi, N., Gupta, S. (2002). STD prevention for teenagers: A look at the universe of sites. *Journal of Health Communication*, 7, 341-53.
54. Keller, S., LaBelle, H., Karimi, N., Gupta, S. (2004). Talking about STD/HIV prevention: A look at communication online. *AIDS Care, Special Issue: The Internet and HIV/STD Prevention* 16(8), 977-992.
55. Noar, S., Clark, A., Cole, C., & Lustria, M. (2006) Review of interactive safer sex web sites: Practice and potential. *Health Communication*, 20(3), 233-241.
56. Levine, D., McCright, J., Dobkin, L., Woodruff, A., & Klausner, J. (2008). SexInfo: A sexual health text messaging service for San Francisco youth. *American Journal of Public Health*, 98, 393-395.
57. Honan, E. (2008). Web site allows anonymous warnings of STD infections. Reuters, Feb. 14, 2008.
58. **The Iowa Network for Adolescent Pregnancy Prevention, Parenting, and Sexual Health** (2008). Talking sex together. Retrieved April 23, 2008, from <http://www.teenstxt.com>.
59. Riley, D. (2008). Morph monkey spreads Chlamydia on Facebook. *TechCrunch*, May 3, 2008. Retrieved May 8, 2008, from <http://www.techcrunch.com/2008/05/03/morph-monkey-spreads-chlamydia-on-facebook>.
60. **Internet Sexuality Information Service (ISIS)**. (2008). In brief: What if ur undies had the last word? Retrieved April 24, 2008, from <http://www.undiescontest.org>.
61. Lee, E. (2008). SexTech takes education online for kids. *San Francisco Chronicle*, Jan. 28, 2008.
62. Rosenstock, I.M. (1974). Historical origins of the health belief model. *Health Education Monographs*, 2, 328-335.
63. Prochaska, J. O., DiClemente, C. C., Norcross, J. C. (1992). In search of how people change. *American Psychologist*, 47, 1102-1114.
64. Alstead, M., Campsmith, M., Halley, C. S., Hartfeild, K., Goldbaum, G., & Wood, R.W. (1999). Developing, implementing, and evaluating a condom promotion program targeting sexually active adolescents. *AIDS Education and Prevention*, 11(6), 497-512.
65. Maibach EW, Maxfield A, Ladin K, Slater M. Translating health psychology into effective health communication: the American Healthstyles Audience Segmentation project. *J Health Psych*. 1996;1:261-77.
66. Bushley, A.W., Cassel, K., Hernandez, B.Y., Robinett, H., & Goodman, M.T. (2005). A tailored multi-media campaign to promote the human papillomavirus cohort study to young women. *Preventive Medicine*, 41(1), 98-101.
67. Reger, B., Wootan, M. G. & Booth-Butterfield, S. (1999). Using mass media to promote healthy eating: A community-based demonstration project. *Preventive Medicine*, 29(5), 414-421.
68. Derzon, J. H. & Lipsey, M. W. (2002). A meta-analysis of the effectiveness of mass communication for changing substance use knowledge, attitudes and behavior. In W. D. Crano & M. Burgoon (Eds.), *Mass media and drug prevention: Classic and contemporary theories and research* (pp. 231-258). Mahwah, NJ: Lawrence Erlbaum.
69. Noar, S. (2008). *Effects of a Televised Two-City Safer Sex Mass Media Campaign Targeting High Sensation-Seeking and Impulsive Decision-Making Young Adults*. Unpublished document. Lexington: University of Kentucky.
70. Delgado, H. & Austin, B. (2007) Can media promote responsible sexual behaviors among adolescents and young adults? *Current Opinion Pediatric*, 19, 405-410.
71. Champman, S., & Dominello, A., (2001). A strategy for increasing news media coverage of tobacco and health in Australia. *Health Promotion International*, 16, 137-143.
72. Lemmens, P., Vaeth, P., & Greenfield, T., (1999). Coverage of beverage alcohol issues in the print media in the United States. *American Journal of Health*, 89, 1555-1560.
73. Wakefield M., Flay B., Nichtec M., & Giovino G., (2003). Role of media influencing trajectories of youth smoking. *Addictions*, 98, s79-s103.
74. Jernigan D., & Wright P., (1996). Media advocacy: Lessons from community experiences. *Journal of Public Health Policy*, 17, 306-330
75. Russel, A., Voas, R.B., Dejong, W., & Chaloupka, M. (1995). MADD rates the states; A media advocacy event to advance the agenda against alcohol-impaired driving. *Public Health Reports*, 10, 240-245.

## TABLE 3-1 SUMMARY OF SEXUAL HEALTH MASS MEDIA CAMPAIGNS IN THE UNITED STATES

INTERVENTION	REGION (OF THE U.S.)	SUMMARY OF INTERVENTION	CHARACTERISTICS OF THE INTERVENTIONS*	EVALUATION FINDINGS
<b>ENTERTAINMENT-EDUCATION (E-E)</b>				
<p><i>The Bold &amp; The Beautiful</i><sup>[33]</sup></p> <p>2001</p>	Nationwide	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>• CDC</li> <li>• CBS</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>• E-E</li> <li>• Public Service Announcements (PSAs)</li> <li>• Hotline</li> </ul> <p><b>Target Audience:</b></p> <ul style="list-style-type: none"> <li>• Adults and youth</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>• Increase HIV/AIDS knowledge</li> <li>• Increase hotline calls</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Theory-Based</li> <li><input type="checkbox"/> Audience Involvement</li> <li><input type="checkbox"/> Tailoring</li> <li><input checked="" type="checkbox"/> Maximize Campaign Exposure</li> <li><input type="checkbox"/> Target High Risk Youth</li> <li><input checked="" type="checkbox"/> Promote New Behaviors</li> <li><input type="checkbox"/> Careful Evaluation</li> </ul>	<p><b>Effects:</b></p> <ul style="list-style-type: none"> <li>• The first PSA generated a total of 1,426 calls to the CDC's national HIV/AIDS hotline during the soap opera time slot, compared to 88 calls the previous day and 108 calls the day following the episode.</li> <li>• Ten days later when the PSA was shown again, the call volume spiked even higher to 1,840 calls originating during and shortly after the episode.</li> <li>• In comparison, the hotline received 94 calls the day before and 234 calls the day after the HIV episode.</li> </ul>

\* Note that these characteristics are based on the recommendations in the chapter. A check mark denotes that the intervention explicitly incorporated that particular characteristic.



INTERVENTION	REGION (OF THE U.S.)	SUMMARY OF INTERVENTION	CHARACTERISTICS OF THE INTERVENTIONS*	EVALUATION FINDINGS
<b>ENTERTAINMENT-EDUCATION (E-E)</b>				
<p><i>Friends</i><sup>[35]</sup></p> <p>2002</p>	<p>Nationwide</p>	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>• Kaiser Family Foundation (KFF)</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>• E-E</li> </ul> <p><b>Target Audience:</b></p> <ul style="list-style-type: none"> <li>• Youth, ages 12-17</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>• Promote condom use</li> <li>• Prevent teen pregnancy</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Theory-Based</li> <li><input type="checkbox"/> Audience Involvement</li> <li><input type="checkbox"/> Tailoring</li> <li><input checked="" type="checkbox"/> Maximize Campaign Exposure</li> <li><input type="checkbox"/> Target High Risk Youth</li> <li><input checked="" type="checkbox"/> Promote New Behaviors</li> <li><input type="checkbox"/> Careful Evaluation</li> </ul>	<p><b>Exposure:</b></p> <ul style="list-style-type: none"> <li>• A post-test survey, funded by KFF, found that, among teens who had viewed the episode, two-thirds (65%) remembered that the specific storyline depicted an unplanned pregnancy caused by condom failure.</li> </ul> <p><b>Effects:</b></p> <ul style="list-style-type: none"> <li>• 40% of teens who reported watching the “Friends” episode watched it with a parent or adult, and 10% of them talked with an adult about the effectiveness of condoms as a result of the episode.</li> <li>• 47% of teens who discussed the episode with an adult recalled the characters describing condoms as being 95% or more effective.</li> <li>• Compared with peers who watched alone or with another youth, teens who watched with a parent or adult were twice as likely to say they learned something new about condoms from the episode (38% vs. 15%), as well as to recall that condoms were said to be between 95% and 100% effective (40% vs. 20%).</li> <li>• A follow-up survey 6 months later found that teens who watched the episode about condom efficacy were more likely to rate condoms as 95% to 100% effective than teens who did not view the episode (30% vs. 18%).</li> </ul>

INTERVENTION	REGION (OF THE U.S.)	SUMMARY OF INTERVENTION	CHARACTERISTICS OF THE INTERVENTIONS*	EVALUATION FINDINGS
<b>ENTERTAINMENT-EDUCATION (E-E)</b>				
<p><i>ER</i><sup>[33]</sup></p> <p>1997-2000</p>	<p>Nationwide</p>	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>• KFF</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>• E-E</li> </ul> <p><b>Target Audience:</b></p> <ul style="list-style-type: none"> <li>• Young adults 18+</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>• Increase emergency contraception awareness</li> <li>• Increase HPV knowledge</li> <li>• Prevent HPV</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Theory-Based</li> <li><input type="checkbox"/> Audience Involvement</li> <li><input type="checkbox"/> Tailoring</li> <li><input checked="" type="checkbox"/> Maximize Campaign Exposure</li> <li><input type="checkbox"/> Target High Risk Youth</li> <li><input checked="" type="checkbox"/> Promote New Behaviors</li> <li><input type="checkbox"/> Careful Evaluation</li> </ul>	<p><b>Methods:</b></p> <ul style="list-style-type: none"> <li>• KFF conducted a study involving 10 national random-sample telephone surveys conducted between March 1997 and April 2000 of more than 3,500 regular ER viewers aged 18 and older (300-500 participants per survey).</li> </ul> <p><b>Effects:</b></p> <ul style="list-style-type: none"> <li>• After a brief vignette about emergency contraception (EC), the percent of viewers who were aware of EC increased by 17 percentage points (50% to 67%).</li> <li>• Among those who had heard of emergency contraception, 20% said they had learned about it on ER.</li> <li>• After an ER episode aired about HPV, the proportion of viewers who had heard of HPV nearly doubled (from 24% to 47%), and the proportion who could correctly define HPV tripled (from 9% to 28%).</li> </ul>



INTERVENTION	REGION (OF THE U.S.)	SUMMARY OF INTERVENTION	CHARACTERISTICS OF THE INTERVENTIONS*	EVALUATION FINDINGS
<b>ENTERTAINMENT-EDUCATION (E-E)</b>				
<p><b>KNOW HIV/AIDS &amp; Rap it Up</b><sup>[36]</sup></p> <p>1998-present</p>	Global	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>• KFF</li> <li>• Viacom</li> <li>• CBS</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>• PSAs (TV and radio)</li> <li>• outdoor ads (billboards, bus)</li> <li>• E-E</li> <li>• website</li> </ul> <p><b>Target audience:</b></p> <ul style="list-style-type: none"> <li>• Young adults, ages 18-25</li> <li>• Men who have sex with men (MSM)</li> <li>• Latinos</li> <li>• African-Americans, ages 18-25</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>• Increase awareness of HIV/AIDS and how to prevent it</li> <li>• Promote dialogue between partners</li> <li>• Encourage testing</li> <li>• Address social stigma</li> <li>• Promote safer sex behaviors</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Theory-Based</li> <li><input checked="" type="checkbox"/> Audience Involvement</li> <li><input checked="" type="checkbox"/> Tailoring</li> <li><input checked="" type="checkbox"/> Maximize Campaign Exposure</li> <li><input checked="" type="checkbox"/> Target High Risk Youth</li> <li><input checked="" type="checkbox"/> Promote New Behaviors</li> <li><input type="checkbox"/> Careful Evaluation</li> </ul>	<p><b>Methods:</b></p> <ul style="list-style-type: none"> <li>• Princeton Survey Research Associates in 2004 surveyed 800 African-Americans 18 and older.</li> </ul> <p><b>Exposure:</b></p> <ul style="list-style-type: none"> <li>• More than 8 in 10 African-American adults reported having seen at least one of the ads or shows.</li> <li>• 48% of all African-Americans report having seen at least 3 or more of the ads.</li> </ul> <p><b>Effects:</b></p> <ul style="list-style-type: none"> <li>• 85% of African-Americans who saw campaigns say the programming really made them think, or that it gets people talking about HIV and AIDS (82%).</li> <li>• The vast majority of viewers in the target audience say the programming made them more likely to take their sexual relationships seriously (73%), and to practice safer sex (66%).</li> <li>• 40% of African-Americans who saw the programming report they took at least one action to protect their own health after seeing the ads or shows, as did 58% of those in the 18-24 year-old age group.</li> <li>• The most widespread behavioral change reported was talking to a partner about safer sex.</li> <li>• 35% of all African-Americans and 52% of those aged 18-24 say they were moved to do this by the ads or shows they saw.</li> <li>• 37% of viewers in this age group say they either visited a doctor or got tested for HIV because of the programming they saw.</li> </ul>

INTERVENTION	REGION (OF THE U.S.)	SUMMARY OF INTERVENTION	CHARACTERISTICS OF THE INTERVENTIONS*	EVALUATION FINDINGS
<b>PUBLIC SERVICE ANNOUNCEMENTS (PSAs)</b>				
<p><b>Two-City Safer Sex<sup>[14]</sup></b></p> <p>2003</p>	<p>Lexington, KY</p>	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>University of Kentucky</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>PSAs (10)</li> </ul> <p><b>Target Audience:</b></p> <ul style="list-style-type: none"> <li>At-risk young adults, ages 18-26</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>Increase safer sexual behavior among high sensation-seekers and impulsive decision-makers</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Theory-Based</li> <li><input checked="" type="checkbox"/> Audience Involvement</li> <li><input checked="" type="checkbox"/> Tailoring</li> <li><input checked="" type="checkbox"/> Maximize Campaign Exposure</li> <li><input checked="" type="checkbox"/> Target High Risk Youth</li> <li><input checked="" type="checkbox"/> Promote New Behaviors</li> <li><input checked="" type="checkbox"/> Careful Evaluation</li> </ul>	<p><b>Methods:</b></p> <ul style="list-style-type: none"> <li>An interrupted-time-series design. Independent, monthly random samples of 100 individuals were surveyed in each city for 21 months.</li> </ul> <p><b>Exposure:</b></p> <ul style="list-style-type: none"> <li>85% to 96% of the audience reported seeing one or more PSAs during the 21-month campaign, varying over the month audience members were surveyed.</li> </ul> <p><b>Effects:</b></p> <ul style="list-style-type: none"> <li>Analyses indicated a significant 5-month increase in condom use, condom-use self-efficacy, and behavioral intentions among the target group in the campaign city with no changes in the comparison city; authors estimate the overall effects to be a 13% increase in safer sex acts.</li> </ul>

INTERVENTION	REGION (OF THE U.S.)	SUMMARY OF INTERVENTION	CHARACTERISTICS OF THE INTERVENTIONS*	EVALUATION FINDINGS
<b>PUBLIC SERVICE ANNOUNCEMENTS (PSAs)</b>				
<p><b>It's Your Sex Life (Think MTV)<sup>[18]</sup></b></p> <p>1997-2003</p>	<p>Nationwide</p>	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>• KFF</li> <li>• MTV</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>• PSAs (62 different ones)</li> <li>• Full-length shows (30 minutes)</li> <li>• Web site</li> </ul> <p><b>Target audience:</b></p> <ul style="list-style-type: none"> <li>• Sexually active teens and young adults, ages 16-to-24</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>• Raise awareness about risks</li> <li>• Encourage young people to discuss safer-sex issues</li> <li>• Promote condom use</li> <li>• Encourage testing for HIV/STI</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Theory-Based</li> <li><input checked="" type="checkbox"/> Audience Involvement</li> <li><input checked="" type="checkbox"/> Tailoring</li> <li><input checked="" type="checkbox"/> Maximize Campaign Exposure</li> <li><input checked="" type="checkbox"/> Target High Risk Youth</li> <li><input checked="" type="checkbox"/> Promote New Behaviors</li> <li><input type="checkbox"/> Careful Evaluation</li> </ul>	<p><b>Methods:</b></p> <ul style="list-style-type: none"> <li>• A survey of 1,000 16-to 24- year-olds nationwide.</li> </ul> <p><b>Exposure:</b></p> <ul style="list-style-type: none"> <li>• Close to a million young people have called the campaign's toll-free hotline to receive additional information on sexual health topics, be connected with a counselor, or find a local HIV/STI testing center.</li> <li>• Millions have also visited the comprehensive website.</li> </ul> <p><b>Effects:</b></p> <ul style="list-style-type: none"> <li>• More than one in two young adults recognized the campaign, and many said they acted on what they saw. <ul style="list-style-type: none"> <li>◦ 59% of 16- to 24-year-olds across the country recognize the brand.</li> <li>◦ 52% of all 16- to 24-year-olds in the country say they have seen sexual health ads on MTV, and 32% say they have seen full-length shows.</li> <li>◦ 63% of those who have seen the campaign say they personally learned new information from it.</li> <li>◦ Among those who are not yet sexually active, 66% say the campaign made them more likely to wait to have sex.</li> <li>◦ Among those who have already had intercourse, 73% said it has made them more likely to take relationships more seriously; 73% said they are more likely to use condoms; 69% are more likely to talk to their partner about safer sex; and 65% are more likely to get tested for HIV or other STIs.</li> </ul> </li> </ul>

INTERVENTION	REGION (OF THE U.S.)	SUMMARY OF INTERVENTION	CHARACTERISTICS OF THE INTERVENTIONS*	EVALUATION FINDINGS
<b>PUBLIC SERVICE ANNOUNCEMENTS (PSAs)</b>				
<p><b>Talk to Your Kids About Sex<sup>[19]</sup></b></p>	<p>North Carolina (32 counties)</p>	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>• State of North Carolina</li> <li>• Adolescent Pregnancy Prevention Coalition of North Carolina</li> </ul> <p><b>What:</b></p> <p>PSAs (paid):</p> <ul style="list-style-type: none"> <li>• radio (in 21 counties)</li> <li>• TV (in 22 counties) and</li> <li>• billboard (in 6 counties)</li> </ul> <p><b>Target Audience:</b></p> <ul style="list-style-type: none"> <li>• Parents and teens</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>• Promote parent-child communication</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Theory-Based</li> <li><input type="checkbox"/> Audience Involvement</li> <li><input type="checkbox"/> Tailoring</li> <li><input type="checkbox"/> Maximize Campaign Exposure</li> <li><input type="checkbox"/> Target High Risk Youth</li> <li><input checked="" type="checkbox"/> Promote New Behaviors</li> <li><input checked="" type="checkbox"/> Careful Evaluation</li> </ul>	<p><b>Methods:</b></p> <ul style="list-style-type: none"> <li>• The counties varied from no exposure to exposure to all 3 types of media during the 9 month campaign. To assess the impact of the campaign, a sample of 1,132 parents of adolescents living in the 32 counties was administered a post-exposure survey via a telephone interview.</li> </ul> <p><b>Effects:</b></p> <ul style="list-style-type: none"> <li>• In bivariate analyses the levels of parental exposure to the 3 types of media messages were associated with both having talked to their children and intentions to talk to their children about sex (<math>p &lt; .0001</math>).</li> <li>• Exposure to each component of this mass media campaign was associated with parents recently having talked to their adolescent children about sex and intentions to talk to their children during the next month.</li> </ul>



INTERVENTION	REGION (OF THE U.S.)	SUMMARY OF INTERVENTION	CHARACTERISTICS OF THE INTERVENTIONS*	EVALUATION FINDINGS
<b>MEDIA ADVOCACY</b>				
<p><b>Following ER</b><sup>[41]</sup></p> <p>1997-2001</p>	<p>Nationwide</p>	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>• KFF</li> <li>• Johns Hopkins University Bloomberg School of Public Health</li> <li>• NBC News Channel</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>• 90-second news segments</li> <li>• Hotline</li> <li>• Online resources</li> </ul> <p><b>Target audience:</b></p> <ul style="list-style-type: none"> <li>• Adults and youth</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>• Reinforce health messages in show</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Theory-Based</li> <li><input type="checkbox"/> Audience Involvement</li> <li><input type="checkbox"/> Tailoring</li> <li><input checked="" type="checkbox"/> Maximize Campaign Exposure</li> <li><input type="checkbox"/> Target High Risk Youth</li> <li><input type="checkbox"/> Promote New Behaviors</li> <li><input type="checkbox"/> Careful Evaluation</li> </ul>	<p><b>Exposure:</b></p> <ul style="list-style-type: none"> <li>• Broadcast in 37 of top 40 media markets nationwide.</li> <li>• Total audience of 120 million cumulatively. Audience sizes ranged from 400,000 to over 2 million per episode; each episode averaged about one million viewers.</li> </ul>
<b>MEDIA INTERVENTIONS USING NEW MEDIA TECHNOLOGIES – Using a New Application for Existing Information</b>				
<p><b>AIDS Interactive</b><sup>[47]</sup></p> <p>1997</p>	<p>Texas</p>	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>• University of Texas, Austin</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>• Computer-assisted instruction (CAI)</li> </ul> <p><b>Target audience:</b></p> <ul style="list-style-type: none"> <li>• Young adults ages 19 to 23</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>• Increase HIV knowledge</li> <li>• Increase safe sex behavior</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Theory-Based</li> <li><input checked="" type="checkbox"/> Audience Involvement</li> <li><input type="checkbox"/> Tailoring</li> <li><input type="checkbox"/> Maximize Campaign Exposure</li> <li><input checked="" type="checkbox"/> Target High Risk Youth</li> <li><input checked="" type="checkbox"/> Promote New Behaviors</li> <li><input checked="" type="checkbox"/> Careful Evaluation</li> </ul>	<p><b>Methods:</b></p> <ul style="list-style-type: none"> <li>• A group of 152 undergraduate students ages 19 to 23 were randomly assigned to receive CAI, a lecture or no intervention. Both the lecture and the CAI had the same content and lasted 1 hour.</li> </ul> <p><b>Effects:</b></p> <ul style="list-style-type: none"> <li>• Participants in the CAI group scored significantly higher on the scales of HIV knowledge and intention to practice safe sex with their current partner.</li> </ul>

INTERVENTION	REGION (OF THE U.S.)	SUMMARY OF INTERVENTION	CHARACTERISTICS OF THE INTERVENTIONS*	EVALUATION FINDINGS
<b>MEDIA INTERVENTIONS USING NEW MEDIA TECHNOLOGIES – Using a New Application for Existing Information</b>				
<p><b>Computer-Delivered Intervention</b> [48]</p> <p>2006</p>	Connecticut	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>University of Connecticut</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>CAI</li> </ul> <p><b>Target Audience:</b></p> <ul style="list-style-type: none"> <li>Young adults, ages 18-23</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>Increase condom use</li> <li>Reduce sexual risk taking</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Theory-Based</li> <li><input checked="" type="checkbox"/> Audience Involvement</li> <li><input checked="" type="checkbox"/> Tailoring</li> <li><input type="checkbox"/> Maximize Campaign Exposure</li> <li><input checked="" type="checkbox"/> Target High Risk Youth</li> <li><input checked="" type="checkbox"/> Promote New Behaviors</li> <li><input checked="" type="checkbox"/> Careful Evaluation</li> </ul>	<p><b>Methods:</b></p> <ul style="list-style-type: none"> <li>Intervention delivered to 157 college students in two sessions the first lasting 15 to 40 minutes and the second lasting 10 to 20 minutes. Control group received a tutorial about nutrition lasting same duration. Participants completed a baseline assessment of HIV prevention information, motivation, behavioral skills and behavior, attended two brief computer-delivered intervention sessions, and completed a follow-up assessment.</li> </ul> <p><b>Effects:</b></p> <ul style="list-style-type: none"> <li>Treatment participants reported a greater frequency of keeping condoms available and displayed greater condom-related knowledge at a 4-week follow-up session; sexually active participants reported a significant increase in condom use.</li> </ul>

INTERVENTION	REGION (OF THE U.S.)	SUMMARY OF INTERVENTION	CHARACTERISTICS OF THE INTERVENTIONS*	EVALUATION FINDINGS
<b>MEDIA INTERVENTIONS USING NEW MEDIA TECHNOLOGIES – Using a New Application for Existing Information</b>				
<p><b>What Could You Do?</b><sup>[51]</sup></p> <p>2004</p>	NA	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>Carnegie Mellon University</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>Interactive video intervention</li> </ul> <p><b>Target audience:</b></p> <ul style="list-style-type: none"> <li>Urban teens girls</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>Increase STI knowledge</li> <li>Decrease sexual risk behavior</li> <li>Reduce STI acquisition</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Theory-Based</li> <li><input checked="" type="checkbox"/> Audience Involvement</li> <li><input checked="" type="checkbox"/> Tailoring</li> <li><input type="checkbox"/> Maximize Campaign Exposure</li> <li><input checked="" type="checkbox"/> Target High Risk Youth</li> <li><input type="checkbox"/> Promote New Behaviors</li> <li><input checked="" type="checkbox"/> Careful Evaluation</li> </ul>	<p><b>Effects:</b></p> <ul style="list-style-type: none"> <li>Self-reports revealed that those assigned to the interactive video were significantly more likely to be abstinent in the first 3 months following initial exposure to the intervention, and experienced fewer condom failures in the following 3 months, compared to controls.</li> <li>Six months after enrollment, participants in the video condition were significantly less likely to report having been diagnosed with an STI.</li> </ul>
<p><b>Project LIGHT</b><sup>[52]</sup></p> <p>2007</p>	California	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>Center for Community Health, University of California</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>Computerized version of interpersonal program</li> </ul> <p><b>Target audience:</b></p> <ul style="list-style-type: none"> <li>High-risk young adults and adolescents ages 14 to 21</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>Increase condom use</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Theory-Based</li> <li><input checked="" type="checkbox"/> Audience Involvement</li> <li><input checked="" type="checkbox"/> Tailoring</li> <li><input type="checkbox"/> Maximize Campaign Exposure</li> <li><input checked="" type="checkbox"/> Target High Risk Youth</li> <li><input checked="" type="checkbox"/> Promote New Behaviors</li> <li><input checked="" type="checkbox"/> Careful Evaluation</li> </ul>	<p><b>Methods:</b></p> <ul style="list-style-type: none"> <li>The research implemented a randomized controlled trial of with the original interpersonal strategy (n=320) compared to the strategy of delivery on a CD-ROM format (n=320) and a control condition (n=320). All participants took a pre-test and 3 post-tests (at 3, 6, and 12 months). The study was implemented at the Juvenile Court and Community Schools and Community Day Schools of the Los Angeles County Office of Education.</li> </ul> <p><b>Effects:</b></p> <ul style="list-style-type: none"> <li>Adolescents in the computerized intervention were significantly less likely to engage in sexual activity and reported significantly fewer partners over 3 months.</li> </ul>

INTERVENTION	REGION (OF THE U.S.)	SUMMARY OF INTERVENTION	CHARACTERISTICS OF THE INTERVENTIONS*	EVALUATION FINDINGS
<b>MEDIA INTERVENTIONS USING NEW MEDIA TECHNOLOGIES – Using a New Application for Existing Information</b>				
<p><b>Reducing the Risk</b><sup>[50]</sup></p> <p>2007</p>	NA	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>• ETR Associates</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>• CAI</li> </ul> <p><b>Target Audience:</b></p> <ul style="list-style-type: none"> <li>• Rural adolescents, high-school</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>• Change perceived threat, perceived self-efficacy, attitudes, and knowledge regarding pregnancy, STI, and HIV prevention</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Theory-Based</li> <li><input checked="" type="checkbox"/> Audience Involvement</li> <li><input checked="" type="checkbox"/> Tailoring</li> <li><input type="checkbox"/> Maximize Campaign Exposure</li> <li><input checked="" type="checkbox"/> Target High Risk Youth</li> <li><input type="checkbox"/> Promote New Behaviors</li> <li><input checked="" type="checkbox"/> Careful Evaluation</li> </ul>	<p><b>Methods:</b></p> <ul style="list-style-type: none"> <li>• Evaluated in nine rural high schools using a pretest/post-test control-group design. At both times 887 9th-graders completed the survey. More than 91% of students in the treatment group completed at least one of the six computer-based activities.</li> </ul> <p><b>Effects:</b></p> <ul style="list-style-type: none"> <li>• Analyses revealed that students in the treatment group outperformed students in the control group on knowledge, condom self-efficacy, attitude toward waiting to have sex, and perceived susceptibility to HIV.</li> </ul>
<b>MEDIA INTERVENTIONS USING NEW MEDIA TECHNOLOGIES – New Strategies for Reaching Youth</b>				
<p><b>SexInfo</b><sup>[56]</sup></p> <p>2006</p>	San Francisco	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>• San Francisco Department of Public Health and Internet Sexuality Information Services, Inc. (ISIS-Inc.)</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>• Text-messaging service</li> </ul> <p><b>Target audience:</b></p> <ul style="list-style-type: none"> <li>• Urban youth</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>• Inform about STIs and pregnancy</li> <li>• Promote testing</li> <li>• Promote clinic visits</li> <li>• Promote safe sex</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Theory-Based</li> <li><input checked="" type="checkbox"/> Audience Involvement</li> <li><input checked="" type="checkbox"/> Tailoring</li> <li><input type="checkbox"/> Maximize Campaign Exposure</li> <li><input checked="" type="checkbox"/> Target High Risk Youth</li> <li><input checked="" type="checkbox"/> Promote New Behaviors</li> <li><input type="checkbox"/> Careful Evaluation</li> </ul>	<p><b>Methods:</b></p> <ul style="list-style-type: none"> <li>• A group of 152 undergraduate students ages 19 to 23 were randomly assigned to receive CAI, a lecture or no intervention. Both the lecture and the CAI had the same content and lasted 1 hour.</li> </ul> <p><b>Effects:</b></p> <ul style="list-style-type: none"> <li>• Consistent positive associations were found between demographic risk factors for STIs and campaign awareness.</li> <li>• Overall, 11% of respondents reported awareness of the campaign.</li> <li>• Preliminary data show that 4,500 callers used the service during the first 25 weeks, 2,500 of which led to referrals and requests for more information.</li> </ul>

INTERVENTION	REGION (OF THE U.S.)	SUMMARY OF INTERVENTION	CHARACTERISTICS OF THE INTERVENTIONS*	EVALUATION FINDINGS
<b>MEDIA INTERVENTIONS USING NEW MEDIA TECHNOLOGIES - New Strategies for Reaching Youth</b>				
<p><b>Evolve</b></p> <p>2008</p>	<p>Nationwide</p>	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>• Trojan Brand Condoms</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>• TV PSAs</li> <li>• Myspace.com</li> <li>• Facebook</li> <li>• Bus tour</li> </ul> <p><b>Target audience:</b></p> <ul style="list-style-type: none"> <li>• Sexually active adults</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>• increase condom use</li> <li>• make condoms cool</li> <li>• shift social norms</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Theory-Based</li> <li><input checked="" type="checkbox"/> Audience Involvement</li> <li><input type="checkbox"/> Tailoring</li> <li><input type="checkbox"/> Maximize Campaign Exposure</li> <li><input checked="" type="checkbox"/> Target High Risk Youth</li> <li><input checked="" type="checkbox"/> Promote New Behaviors</li> <li><input type="checkbox"/> Careful Evaluation</li> </ul>	<p>NA</p>
<p><b>Stay Teen</b></p> <p>2007 - present</p>	<p>Nationwide</p>	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>• National Campaign to Prevent Teen and Unplanned Pregnancy</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>• PSA contest (online submission of teen generated content)</li> <li>• MySpace.com</li> <li>• Widget application</li> <li>• Web site (including user generated content)</li> <li>• videos</li> </ul> <p><b>Target Audience:</b></p> <ul style="list-style-type: none"> <li>• Youth, ages 13 to 19</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>• Prevent teen pregnancy</li> <li>• Teach relationship respect</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Theory-Based</li> <li><input checked="" type="checkbox"/> Audience Involvement</li> <li><input checked="" type="checkbox"/> Tailoring</li> <li><input type="checkbox"/> Maximize Campaign Exposure</li> <li><input checked="" type="checkbox"/> Target High Risk Youth</li> <li><input type="checkbox"/> Promote New Behaviors</li> <li><input type="checkbox"/> Careful Evaluation</li> </ul>	<p>NA</p>

INTERVENTION	REGION (OF THE U.S.)	SUMMARY OF INTERVENTION	CHARACTERISTICS OF THE INTERVENTIONS*	EVALUATION FINDINGS
<b>MEDIA INTERVENTIONS USING NEW MEDIA TECHNOLOGIES - New Strategies for Reaching Youth</b>				
<p><b>Pause</b></p> <p>2008</p>	<p>Nationwide</p>	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>• KFF</li> <li>• Fox Networks Group</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>• Broadcast, cable and online PSAs</li> <li>• New media platforms, including MySpace.com</li> </ul> <p><b>Target audience:</b></p> <ul style="list-style-type: none"> <li>• Youth, ages 15+</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>• Get young people to pause before they make difficult decisions on a range of issues (e.g., teen pregnancy and STIs, alcohol and substance use, online safety)</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Theory-Based</li> <li><input checked="" type="checkbox"/> Audience Involvement</li> <li><input type="checkbox"/> Tailoring</li> <li><input checked="" type="checkbox"/> Maximize Campaign Exposure</li> <li><input checked="" type="checkbox"/> Target High Risk Youth</li> <li><input type="checkbox"/> Promote New Behaviors</li> <li><input type="checkbox"/> Careful Evaluation</li> </ul>	<p>NA</p>
<p><b>TxT: Talking Sex Together<sup>[5B]</sup></b></p> <p>2008</p>	<p>Iowa</p>	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>• Iowa Network for Adolescent Pregnancy Prevention, Parenting, and Sexual Health</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>• Text messages</li> </ul> <p><b>Target audience:</b></p> <ul style="list-style-type: none"> <li>• Teens</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>• Encourage teens to exchange messages of abstinence, teenage pregnancy avoidance, and safer sex</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Theory-Based</li> <li><input checked="" type="checkbox"/> Audience Involvement</li> <li><input checked="" type="checkbox"/> Tailoring</li> <li><input type="checkbox"/> Maximize Campaign Exposure</li> <li><input checked="" type="checkbox"/> Target High Risk Youth</li> <li><input checked="" type="checkbox"/> Promote New Behaviors</li> <li><input type="checkbox"/> Careful Evaluation</li> </ul>	<p>NA</p>

INTERVENTION	REGION (OF THE U.S.)	SUMMARY OF INTERVENTION	CHARACTERISTICS OF THE INTERVENTIONS*	EVALUATION FINDINGS
<b>MEDIA INTERVENTIONS USING NEW MEDIA TECHNOLOGIES - New Strategies for Reaching Youth</b>				
<p><b>In Brief</b><sup>[60]</sup></p> <p>2008</p>	<p>Nationwide</p>	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>• Internet Sexuality Information Services (ISIS)</li> <li>- University of Colorado</li> <li>- Columbia University</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>• Underwear design contest (hosted online)</li> </ul> <p><b>Target audience:</b></p> <ul style="list-style-type: none"> <li>• Youth</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>• STI/HIV prevention</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Theory-Based</li> <li><input checked="" type="checkbox"/> Audience Involvement</li> <li><input checked="" type="checkbox"/> Tailoring</li> <li><input type="checkbox"/> Maximize Campaign Exposure</li> <li><input checked="" type="checkbox"/> Target High Risk Youth</li> <li><input type="checkbox"/> Promote New Behaviors</li> <li><input type="checkbox"/> Careful Evaluation</li> </ul>	<p>NA</p>
<p><b>In Spot</b><sup>[57]</sup></p> <p>2008-present</p>	<p>9 U.S. cities, 10 states, &amp; 3 international locations</p>	<p><b>Who:</b></p> <ul style="list-style-type: none"> <li>• ISIS</li> </ul> <p><b>What:</b></p> <ul style="list-style-type: none"> <li>• Website</li> <li>- E-cards</li> </ul> <p><b>Target audience:</b></p> <ul style="list-style-type: none"> <li>• Youth and adults</li> </ul> <p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>• Slow spread of new STI/HIV infections</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Theory-Based</li> <li><input checked="" type="checkbox"/> Audience Involvement</li> <li><input checked="" type="checkbox"/> Tailoring</li> <li><input type="checkbox"/> Maximize Campaign Exposure</li> <li><input checked="" type="checkbox"/> Target High Risk Youth</li> <li><input type="checkbox"/> Promote New Behaviors</li> <li><input type="checkbox"/> Careful Evaluation</li> </ul>	<p>NA</p>