HHS Public Access

Author manuscript

Health Promot Pract. Author manuscript; available in PMC 2024 March 21.

Published in final edited form as:

Health Promot Pract. 2012 November ; 13(6): 842–847. doi:10.1177/1524839911404232.

Development of a Media Campaign on Fetal Alcohol Spectrum Disorders for Northern Plains American Indian Communities

Jessica D. Hanson, MA[1], **Austin Winberg, MA**[2], **Amy Elliott, PhD**[1]

[1]Center for Health Outcomes and Prevention Research, Sanford Research, Sioux Falls, SD, USA

[2]University of South Dakota, Sanford School of Medicine, Center for Disabilities, Sioux Falls, SD, USA

Abstract

Alcohol-exposed pregnancies are especially of concern for American Indians. The Indian Health Service reported that 47% to 56% of pregnant patients admitted to drinking alcohol during their pregnancy. In addition, rates of Fetal Alcohol Syndrome are estimated to be as high as 3.9 to 9.0 per 1,000 live births among American Indians in the Northern Plains, making prevention of alcohol-exposed pregnancies an important public health effort for this population. The goal of this article is to add to the literature on universal prevention of Fetal Alcohol Spectrum disorders by describing the development, dissemination, and evaluation of a media campaign on Fetal Alcohol Spectrum Disorders that was created by and for American Indian communities in the Northern Plains.

Keywords

health disparities; maternal and infant health; Native American/American Indian; minority health; program planning and evaluation; reproductive health; social marketing/health communication; substance abuse; women's health

Alcohol-exposed pregnancies are especially of concern for American Indians. The Indian Health Service (IHS)—the federal organization that provides health services to American Indian communities—reported that 47% to 56% of pregnant patients admitted to drinking alcohol during their pregnancy (Gale, White, & Welty, 1998; May et al., 2004). In addition, American Indian/Alaskan Native women who binge drank in the months before pregnancy were less likely to quit binge drinking during pregnancy when compared with Caucasians (Tenkku, Morris, Salas, & Xaverius, 2009). Finally, rates of Fetal Alcohol Syndrome (FAS) are estimated to be as high as 3.9 to 9.0 per 1,000 live births among American Indians in the Northern Plains (compared with 0.3 per 1,000 live births in a multistate surveillance study; Centers for Disease Control and Prevention [CDC], 2002; Duimstra et al., 1993; May, McClosky, & Gossage, 2002), making prevention of alcohol-exposed pregnancies an important public health effort for this population.

Authors' Note: This project was funded by the Centers for Disease Control and Prevention, #U84/CCU823298.

➢BACKGROUND

Alcohol consumption during pregnancy is a public health concern because of the possibility for lifelong physical and cognitive effects on the infant (Duimstra et al., 1993; Floyd & Sidhu, 2004). Fetal Alcohol Spectrum Disorders (FASD) is the continuum of outcomes in those prenatally exposed to alcohol and includes a diagnosis of FAS, partial-FAS, alcohol-related neurodevelopmental disorders (ARND), and alcohol-related birth defects (ARBD; Floyd, O'Connor, Sokol, Bertrand, & Cordero, 2005). FAS, the most damaging outcome of alcohol consumption during pregnancy, is characterized by facial abnormalities (i.e., palpebral fissures, thin vermilion, smooth philtrum); evidence of growth retardation; delayed brain growth, including small head circumference; and if possible, confirmed maternal alcohol consumption (Astley, 2006; CDC, 2004).

Although the American College of Obstetricians and Gynecologists (ACOG) advises against any drinking during pregnancy, the CDC find that between 2% and 5% of women continue to binge drink during pregnancy and between 10.2% and 13% of pregnant women continue to consume moderate amounts of alcohol (Floyd & Sidhu, 2004; Tsai & Floyd, 2004). Other studies find higher rates of prenatal alcohol consumption. The National Birth Defects Prevention Study found that more than 30% of all women in one large national study reported drinking alcohol at some point during pregnancy, with 8.3% binge drinking and 2.7% drinking throughout all trimesters of pregnancy (Ethen et al., 2009).

There is a continuum of interventions to prevent FASD, including universal interventions (prevention messages for all women); selective interventions (targeted to a high-risk subgroup of the population); and indicated interventions, or those that are targeted to high-risk individuals who are identified as having "minimal but detectable signs or symptoms foreshadowing a condition or who have biological markers indicating predisposition" (Stratton, Howe, & Battaglia, 1996). The majority of interventions to prevent alcohol-exposed pregnancies have promoted alcohol cessation among pregnant women (Chang, McNamara, Orav, & Wilkins-Haug, 2006; Handmaker, Miller, & Manicke, 1999; May et al., 2008).

Selective and Indicated Interventions

Besides clinical interventions through alcohol treatment programs, the most common way to prevent FASD is through behavioral interventions with pregnant women to encourage complete abstention (or at least decreasing usage) of alcohol (Armstrong et al., 2009). One study on a case management system to prevent FAS in American Indian communities used motivational interviewing techniques with 176 heavily drinking pregnant women (May et al., 2008). This social support intervention found that 76% of the participants had normal deliveries and that drinking was reduced during their pregnancy. Another brief intervention for pregnant women and their partners that used setting goals concluded that goal selection was highly predictive of subsequent drinking behavior (Chang et al., 2006). Finally, a study with pregnant women used personalized feedback to highlight the potential impact of drinking patterns on the fetus; the result of this study showed a significant reduction in alcohol consumption and peak intoxication levels (Handmaker et al., 1999).

Universal Prevention

Other interventions with pregnant women to encourage complete abstinence from alcohol have used mass media campaigns. Social marketing has previously been successful in "understanding the determinants of the behavior to be changed," communicating arguments for or against certain behaviors, and attempting to influence behavior changes (MacStravic, 2000). A review article of mass media campaigns found that "well-executed" media campaigns can influence health knowledge and actual behaviors (Noar, 2006).

For pregnant women who believe that alcohol consumption during pregnancy is safe or who are unsure as to a safe amount of drinking, social change strategies that elicit behaviors through informational messages are one option (Deshpande et al., 2005). For example, formative research with pregnant women in California found that women receive mixed messages about drinking during pregnancy, thus a mass media campaign was created to send a clear single message: Abstain completely from alcohol during pregnancy (Glik, Prelip, Myerson, & Eilers, 2008). This intervention used a social norms approach and normative beliefs by using positive role models to normalize abstaining from drinking during pregnancy.

As stated earlier, prenatal alcohol consumption and FASD are especially concerning for American Indian communities. The goal of this article is to add to the literature on universal prevention of FASD by describing the development, dissemination, and evaluation of a media campaign on FASD that was created by and for American Indian communities in the Northern Plains.

➢METHOD

Development of Campaign

The purpose of the project was to develop a culturally and linguistically appropriate media campaign focused on FASD prevention and awareness for American Indian populations in the Northern Plains. The project was funded for 5 years, although Years 1 and 2 were dedicated to the development of the project, with Years 3 to 5 focused on dissemination and evaluation. To begin this campaign, a marketing firm was contracted to conduct focus groups with Northern Plains American Indian community members from one tribe. This marketing firm had previously worked with multiple tribes in the Upper Midwest on public health issues, such as smoking cessation public service announcements (PSAs). They were not only familiar with the tribal communities but also sensitive to the need to include formative research from a variety of tribal members.

The focus groups were organized by two tribal members who were interested in initiating a FASD social marketing campaign. Three focus groups were held at the end of June 2005, at the local tribal headquarters and at a school gymnasium. The first focus group was made up of 10 elder tribal women, and the second group included 5 adult women of childbearing age (18–44 years), one of whom was pregnant. These first two focus groups were held as roundtable discussion groups. The third focus group involved about 25 people, both males and females of a variety of ages, in a town meeting setting. All focus group participants

signed the marketing firm's standard consent form and were given a gift certificate to thank them for their participation.

Each focus group followed a similar methodology to collect information. First, each focus group discussed the tribal members' media preferences in regard to television, radio, and print material. They were then asked open-ended questions about FASD, including drinking patterns during pregnancy, tribal laws related to drinking during pregnancy, and the effect maternal alcohol consumption has on the community. Focus group participants were also asked about family planning as a way to prevent FASD and if this type of message would be appropriate with this population. Finally, participants were asked about culturally traditional beliefs and images and how they could be incorporated into a social marketing campaign.

The general themes that emerged from the focus groups included using traditional language and images from the tribal communities; these were all incorporated into the marketing campaign of three posters and five radio ads. First, the media campaign was titled "The *Yuonihan* Project"; *yuonihan* means "respect" or "to honor" in the Lakota language. Also, the image of a turtle amulet was used throughout the posters. A turtle amulet is a traditional Northern Plains Lakota symbol that is given to a pregnant woman or a new mother by her grandmother or elder female relative, and it is used to place the new baby's *cekpa* or umbilicus. It symbolizes long life, good health, and protection for that infant. One poster shows the images of the granddaughter dolls, which were a traditional gift given to young Northern Plains Lakota girls.

The Lakota language was also used in a radio ad, spoken by an elder woman with the English translation heard softly in the background. This was not because English is not understood by most tribal members but instead as a recommendation from the focus groups to integrate traditions into this campaign. In addition, the focus group of women of childbearing age felt it was important to include local community members and local enunciation in the media messages, therefore one poster consists of seven community members of various ages (from a young child to an elder woman), and the radio ads were read by tribal members. Finally, a suggestion was made by the elder women to create a more positive media campaign as opposed to shocking and negative messages such as previous social marketing campaigns on FASD. Thus, one of the posters shows a pregnant Northern Plains Lakota woman choosing *not* to drink: As a party transpires in the background of the poster, the woman protectively holds her pregnant stomach, with the *cekpa* covering her growing fetus.

Dissemination of Campaign

The media campaign included posters, radio ads, and other materials such as brochures and pens that were disseminated in several ways. First, community liaisons were hired from three tribal communities to disseminate project materials. The three tribal communities were located at great distances from one another (400–600 miles apart), thus the need for three separate liaisons. These community liaisons were local tribal members—of a variety of ages but all female—who were familiar with local nonprofit organizations and health care agencies. A manual was created for the community liaisons that included a training curriculum, objectives of the position, project protocol, and concrete tasks, such

as conducting outreach activities and identifying particular sites for the priority audience (such as local clinics and community centers). The community liaisons were also trained by project staff on the importance of tracking where materials were disseminated and the types of outreach activities conducted. Therefore, efforts were made to track where the posters and other materials were disseminated, although the total number of these materials disseminated (i.e., the number of posters hung in different locations) was not tracked.

Grassroot outreach activities were an important component of project dissemination. These activities included setting up booths at local health fairs or community events (such as powwows) and setting up tables at community centers, health clinics, and local tribal colleges. Many posters, t-shirts, and pens were given out at these events along with face-to-face interaction with community members about FASD. In addition, community presentations were organized with a meal provided and informational presentation on the project given. Providing a meal was not only a way to thank community members for attending the presentations but overall is an important cultural aspect when bringing a group of American Indians together. The audience for these was the entire community, including the priority audience (women of childbearing age) as well as health care providers. Other community presentations involved Head Start workers and discussing FASD at local schools and treatment facilities.

In addition, the outreach activities included PSAs on local radio stations. Two of the three tribal communities had locally owned radio stations that were owned and run by the tribe(s), with a relatively large listening audience (i.e., a large proportion of tribal members in these rural/frontier communities listened to these stations). Besides regularly playing the project's radio advertisement messages on these local radio stations, project staff, particularly the community liaisons, did live radio interviews at least twice a year. They discussed the development of the project and posed quizzes about FASD in which community members could call in and win prizes if they answered correctly. The radio promotions were conducted in English, as the community liaisons were not fluent in the Native language and most if not all of the listeners understood English. Not only were the PSAs regularly played, but also FASD was discussed to a large listening audience and several calls were made to an alcohol cessation helpline as a result of these radio sessions.

Finally, a major part of disseminating the media campaign on FASD was putting up posters throughout the three tribal communities. The posters were laminated for better presentation and were put up in a variety of community venues: women's restrooms, clinics, tribal college buildings, IHS obstetrics ward, domestic violence shelters, homeless shelters, and local food banks. Brochures and posters were also specifically given to IHS community health nurses, the Women, Infants, and Children (WIC) program, Temporary Assistance to Needy Families (TANF) directors, obstetrics and gynecology providers, and day care providers for them to appropriately distribute these materials to women they feel might be at-risk for an alcohol-exposed pregnancy.

Posters were also printed in local newspapers. All three of the tribal communities involved with this project had local newspapers (usually distributed weekly) that community members read regularly; thus, a ¼-page advertisement was taken out weekly to highlight the program.

This “advertisement” was actually a small version of the posters that highlighted the 1–800 number; each of the three posters was rotated into the newspaper. These were in English because, as previously discussed, most if not all tribal members understand English.

Evaluation of Campaign

A convenience sample of 119 American Indian women of childbearing age (18–44) were asked their opinions about the media campaign as part of an overall project to prevent FASD. They self-enrolled in this overall project (e.g., called a 1–800 number that was included in the media campaign to enroll in the FASD prevention project) and were asked additional questions about the media campaign. The questions specific to the media campaign included whether the campaign was culturally appropriate, if it increased knowledge about FASD, and if it changed any behavior related to FASD (i.e., alcohol consumption).

Table 1 outlines the responses to the Likert-scale questions regarding the media campaign. Based on feedback from this sample of American Indian women, the media campaign was seen as culturally appropriate. In addition, the vast majority of those women sampled also felt that the media campaign increased their knowledge about FASD and the effects of prenatal alcohol exposure. Finally, most of the women said that the campaign decreased their drinking behavior.

➢DISCUSSION

Based on the evaluation, the campaign was seen as culturally appropriate, increased knowledge, and decreased actual drinking. It is not surprising that the media campaign is seen as culturally appropriate as it was created through a thorough inclusion of the communities, specifically via community focus groups, with drafts of the campaign viewed by community members before final versions were disseminated. The approach to dissemination was also community based by hiring liaisons to represent the project and to connect directly with the community to increase the presence of the project in the tribes. However, this evaluation was done only with American Indian women between the ages of 18 and 44; therefore, the evaluation would have been enhanced by including men and people of a variety of ages, as well as through different venues such as follow-up focus groups, to truly determine if the campaign was received well by the community.

With regard to the media campaign increasing knowledge about FASD and the effects of alcohol on the growing fetus, the majority said that it did increase knowledge. Although the posters and radio ads discussed the spectrum of disorders that can result from drinking during pregnancy, it is not possible to say whether the campaign actually did increase knowledge as there was no baseline survey to measure pre-media campaign knowledge. In addition, it is possible that there was a self-reporting bias; these interviews were done over the phone between the participants and project staff, and it is possible that the participants were responding based on what they felt was the “correct” answer.

Likewise, it is not possible to corroborate if the media campaign altered a woman’s drinking behavior. Although most respondents affirmed that the media campaign changed their

drinking patterns, there was no baseline survey to measure their drinking before and after the media campaign. Also, as Snyder et al. (2004) report, media campaigns only have small effects for the short term. Finally, similar to an increase in knowledge, there may also have been a self-report bias for these questions.

It is important to keep in mind, however, that social marketing campaigns have the ability to communicate desired behavior changes and therefore the potential to influence behaviors, as cited earlier. Although it is not possible to correlate this media campaign directly to any changes in drinking behavior or even how it affected FASD rates with these communities, the people involved in developing and evaluating the campaign saw it as a positive step toward reducing drinking during pregnancy. Future projects in FASD prevention can combine this type of social marketing campaign with a more directed intervention to address prenatal alcohol consumption in a more holistic approach.

➢CONCLUSION

Although the evaluation was with a convenience sample and did not use an intense survey methodology, it is felt that the development and dissemination of the media campaign was community based, allowing for a positive contribution in these communities. It is hoped that the campaign continued to raise awareness of the issue of FASD in American Indian communities. A media campaign such as this is a positive first step in alleviating this as a health disparity.

REFERENCES

Armstrong MA, Kaskutas LA, Witbrodt J, Taillac CJ, Hung YY, Osejo VM, & Escobar GJ (2009). Using drink size to talk about drinking during pregnancy: A randomized clinical trial of Early Start Plus. Social Work in Health Care, 48, 90–103. [PubMed: 19197768]

Astley SJ (2006). Comparison of the 4-Digit Diagnostic Code and the Hoyme diagnostic guidelines for fetal alcohol spectrum disorders. Pediatrics, 118, 1532–1545. [PubMed: 17015544]

Centers for Disease Control and Prevention. (2002). Fetal alcohol syndrome: Alaska, Arizona, Colorado, and New York, 1995–1997. MMWR. Morbidity and Mortality Weekly Report, 51, 433–435. [PubMed: 12056499]

Centers for Disease Control and Prevention. (2004). Fetal alcohol syndrome: Guidelines for referral and diagnosis. Retrieved from http://www.cdc.gov/ncbddd/fasd/documents/FAS_guidelines_accessible.pdf

Chang G, McNamara TK, Orav EJ, & Wilkins-Haug L (2006). Brief intervention for prenatal alcohol use: The role of drinking goal selection. Journal of Substance Abuse Treatment, 31, 419–424. [PubMed: 17084796]

Deshpande S, Basil M, Basfor L, Thorpe K, Piquette-Tomei N, Droessler J, . . . Bureau A, (2005). Promoting alcohol abstinence among pregnant women: Potential social change strategies. Health Marketing Quarterly, 23(2), 45–67. [PubMed: 17182461]

Duimstra C, Johnson D, Kutsch C, Wang B, Zentner M, Kellerman S, & Welty T (1993). A fetal alcohol syndrome surveillance pilot project in American Indian communities in the Northern Plains. Public Health Reports, 108, 225–229. [PubMed: 8464980]

Ethen MK, Ramadhani TA, Scheuerle AE, Canfield MA, Wyszynski DF, Druschel C, & Romitti PA (2009). Alcohol consumption by women before and during pregnancy. Maternal and Child Health Journal, 13(2), 274–285. [PubMed: 18317893]

Floyd RL, O'Connor MJ, Sokol RJ, Bertrand J, & Cordero JF (2005). Recognition and prevention of fetal alcohol syndrome. Obstetrics & Gynecology, 106(5, Pt. 1), 1059–1064. [PubMed: 16260526]

Floyd RL, & Sidhu JS (2004). Monitoring prenatal alcohol exposure. American Journal of Medical Genetics: Part C, Seminars in Medical Genetics, 127C(1), 3–9. [PubMed: 15095466]

Gale TCE, White JA, & Welty T (1998). Differences in detection of alcohol use in a prenatal population (on a Northern Plains Indian reservation) using various methods of ascertainment. South Dakota Medical Journal, 51, 235–240.

Glik D, Prelip M, Myerson A, & Eilers K (2008). Fetal alcohol syndrome prevention using community-based narrowcasting campaigns. Health Promotion Practice, 9, 93–103. [PubMed: 18166669]

Handmaker NS, Miller WR, & Manicke M (1999). Findings of a pilot study of motivational interviewing with pregnant drinkers. Journal of Studies on Alcohol, 60, 285–287. [PubMed: 10091968]

MacStravic S (2000). The missing links in social marketing. Journal of Health Communication, 5, 255–263. [PubMed: 11185025]

May PA, Gossage JP, White-Country M, Goodhart KA, Decoteau S, Trujillo PM, . . . Hoyme HE. (2004). Alcohol consumption and other maternal risk factors for fetal alcohol syndrome among three distinct samples of women before, during and after pregnancy: The risk is relative. American Journal of Medical Genetics: Part C, Seminars in Medical Genetics, 127C(1), 10–20. [PubMed: 15095467]

May PA, McClosky J, & Gossage JP (2002). Fetal alcohol syndrome among American Indians: epidemiology, issues, and research review. In Mail PD, Heurtin-Roberts S, Martin SE, & Howard J (Eds.), Alcohol use among American Indians and Alaska Natives: Multiple perspectives on a complex problem (Vol. 13, pp. 321–369). Bethesda, MD: U.S. Department of Health and Human Services.

May PA, Miller JH, Goodhart KA, Maestas OR, Buckley D, Trujillo PM, & Gossage JP (2008). Enhanced case management to prevent fetal alcohol spectrum disorders in Northern Plains communities. Maternal and Child Health Journal, 12, 747–759. [PubMed: 18026824]

Noar SM (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. [PubMed: 16546917]

Snyder LB, Hamilton MA, Mitchell EW, Kiwanuka-Tondo J, Fleming-Milici F, & Proctor D (2004). A meta-analysis of the effect of mediated health communication campaigns on behavior change in the United States. Journal of Health Communication, 9(Suppl. 1), 71–96. [PubMed: 14960405]

Stratton K., Howe C., & Battaglia F. C. (Eds.). (1996). Fetal alcohol syndrome: Diagnosis, epidemiology, prevention, and treatment. Washington, DC: National Academies Press.

Tenkku LE, Morris DS, Salas J, & Xaverius PK (2009). Racial disparities in pregnancy-related drinking reduction. Maternal and Child Health Journal, 13, 604–613. [PubMed: 18780169]

Tsai J, & Floyd RL (2004). Alcohol consumption among women who are pregnant or who might become pregnancy. Morbidity and Mortality Weekly Report, 53, 1178–1181. [PubMed: 15614234]

TABLE 1

Evaluation of the FAS Media Campaign

	Strongly Agree/Agree		*Undecided*		*Disagree/Strongly Disagree*	
	n	***Percentage***	***n***	***Percentage***	***n***	***Percentage***
The media campaign was culturally appropriate	102	85.7	14	11.8	3	2.5
The media campaign increased my knowledge about FAS	109	91.6	8	6.7	2	1.7
The media campaign increased my knowledge about the effects of alcohol on unborn children	111	93.3	7	5.9	1	0.8
Overall, the campaign has decreased my drinking[a]	79	71.8	24	21.8	7	6.4

NOTE: Total N = 119. FAS = Fetal Alcohol Syndrome.

[a]Frequency missing = 9.