

NATIVE GENERATIONS: A CAMPAIGN ADDRESSING INFANT MORTALITY AMONG AMERICAN INDIANS AND ALASKA NATIVES IN URBAN AREAS

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Abstract: This study describes the development and evaluation of Native Generations, a campaign addressing high rates of infant mortality (IM) among American Indians and Alaska Natives (AI/ANs) in urban areas. Campaign development included reviews of literature and previous campaigns, an advisory council, and focus groups. Campaign messages are strength-based, encouraging AI/AN caregivers to utilize available Native-specific resources, including health care, support services, and programming as IM protective factors. The primary campaign material is an 11-minute video. Pilot survey data indicate the video may help increase awareness of IM and Native-specific resources, and increase connection to Native identity, culture, and community.

INTRODUCTION

In November 2012, a national health communication campaign entitled *Native Generations* was piloted to address disparities in rates of infant mortality (IM) among American Indians and Alaska Natives (AI/ANs) living in urban areas compared to the general population. The campaign was developed, conducted, and evaluated by an urban AI/AN epidemiology center in close partnership with urban AI/AN communities, and included a review of literature and of previous campaigns targeted to AI/AN audiences, recommendations from an advisory council, focus groups for message development, communication strategies, and material testing. Based on the findings from this formative research, the campaign messages promote IM protective factors for urban AI/ANs, such as increased utilization of Native-specific resources, including health care, support services, and programs; and connection to Native identity, culture, and community. The campaign materials include an 11-minute video, companion guides for sharing the video, and a campaign webpage to host these and other resources for AI/AN families. We conducted an

evaluation to assess the implementation of the pilot and whether intended outcomes were achieved with the video, as well as to inform recommendations for future upscaling of the campaign.

BACKGROUND

In 2009, the Urban Indian Health Institute (UIHI), a division of the Seattle Indian Health Board serving as a national epidemiology center for urban AI/ANs, was provided funding by the U.S. Department of Health and Human Services (US DHHS) Office of Minority Health to develop and pilot a national communication campaign to address high rates of IM among urban AI/ANs. We present here a brief description of data on the urban AI/AN population, IM rates, and causes of IM among AI/AN populations to outline the need for our campaign.

The Urban AI/AN Population

Seventy-one percent of the over 5.2 million AI/ANs (AI/AN alone or in combination with other races) live in urban areas (U.S. Census Bureau, 2010). Urban AI/ANs include members, or descendants of members, of many different tribes that may or may not be federally or state recognized. Individuals may or may not have ties to their tribal communities. Urban AI/ANs are generally spread out within urban centers instead of localized within one or two neighborhoods and thus are often not seen or recognized by the wider population (Lobo, 2003).

Striking disparities exist between AI/ANs and the general population in urban areas with regard to socioeconomic, maternal and child health, and morbidity and mortality indicators—many at least twofold (Castor et al., 2006). The socioeconomic disparities include high rates of unemployment, poverty, single-parent households, and disability, and low levels of education (Castor et al., 2006). In a recent analysis of national data, the all-cause death rate for AI/AN persons was 46% more than that for Whites, with deaths due to diabetes, chronic liver disease, and homicide occurring at as much as five times the rates for Whites; deaths due to nearly all other causes also exceeded those of Whites (Espey et al., 2014).

Infant Mortality among Urban AI/ANs

The IM rate among AI/ANs in urban areas is significantly higher than the rate for non-Hispanic (NH) Whites in urban areas (7.4 and 4.6 per 1,000 live births, respectively); variations exist by geographic area, with some areas as high as 14.5 per 1,000 live births among AI/ANs (U.S. National Center for Health Statistics [US NCHS], 2006-2010). The true rate of IM for AI/ANs is likely greater due to racial misclassification of death records (Epstein, Moreno, & Bacchetti, 1997).

The five most common causes of IM for AI/ANs in urban areas are: 1) birth defects, 2) Sudden Infant Death Syndrome, 3) preterm and low birth weight, 4) unintentional injuries, and 5) maternal pregnancy complications (US NCHS, 2001-2010). The rates of death for each of these causes are significantly higher among AI/ANs compared with NH Whites in urban areas (US NCHS, 2001-2010).

This article expands the literature on IM specific to urban AI/ANs by outlining disparities in rates of and risk factors for IM, the need for tailored communication campaigns on this topic, and promising communication strategies for this population to reduce IM.

METHODS

To guide development of the *Native Generations* campaign, we used the social marketing process described in *Making Health Communication Programs Work* (National Cancer Institute [NCI], 2002). The process includes four primary steps: 1) planning and strategy development; 2) creation and testing of concepts, messages, and materials; 3) program implementation; and 4) assessing effectiveness/making refinements. Our planning and strategy development drew on a review of literature and of previous campaigns targeted to AI/AN audiences, as well as recommendations from an advisory council. Concepts, message development, and material formats were informed by focus groups and tested in follow-up focus groups. The campaign pilot was implemented through online distribution, and the primary campaign material, an 11-minute video, was evaluated at in-person screening events. Methods and brief findings are presented for each campaign development stage and for the evaluation of the *Native Generations* video. The Indian Health Service (IHS) National Institutional Review Board deemed the project exempt from oversight.

Campaign Planning and Strategy Development

Advisory Council

A national advisory council convened by the UIHI guided the initial planning and strategy of the campaign, including project methods, interpretation of findings, and potential implications of the project for AI/AN communities nationwide. Co-authors of this article were also advisory council members. Sixty percent of the 10 council members were AI/AN. Members included invited leaders from grassroots community groups; maternal and child health care; and urban Indian health care, including technical experts in obstetrics and gynecology, epidemiology, infant and child mortality, pediatric oral health care, and injury. The council met quarterly via webinar, and contributed their guidance without financial compensation.

Review of Literature

The review of literature revealed the unique risk factors experienced by urban AI/ANs, especially prenatal and maternal populations. The full results of this review have been reported elsewhere; key findings are described here briefly (UIHI, 2011b). Urban AI/ANs experience significant disparities in risk factors for poor birth outcomes and IM compared to NH Whites in the same areas, including the rate of births to: mothers less than 18 years old (5% and 1%, respectively), unmarried women (68% and 21%, respectively), women who received late or no prenatal care (9% and 3%, respectively), and women who smoked while pregnant (11% and 6%, respectively; US NCHS, 2007-2011). Additionally, urban AI/ANs have higher rates of unintended and mistimed (i.e., mother wanted the pregnancy later) pregnancies than NH Whites (UIHI, 2010).

Low relative socioeconomic status, as is experienced among the urban AI/AN population, often is related to having low levels of social support and increased rates of risk behaviors, stress, and depression (Williams, 2005). Further, travel to urban areas means leaving tribal social networks, often resulting in poor social support, high stress, and diminished cultural ties, all of which may be linked to poor health outcomes among urban AI/ANs (Burhansstipanov, 2000; Fuchs & Bashshur, 1975; Hodge, Fredericks, & Kipnis, 1996; Pearce & Davey Smith, 2003; Rhoades, Manson, Noonan, & Buchwald, 2005). Also, historical trauma from colonialism and federal policies resulting in cultural genocide have a continuing negative impact on AI/AN families, passing from generation to generation (Brave Heart & DeBruyn, 1998; Henry-Tanner & Tanner, 2005).

AI/AN mothers also experience a disproportionate number of stressful life events during pregnancy, particularly as related to traumatic stressors (substance or physical abuse, incarceration, and homelessness; Lu & Chen, 2004). Exposure to stressful life circumstances (and related hormonal response) over the course of a woman's life increases the cumulative allostatic load (i.e., physiological consequences) hypothesized to impact birth outcomes (Lu & Halfon, 2003).

Barriers to health care in general and maternal and child health services in particular among urban AI/ANs also increase risk for poor birth outcomes (James, Schwartz, & Berndt, 2009; UIHI, 2009). Documented barriers include cultural differences creating communication challenges with providers, intentional or unintentional discrimination, perceptions of bias and mistrust, lack of confidence in ability to get health care, dissatisfaction with care, and differences in beliefs and attitudes about health care (Browne et al., 2011; Call et al., 2006; Daley et al., 2012; Johansson, Jacobsen, & Buchwald, 2006; Johnson, Carlson, & Hearst, 2010; Urban Indian Health Commission [UIHC], 2007; UIHI, 2009, 2012).

While lower levels of social support, more stressful life events, and barriers to care contribute to risk for IM, identification with Native culture may be a protective factor. One model of Native women's health describes how cultural factors such as community, traditional healing practices, and Native identity function as buffers against stressors (Walters, Simoni, & Evans-Campbell, 2002). There are multiple and varied factors of resilience among traditional and modern AI/ANs, including passing down of traditional wisdom through oral history, storytelling, and folklore (Long & Curry, 1998). Traditional teachings about pregnancy and childbirth passed on by mothers and grandmothers include recognizing pregnancy as a normal and natural process, and caring for the infant during pregnancy by caring for one's physical and emotional health (Long & Curry, 1998).

Review of Previous Campaigns

We also examined data on national health communication campaigns targeted at AI/ANs in published and grey literature from 11 databases and online search engines to support campaign development and inform the key concepts and messages that would resonate with our audience. The review indicated a lack of previous campaigns specific to urban AI/ANs. While there were limited data available on campaigns for AI/ANs, findings highlighted the importance of incorporating AI/AN cultural concepts and practices in a way that features the strengths of the

community. An emphasis on strength-based concepts, such as political and cultural sovereignty, self-determination, and spirituality, is an effective way to counteract the historical trauma and cultural degradation that impact AI/AN communities (National Healthy Marriage Resource Center, 2010). While differences among communities exist, AI/AN values and beliefs can still be incorporated effectively into programs through practices common across many tribes, such as oral teachings and learning by observing and through experience (Becker, 1998).

Previously published findings on the development of materials for AI/ANs report a strong preference by AI/ANs for materials relevant to their specific tribe or culture (Roubideaux et al., 2000). As a result, development of materials for AI/ANs in urban areas that represent a variety of tribes and cultures can pose a challenge. This background information confirmed the need to conduct formative research with urban AI/ANs to ensure that message content and communication channels would be acceptable and applicable to the audience.

Creation and Testing of Concepts, Messages, and Materials

The UIHI worked with Urban Indian Health Organizations (UIHOs) in Detroit, Michigan; Sacramento, California; Salt Lake City, Utah; and Seattle, Washington to host focus groups that would inform concept and message creation. Funded in part by the IHS, UIHOs are independent, nonprofit centers that serve AI/ANs and others in select cities across the country with a range of health and social services, from outreach and referral to full ambulatory care. UIHOs provide traditional health care services, cultural activities, and a culturally appropriate place for urban AI/ANs to receive care (UIHC, 2007). Additionally, UIHOs often serve as community centers for AI/ANs who are dispersed around urban centers to come together. The involved UIHOs represent geographically diverse areas, with distinct communities served and services provided. Three included UIHOs are in states with some of the largest AI/AN populations in the U.S (California, Washington, and Michigan). A coordinator from each UIHO reviewed and disseminated/implemented the project materials, including a flyer, a screening form, a consent form, and topic question guides developed by the UIHI with guidance from the Advisory Council.

Brief focus group methods are provided here, and are described in detail elsewhere (UIHI, 2011a). UIHOs held four group discussions with AI/AN mothers, and one group discussion and four interviews with young fathers (total $N = 39$), led by AI/AN and Māori

facilitators with experience working in the local AI/AN community. The topics were barriers and facilitators to keeping their infants healthy and safe, and preferred communication strategies on these topics. Because parents may not be the primary caregivers in many multigenerational AI/AN families, we asked focus group and interview respondents about the audience segments they viewed as priority for the campaign. Discussions were structured around a set of predetermined open-ended questions (available upon request), with probing to ensure topics were addressed in sufficient depth.

UIHI staff members entered discussion transcripts into Atlas.ti software, and coded the transcripts into themes that aligned with the discussion questions, with subthemes for topics participants discussed in more depth. Other overarching themes emerged outside the topics in the discussion guide. Site coordinators reviewed the thematic coding structure and preliminary results for approval, clarification, and agreement on interpretation, with additional consultation by discussion facilitators as needed.

Findings on message content are provided briefly here; detailed findings, including communication strategies, are described elsewhere (UIHI, 2011a). Our initial focus group findings indicated more similarities than differences between responses and perspectives of fathers and mothers, as well as across sites; therefore, findings are presented in aggregate. Parents reported that a stable environment for their infants was critical to ensuring their health and safety. Parents discussed negative patterns, such as alcohol and tobacco use, teen parenting, and violence, as challenges to creating a healthy environment. Other specific barriers to infant health and safety practices were a lack of money, housing, transportation, and child care; social isolation; and stress, especially for teen parents. Parents identified facilitators for keeping their infants healthy and safe and breaking unhealthy patterns, including a strong Native identity; Native-specific resources, such as those offered at UIHOs; control over their own environment, such as determining who is allowed around their infant and having consistent housing; shared values among caregivers; and social support.

Parents described topics specific to life for urban AI/ANs, noting the importance of diversity in tribal, geographic, family structure, and multiracial images in the campaign materials; the sense of invisibility of the urban AI/AN population among the general population;

and limitations in accessing health care and other resources. Parents also commented on the role of AI/AN men and fathers in keeping infants healthy and safe, remarking that being present, a role model, and a provider were all primary.

Based on this formative research, the *Native Generations* campaign was designed to highlight the strength-based message of connection to Native identity, culture, and community, and encourages urban AI/AN families to access Native-specific resources, including health care, support services, and programs at UIHOs to help prevent risks for IM. We pre-tested an initial draft of the campaign video with community members at two of the four involved UIHOs, and incorporated edits accordingly before implementing the pilot.

Implementation of the Campaign Pilot

We describe below the objectives, materials, and piloting of the *Native Generations* campaign. The audience for the campaign pilot was urban AI/ANs, including primarily parents, other family members, and other child care providers. The overall objectives of the campaign were to: 1) increase awareness of rates of, and risks and protective factors for, IM; 2) increase awareness of UIHOs as Native-specific resources for health care, support services, programs, and community; 3) increase utilization of Native-specific resources; and 4) increase connection to Native identity, culture, and community.

The primary campaign material is an 11-minute video, which is hosted on a *Native Generations* campaign webpage. The video shares the stories of urban AI/AN parents who are staying connected to their Native identity, culture, and community; reveals challenges to infant health and to safety practices, as well as other health risks; and highlights examples of innovative and vital programs at UIHOs for AI/AN families in two cities.

The video was formatted for web deployment, including on social networks, and also was posted on YouTube. Companion materials for the video also were made available on the webpage, including a guide with information on IM and prevention steps for the top causes of death, online health education and support resources for AI/AN families, and a variety of tools for organizations to promote the video and to plan and facilitate video screenings.

The *Native Generations* campaign pilot was released to a wide national audience using online avenues, listservs, and outreach to media. A campaign kit, including a DVD and the companion materials, was sent to UIHOs and nationwide partners, as well as to key experts and personnel in the health care and maternal and child health fields.

Evaluation of the Campaign Pilot

To assess the effectiveness of the primary campaign material, each of the four UIHOs hosted in-person screening events for the *Native Generations* video. Screening events were planned in conjunction with other events at those sites to draw a broad community audience. Project staff at each of the four UIHOs recruited video screening audiences via flyers, word of mouth, and other communication avenues available to the sites. The campaign was intended for release to a wide audience; therefore, all community members were invited to participate in screening events and complete a survey. The survey elicited opinions about the video and used dichotomous agreement measures to assess campaign objectives, such as whether the video made respondents want to connect more with the services, programs, and support available for AI/ANs in their area; whether the video made AI/AN respondents feel proud to be AI/AN; and whether the video increased respondents' awareness of risks for IM among AI/ANs. There was no age limit, race restriction, or restriction to parents; however, new parents and child care providers were encouraged to attend.

A total of 144 in-person screening attendees across the four UIHOs responded to the evaluation survey and were given a tote bag; of these, 97 (67%) were AI/AN. Data presented here are from AI/AN respondents only. These data were examined separately by study site and as a whole; no significant differences within the AI/AN sample were seen among sites using Fisher's exact tests. UIHI staff members used Microsoft Excel software to examine qualitative survey data (i.e., respondents' comments on why they liked or did not like the video). The lead UIHI project staff member grouped comments into common patterns, and selected example quotations from each theme. Themes and example quotations were reviewed and agreed upon by a separate UIHI project staff member.

AI/AN respondents ranged from 18 years to 88 years old, and a large majority were female (80%). A majority of respondents (60%) had children, with one third of these children being under the age of 5 years; and approximately about half of respondents (51%) had children

of childbearing age themselves (i.e., 16 years or older). All survey respondents (100%) reported that they liked the video. Respondents also offered comments as to why they liked the video (Table 1). The majority of comments focused on the information in the video about available health services, AI/ANs in urban areas, and culture. Respondents described the video as “realistic” and “relatable.” There also was a positive response to the diversity of regions represented; the inclusion of fathers; and the balance among urban, modern, and traditional images presented in the video (Table 1).

Table 1
Themes on Opinions of Campaign Video from Qualitative Data^a

Theme	Example comments
Information	<ul style="list-style-type: none"> • It lets us know that there are resources and that we are not alone just because we are not where we came from. • It had enough information to make me want to look further into the subject. • It somewhat gave me insight for when I do plan on having kids of my own and resources. • It made me aware of health opportunities in the urban area.
Culture	<ul style="list-style-type: none"> • It showed me to look into my heritage. I didn't even know this was around. • Liked how they explained the Native American practices they offered here at the clinic, did not know they offered that.
Realistic and relatable	<ul style="list-style-type: none"> • I can relate to some of their stories. • It told it like it is. • It was incredibly real.
Regional diversity	<ul style="list-style-type: none"> • It shows people from all over/different tribes. • It was nice to see different communities woven together. • I thought it was cool to see the perspectives of people from two different Native centers side by side and their connection with their culture.
Urban and traditional balance	<ul style="list-style-type: none"> • I liked how the video incorporated different urban settings through the music, scenery, and people. Yet they still had traditional stuff in it too. • I liked it because it was new and current with today's issues.
Fathers	<ul style="list-style-type: none"> • I liked that fatherhood was a focus in the movie as well as mothers. • I thought it was beautiful that the father sang his tribal song to his baby daughter.

^a Data Source: Native Generations Campaign Video Pilot Evaluation Survey

Several respondents commented on aspects of the video that they felt could be improved, although none said they did not like it. One respondent asked for more tribes to be represented, while others requested specific tribes/regions be included. Other comments described the need

for more focus on prevention steps for IM. For example, respondents noted, “[The video] did not compare [statistics] by race or explain prevention,” “Could be more concrete action/or more clear ways to impact those [statistics] in the film,” and “Need more depth.”

The results of the pilot evaluation are promising (Table 2). Even the item with the lowest number of responses was positive, with 76% indicating that the video increased their awareness of ways to prevent IM. Analysis of survey items indicated that the campaign objectives were achieved, with a vast majority of respondents reporting increased awareness of IM rates and risks (80%), and nearly all respondents reporting increased awareness of services and support in urban areas (91%) and increased desire to connect with these services (92%). Additionally, a great proportion of respondents reported the video made them feel proud to be AI/AN (95%), and most reported a desire to connect more with the AI/AN community (94%).

Table 2
Outcomes from Native Generations Campaign Video Pilot Evaluation: AI/AN Data^a

Objective	Measure	Number ^b	Percentage
	Increased awareness of infant mortality rates	74	80.4
Increase awareness of rates of and risks and protective factors for infant mortality	Increased awareness of risks for infant mortality	74	80.4
	Increased awareness of ways to prevent infant mortality	69	75.8
	Increased awareness of Urban Indian Health Organizations as a Native-specific resource for health care, support services, programs, and community	82	91.1
Increase utilization of Native-specific resources	Increased desire to connect more with services, programs and support	83	92.2
Increase connection to Native identity, culture, and community	Increased pride in AI/AN identity	90	94.7
	Increased desire to connect more with AI/AN community	88	93.6

^a Data Source: Native Generations Campaign Video Pilot Evaluation Survey. ^b Total N= 97. Number represents total respondents for each measure, and may reflect missing responses.

DISCUSSION

This study of a national health communication campaign pilot encompasses the four primary steps in the social marketing process outlined in the guide *Making Health Communication Programs Work*: planning and strategy development, concept creating and materials testing, implementation, and evaluation of the campaign (NCI, 2002). Pilot evaluation data describe a positive response to the campaign video and the strong potential of the *Native Generations* campaign to achieve its objectives with urban AI/ANs and broad audiences beyond the pilot. A large majority of respondents reported increased awareness of IM rates, risks, and prevention; and of Native-specific resources available to AI/ANs in urban areas. Most respondents reported the video increased their desire to connect to these resources and to AI/ANs in their community. Connection with Native identity and culture serves as a vital protective factor, which could intervene against increased risk for IM among AI/AN communities (Galliher, Jones, & Dahl, 2011; Weaver, 1999).

Our evaluation survey sample consisted of community members recruited from each of the participating sites and their contacts; therefore, the results may not be representative of the greater urban AI/AN population. Although 83% ($n = 79$) of AI/AN respondents had received services before at the UIHO where they were surveyed, over 90% stated that the video did increase their awareness of and desire to connect more with these services, programs, and support. Respondents already connected to health care and services represent a lower-risk population than those who may not already be connected to these services. Future expansion of the campaign should secure resources to broaden outreach methods that engage more AI/ANs, and a wider audience who are not connected to services. Although 76% of respondents indicated that the video increased their awareness of ways to prevent IM, this proportion was the lowest of all the measured objectives, and also mirrors qualitative comments, which called for more concrete action. This finding may suggest the need for a more explicit description about the relationship between IM prevention and utilization of Native-specific resources, including health care, support services, and programs, and connection to Native identity, culture, and community.

When asked whether they liked the video, none of the respondents stated that they did not. Despite the anonymous nature of the survey, these results may reflect response biases, including acquiescence bias (the tendency to agree with survey statements) and/or social acceptability bias (the tendency to provide a response that will be viewed favorably by others or

that respondents feel is the “correct” answer). The overwhelming acceptance of the video reinforces the importance of conducting formative research in partnership with priority communities.

The survey questions used to measure intended outcomes represent an approximation of effect based on the self-reported impact of the video on respondents’ emotions, not their behavioral changes. For example, while increased connection to Native-specific resources is one of our campaign objectives, the survey captures a self-reported increased “desire” to connect more to these resources after watching the video. Future studies should measure mid-term outcomes, such as changes in utilization of Native-specific resources, community engagement, and knowledge of risk and protective factors, including baseline knowledge. Resources to measure effects more directly (e.g., through video screenings and promotion beyond the study sites), as well as evaluation of perceived effectiveness and recall of campaign messages over time, would provide needed information to support the full-scale implementation of this promising campaign.

Although health communication can be a powerful strategy for reaching large numbers of people, changes in outcomes typically require long-term and sustained efforts (Institute of Medicine, 2002). Our campaign pilot is unique in its focus on the urban AI/AN audience, and because there is very little evaluation data available from other campaigns for this audience, we are limited in our ability to make specific comparisons. Local program providers and community leaders are most closely acquainted with the needs of their specific communities, and should be included in development and tailoring of materials to fit the mores and customs of the populations they serve, as well as to help ensure sustainability of the efforts.

Long-term behavioral change induced by campaign messages alone is unlikely to succeed; therefore, other supportive interventions at the individual and community levels are essential to help reduce IM (McGuire, 1984). Culturally competent IM prevention efforts should be undertaken within the social-environmental-political context, which impacts individuals’ and communities’ ability to implement positive change (Bronheim & Sockalingam, 2003). Aspects of the context that may affect infant health and safety efforts for urban AI/AN families include scenarios articulated by participants in our formative research, such as shared housing exposing

infants to commercial cigarette smoke and violence, the ability to afford or create safe infant sleep environments, time away from work and child care to attend health care appointments, and lack of transportation that limits consistent use of a car seat.

Health communication campaigns have the greatest, most lasting impact when conducted in conjunction with health and social service systems that provide access to essential services while reinforcing educational messages (NCI, 2002). Despite the fact that the vast majority of AI/ANs live in urban areas, the IHS allocates only 1% of its budget to the urban programs, challenging the capacity of these programs to focus on improving perinatal outcomes and infant health (Grossman et al., 2002; US DHHS, 2016). Funds should be designated to support health care for urban AI/ANs and to engage the network of UIHOs as vested stakeholders in reducing the risk of IM in their communities.

CONCLUSION

The *Native Generations* campaign, which promotes utilization of Native-specific resources, including health care, support services, and programs, and connection to Native identity, culture, and community to prevent IM among AI/ANs in urban areas, is unique in both its message and audience. The campaign pilot responded to a critical need for materials that address the crisis of IM among an often-overlooked population and creates opportunities for expansion of the message to AI/ANs nationwide. An expanded campaign implementation would also provide increased opportunities to assess impact.

The *Native Generations* campaign holds promise, especially when coupled with policies, systems, and environmental changes that support urban AI/AN communities in preventing IM. The positive response from the pilot audience indicates that an expanded *Native Generations* campaign that incorporates community action steps would be well received and could increase IM protective factors, such as utilization of Native-specific resources, including health care, support services, and programs, and connection to Native identity, culture, and community.

REFERENCES

- Alexander, G.R., Wingate, M.S., & Boulet, S. (2008). Pregnancy outcomes of American Indians: Contrasts among regions and with other ethnic groups. *Maternal and Child Health Journal*, (12), S5-S11. <http://dx.doi.org/10.1007/s10995-007-0295-z>
- Becker, T. (1998). *Reflections on traditional American Indian ways*. Minneapolis, MN: University of Minnesota, Center for Urban and Regional Affairs. Retrieved from <http://www.cura.umn.edu/publications/catalog/m9802>
- Brave Heart, M. Y. H., & DeBruyn, L. M. (1998). The American Indian holocaust: Healing historical unresolved grief. *American Indian and Alaska Native Mental Health Research*, 8(2), 56-78. <http://dx.doi.org/10.5820/aian.0802.1998.60>
- Bronheim, S., & Sockalingam, S. (2003). *A guide to choosing and adapting culturally and linguistically competent health promotion materials*. Washington, DC: Georgetown University Center for Child and Human Development University Center for Excellence in Developmental Disabilities, National Center for Cultural Competence. Retrieved from http://nccc.georgetown.edu/documents/Materials_Guide.pdf
- Browne, A. J., Smye, V. L., Rodney, P., Tang, S. Y., Mussell, B., & O'Neil, J. (2011). Access to primary care from the perspective of Aboriginal patients at an urban emergency department. *Qualitative Health Research*, 21(3), 333-348. <http://dx.doi.org/10.1177/1049732310385824>
- Burhansstipanov, L. (2000). Urban Native American health issues. *Cancer*, 88(5 Suppl), 1207-1213. [http://dx.doi.org/10.1002/\(SICI\)1097-0142\(20000301\)88:5+<1207::AID-CNCR5>3.0.CO;2-T](http://dx.doi.org/10.1002/(SICI)1097-0142(20000301)88:5+<1207::AID-CNCR5>3.0.CO;2-T)
- Call, K. T., McAlpine, D. D., Johnson, P. J., Beebe, T. J., McRae, J. A., & Song, Y. (2006). Barriers to care among American Indians in public health care programs. *Medical Care*, 44(6), 595-600. <http://dx.doi.org/10.1097/01.mlr.0000215901.37144.94>
- Castor, M. L., Smyser, M. S., Taulii, M. M., Park, A. N., Lawson, S. A., & Forquera, R. A. (2006). A nationwide population-based study identifying health disparities between American Indians/Alaska Natives and the general populations living in select urban counties. *American Journal of Public Health*, 96(8), 1478-1484. <http://dx.doi.org/10.2105/AJPH.2004.053942>
- Daley, C. M., Filippi, M., James, A. S., Weir, M., Braiuca, S., Kaur, B., . . . Griener, K. A. (2012). American Indian community leader and provider views of needs and barriers to mammography. *Journal of Community Health*, 37(2), 307-315. <http://dx.doi.org/10.1007/s10900-011-9446-7>

- Epstein, M., Moreno, R., & Bacchetti, P. (1997). The underreporting of deaths of American Indian children in California, 1979 through 1993. *American Journal of Public Health, 87*(8), 1363-1366. <http://dx.doi.org/10.2105/AJPH.87.8.1363>
- Espey, D., Jim, M., Cobb, N., Bartholomew, M., Becker, T., Haverkamp, D., & Plescia, M. (2014). Leading causes of death and all-cause mortality in American Indians and Alaska Natives. *American Journal of Public Health, 104*(S3), S303-S311. <http://dx.doi.org/10.2105/AJPH.2013.301798>
- Fuchs, M., & Bashshur, R. (1975). Use of traditional Indian medicine among urban Native Americans. *Medical Care, 13*(11), 915-927. <http://dx.doi.org/10.1097/00005650-197511000-00004>
- Galliher, R., Jones, M., & Dahl, A. (2011). Concurrent and longitudinal effects of ethnic identity and experiences of discrimination on psychosocial adjustment of Navajo adolescents. *Developmental Psychology, 47*(2), 509-526. <http://dx.doi.org/10.1037/a0021061>
- Grossman, D., Baldwin, L., Casey, S., Nixon, B., Hollow, W., & Hart, L. (2002). Disparities in infant health among American Indians and Alaska Natives in US metropolitan areas. *Pediatrics, 109*(4), 627-633. <http://dx.doi.org/10.1542/peds.109.4.627>
- Henry-Tanner, L., & Tanner, C. (2005). *Living like neighbors: Supporting the treaty rights and sovereignty of Indigenous nations. A Report of the Northwest Community Alliance*. Poulsbo, Washington: Northwest Community Alliance. Retrieved from <http://academic.evergreen.edu/curricular/decolonization/LivingLikeNeighbors.pdf>
- Hodge, F. S., Fredericks, L., & Kipnis, P. (1996). Patient and smoking patterns in northern California American Indian clinics. Urban and rural contrasts. *Cancer, 78*(7 Suppl), 1623-1628. [http://dx.doi.org/10.1002/\(SICI\)1097-0142\(19961001\)78:7<1623::AID-CNCR45>3.0.CO;2-Z](http://dx.doi.org/10.1002/(SICI)1097-0142(19961001)78:7<1623::AID-CNCR45>3.0.CO;2-Z)
- Institute of Medicine. (2002). *Speaking of health: Assessing health communication strategies for diverse populations*. Washington, DC: The National Academies Press.
- James, C., Schwartz, K., & Berndt, J. (2009). *A profile of American Indians and Alaska Natives and their health coverage*. Race, Ethnicity & Health Care Issue Brief. Retrieved from <http://kaiserfamilyfoundation.files.wordpress.com/2013/01/7977.pdf>
- Johansson, P., Jacobsen, C., & Buchwald, D. (2006). Perceived discrimination in health care among American Indians/Alaska Natives. *Ethnicity & Disease, 16*, 766-771. Retrieved <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.496.399&rep=rep1&type=pdf>
- Johnson, P., Carlson, K., & Hearst, M. (2010). Healthcare disparities for American Indian veterans in the United States. *Medical Care, 48*(6), 563-569. <http://dx.doi.org/10.1097/MLR.0b013e3181d5f9e1>

- Lobo, S. (2003). Urban clan mothers: Key households in cities. *American Indian Quarterly*, 27(3/4), 505-522. <http://dx.doi.org/10.1353/aiq.2004.0082>
- Long, C., & Curry, M. (1998). Living in two worlds: Native American women and prenatal care. *Health Care for Women International*, 19(3), 205-215. <http://dx.doi.org/10.1080/073993398246377>
- Lu, M. C., & Chen, B. (2004). Racial and ethnic disparities in preterm birth: The role of stressful life events. *American Journal of Obstetrics and Gynecology*, 191(3), 691-699. <http://dx.doi.org/10.1016/j.ajog.2004.04.018>
- Lu, M. C., & Halfon, N. (2003). Racial and ethnic disparities in birth outcomes: A life-course perspective. *Maternal and Child Health Journal*, 7(1), 13-30. <http://dx.doi.org/10.1023/A:1022537516969>
- McGuire, W. J. (1984). Public communication as a strategy for inducing health-promoting behavioral change. *Preventative Medicine*, 13(3), 299-319. [http://dx.doi.org/10.1016/0091-7435\(84\)90086-0](http://dx.doi.org/10.1016/0091-7435(84)90086-0)
- National Cancer Institute. (2002). *Making health communications programs work*. Rockville, MD: U.S. Department of Health & Human Services, National Institutes of Health, National Cancer Institute. Retrieved from <http://www.cancer.gov/publications/health-communication/pink-book.pdf>
- National Healthy Marriage Resource Center. (2010). *Reference guide for Native American family preservation programs*. Tulsa, OK: Author. Retrieved from <http://www.healthymarriageinfo.org/resource-detail/index.aspx?rid=3373>
- Pearce, N., & Davey Smith, G. (2003). Is social capital the key to inequalities in health? *American Journal of Public Health*, 93(1), 122-129. <http://dx.doi.org/10.2105/AJPH.93.1.122>
- Rhoades, D. A., Manson, S. M., Noonan, C., & Buchwald, D. (2005). Characteristics associated with reservation travel among urban Native American outpatients. *Journal of Health Care for the Poor and Underserved*, 16(3), 464-474. <http://dx.doi.org/10.1353/hpu.2005.0059>
- Roubideaux, Y. D., Moore, K., Avery, C., Muneta, B., Knight, M., & Buchwald, D. (2000). Diabetes education materials: recommendations of tribal leaders, Indian health professionals, and American Indian community members. *The Diabetes Educator*, 26(2), 290-294. <http://dx.doi.org/10.1177/014572170002600209>
- U.S. Census Bureau. (2010). *Census 2010 American Indian and Alaska Native summary file* [Table: PCT2; Urban and rural; Universe Total Population; Population group name: American Indian alone or in combination with one or more other races]. Suitland, MD: Author. Retrieved from <http://factfinder2.census.gov/>

- U.S. Department of Health and Human Services. (2016). *Fiscal year 2016 Indian Health Service: Justification of estimates for appropriations committees*. Rockville, MD: Authors. Retrieved from <https://www.ihs.gov/budgetformulation/includes/themes/newihstheme/documents/FY2016CongressionalJustification.pdf>
- U.S. National Center for Health Statistics (U.S. NCHS). (2001-2010). *Infant mortality causes* [Linked birth-infant death certificate data]. Atlanta, GA: Centers for Disease Control and Prevention. Retrieved from: <http://www.cdc.gov/nchs/nvss.htm>
- U.S. NCHS. (2006-2010). *Infant mortality* [Linked birth-infant death certificate data]. Atlanta, GA: Centers for Disease Control and Prevention. Retrieved from <http://www.cdc.gov/nchs/nvss.htm>
- U.S. NCHS. (2007-2011). *Birth risk factors* [Birth certificate data]. Atlanta, GA: Centers for Disease Control and Prevention. Retrieved from <http://www.cdc.gov/nchs/nvss.htm>
- Urban Indian Health Commission. (2007). *Invisible tribes: Urban Indians and their health in a changing world*. Seattle, WA: Author. Retrieved from http://www.uihi.org/wp-content/uploads/2009/09/UIHC_Report_FINAL.pdf
- Urban Indian Health Institute (UIHI). (2009). *Urban American Indian/Alaska Native maternal, infant, and child health capacity needs assessment*. Seattle, WA: Author. Retrieved from http://www.uihi.org/wp-content/uploads/2010/01/MCHNA_RoundII_UPDATEDec2009.pdf
- UIHI. (2010). *Reproductive health of urban American Indian and Alaska Native women: Examining unintended pregnancy, contraception, sexual history and behavior, and non-voluntary sexual intercourse*. Seattle, WA: Author. Retrieved from http://www.uihi.org/wp-content/uploads/2010/09/nsfg-report_final_2010-09-22.pdf
- UIHI. (2011a). *Discussions with Urban American Indian and Alaska Native parents: Keeping babies healthy and safe*. Seattle, WA: Author. Retrieved from <http://www.uihi.org/wp-content/uploads/2011/05/Discussions-with-Urban-American-Indian-and-Alaska-Native-Parents.pdf>
- UIHI. (2011b). *Looking to the past to improve the future: Designing a campaign to address infant mortality among American Indians and Alaska Natives*. Seattle, WA: Author. Retrieved from http://www.uihi.org/wp-content/uploads/2011/07/Healthy-Babies-Lit-Review-Final_JulyRev.pdf
- UIHI. (2012). *Healthcare access and utilization among urban American Indians and Alaska Natives*. Seattle, WA: Author. Retrieved from http://www.uihi.org/wp-content/uploads/2012/11/Fact-sheet_NHIS_Healthcare-access-and-use.pdf

- Walters, K. L., Simoni, J. M., & Evans-Campbell, T. (2002). Substance use among American Indians and Alaska Natives: Incorporating culture in an “Indigenist” stress-coping paradigm. *Public Health Reports*, (117 Suppl 1), S104-S117. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1913706/>
- Weaver, H. (1999). Indigenous people and the social work profession: Defining culturally competent services. *Social Work*, 44(3), 217-225. <http://dx.doi.org/10.1093/sw/44.3.217>
- Williams, D. R. (2005). Patterns and causes of disparities in health. In D. Mechanic, L. B. Rogut, D. C. Colby, & J. R. Knickman (Eds.), *Policy challenges in modern health care* (pp. 115-134). New Brunswick, NJ: Rutgers University Press.

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