NATIVE VOICES: ADAPTING A VIDEO-BASED SEXUAL HEALTH INTERVENTION FOR AMERICAN INDIAN TEENS AND YOUNG ADULTS USING THE ADAPT-ITT MODEL

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Abstract: American Indian and Alaska Native (AI/AN) youth experience disproportionate rates of sexually transmitted infections (STIs). Despite their need for culturally appropriate sexual health interventions, few evidence-based programs have been designed for or rigorously evaluated with AI/AN youth. The primary goal of this study was to adapt a video-based HIV/STI intervention for AI/AN teens and young adults (15-24 years old) living in urban and reservation settings. To capture the heterogeneous experience of AI/AN youth, as well as the viewpoints of adult stakeholders, formative research activities were carried out in collaboration with three geographically dispersed communities in the Pacific Northwest using focus groups and key informant interviews, following the ADAPT-ITT model. Based on participants' feedback, the team produced a culturally tailored intervention toolkit containing a Users Guide, the Native VOICES video, condom and dental dam demonstration videos, and a selection of condoms and dental dams. Forthcoming analyses are evaluating the effectiveness of the Native VOICES intervention with AI/AN youth living across the U.S.

INTRODUCTION

Health issues that affect teens and young adults are particularly relevant in Indian Country. Youth are torchbearers of tradition and the future leaders of our communities. They are also a relatively large portion of the American Indian and Alaska Native (AI/AN or Native) population. Notably, roughly one-third of Native persons are 18 years or younger, compared to 24% of the total U.S. population, and as of 2015, 1.5 million AI/AN youth reside across Indian Country (Office of Minority Health, 2015).

Of particular importance are inequities related to sexual health. Stemming in part from a younger than average sexual début and lower rates of consistent condom use (de Ravello, Tulloch, & Taylor, 2012; Hellerstedt, 2004; Kaufman, Beals, Mitchell, LeMaster, &

Fickenscher, 2004), AI/AN youth experience disproportionate rates of sexually transmitted infections (STIs; de Ravello et al., 2012). In 2009, AI/ANs had the second highest rate of chlamydia reported among all races and ethnicities, with the highest rates occurring among young people ages 15-24 years (Centers for Disease Control and Prevention [CDC] & Indian Health Service [IHS], 2012). Sexually active youth are particularly vulnerable to Human Immunodeficiency Virus (HIV) transmission; nearly one-quarter of new HIV infections in the U.S. occur among teens and young adults (CDC, 2015).

The sexual health of Native youth is influenced by a number of socioecological factors, including high levels of poverty and substance use, insufficient sex education, poor access to reproductive health services, stigma, sexual violence, and historical trauma (de Ravello et al., 2012). Each of these important contributing factors have been discussed in greater detail by Walters and Simoni (2002) and de Ravello (2012).

Native young people's reproductive decisions also are shaped by unique social norms and sexual contexts that include both traditional and contemporary cultural values (Kaufman et al., 2007). Sexual health messaging is highly nuanced in AI/AN communities (Craig Rushing & Stephens, 2011; Gilley, 2006). As a result, mainstream sexual health campaigns and curricula frequently are inappropriate and ineffective for these populations.

Integrating cultural values into health interventions has been shown to enhance their appeal and effectiveness in diverse populations (Gilley, 2006; Kreuter, Oswald, Bull, & Clark, 2000; Kreuter et al., 2004; Kreuter et al., 2005). Resnicow (1999) first described cultural sensitivity as containing two dimensions: surface and deep structures. "Surface structure involves matching intervention materials and messages to observable, 'superficial' characteristics of a target population," including preferred people, places, language, music, food, locations, and clothing (Resnicow, Baranowski, Ahluwalia, & Braithwaite, 1999, p. 11). Deep structures, on the other hand, "involve incorporating the cultural, social, historical, environmental, and psychological forces that influence the target health behavior in the proposed target population" (Resnicow et al., 1999, p. 12). Incorporating this level of cultural sensitivity ensures that the intervention is grounded in the population's core health epistemology, values, and beliefs. Furthermore, subsequent research has found that messages tailored to the culture of the recipients are more likely to be retained, discussed with others, and perceived as relevant to the recipients (Kreuter, Lukwago, Bucholtz, Clark, & Sanders-Thompson, 2003). Cultural tailoring is particularly important when addressing sensitive topics, like sexual health.

Similarly, interventions must align with organizational capacity and community readiness in order to be implemented sustainably and disseminated broadly (Peters, Adam, Alonge, Agyepong, & Tran, 2013). Misalignment can create irrelevant programs or unsustainable

services, and can negate the effectiveness of an intervention altogether (Chinman et al., 2005; Chinman, Imm, & Wandersman, 2004; Wandersman, Imm, Chinman, & Kaftarian, 2000). Aligning interventions to community needs can be particularly challenging in Indian Country, where readiness levels differ from tribe to tribe and health services vary from clinic to clinic (IHS, 2015).

THE *NATIVE VOICES* STUDY

The primary goal of this study was to design a video-based HIV/STI intervention for heterosexual and lesbian, gay, bisexual, trans, and two spirit (LGBT-TS) AI/AN teens and young adults ages 15-24 years, living in urban and reservation communities. The intervention was adapted from two evidence-based interventions (EBIs) included in the CDC's compendium of high-impact HIV prevention interventions: *Video Opportunities for Innovative Condom Education and Safer Sex* (*VOICES*) and *Safe in the City*. Given the substantial time and cost associated with designing effective interventions, the CDC strongly encourages communities to adapt EBIs to better reflect their own social and cultural contexts, without altering the interventions' core elements (Wingood & DiClemente, 2008). Prior to this study, none of the EBIs recognized by the CDC were designed for or rigorously evaluated with AI/AN youth (see www.effectiveinterventions.org).

Video-based Interventions

VOICES is a single-session, HIV/STI prevention intervention in which condom use and negotiation skills are modeled in a video and then role-played and practiced by participants (O'Donnell, O'Donnell, San Doval, Duran, & Labes, 1998). The original intervention consisted of two culturally tailored videos, one for heterosexual African American adults and one for Latino adults visiting an STI clinic. In a randomized controlled trial involving 2,004 participants, those who viewed the *VOICES* videos had significantly fewer repeat STI infections (O'Donnell et al., 1998).

The CDC allows other culturally tailored videos to be used in the *VOICES* intervention, as long as they meet the inclusion criteria outlined by the intervention package. Thus far, seven supplemental videos have been approved by the CDC for use as alternatives, including *Safe in the City*. *Safe in the City* is a 23-minute looping video designed for STI clinic waiting rooms that requires no counseling or small-group facilitation (Myint-U et al., 2010). The video was designed for heterosexual and LGBT patients from diverse cultural backgrounds. A large-scale two-arm controlled trial, involving over 40,000 patients over 24 months, found a 9% reduction in

STIs among patients exposed to the video in the clinic's waiting room, compared with those who were not—likely a conservative estimate of intervention's potential impact, given that up to 20% of the patients did not see the entire video while in the waiting room (Warner et al., 2008).

METHODS

Native VOICES Adaptation Process

Formed in 1972, the Northwest Portland Area Indian Health Board (NPAIHB) is a tribal organization that represents 43 federally recognized tribes in Washington, Oregon, and Idaho (NW). The mission of the NPAIHB is to "eliminate health disparities and improve the quality of life of American Indians and Alaska Natives by supporting Northwest Tribes in their delivery of culturally appropriate, high quality health care." The NPAIHB's governing board meets quarterly and is composed of one delegate from each member tribe, selected by the individual tribal governments.

The NPAIHB runs the Northwest Tribal Epidemiology Center (NW TEC), which carries out research, surveillance, and public health capacity building in partnership with the NW tribes. Within the NW TEC, several projects address adolescent sexual health, including Project Red Talon, which has provided training and technical assistance to tribes throughout the U.S. on implementing culturally appropriate sexual health programs for over 25 years. Two Project Red Talon staff—a Project Director and a Project Coordinator—oversaw the *Native VOICES* adaption process at the NPAIHB.

Staff from the NW TEC also facilitate the Adolescent Health Alliance, an inclusive, multifunctional group that meets quarterly in OR, WA, and ID to discuss cross-cutting planning and prevention strategies targeting AI/AN teens and young adults (addressing commercial tobacco use, substance abuse, HIV/STIs, teen pregnancy, and suicide). The Adolescent Health Alliance and the NPAIHB's Behavioral Health Committee (which meets quarterly) served as regional advisors for the *Native VOICES* study. Both bodies provided general guidance on the overall study design, and reviewed and interpreted study findings.

The *Native VOICES* study protocol was reviewed and approved by the Portland Area Indian Health Service Institutional Review Board (333712-1) and the Northwest Indian College Institutional Review Board. NW TEC staff recruited two NW tribes and one urban Indian health clinic to participate in the study by sending an informational letter to NPAIHB tribal delegates

and giving a presentation at an NPAIHB quarterly board meeting. Each study site submitted a letter of agreement signed by the tribe's Health Director, the clinic's Executive Director, or the tribe's governing council, as deemed appropriate by the site.

The ADAPT-ITT Model

Designed by Wingood and DiClemente (2008), the ADAPT-ITT Model is a theoretical framework used to guide the adaptation of evidence-based HIV prevention interventions. The model consists of eight phases:

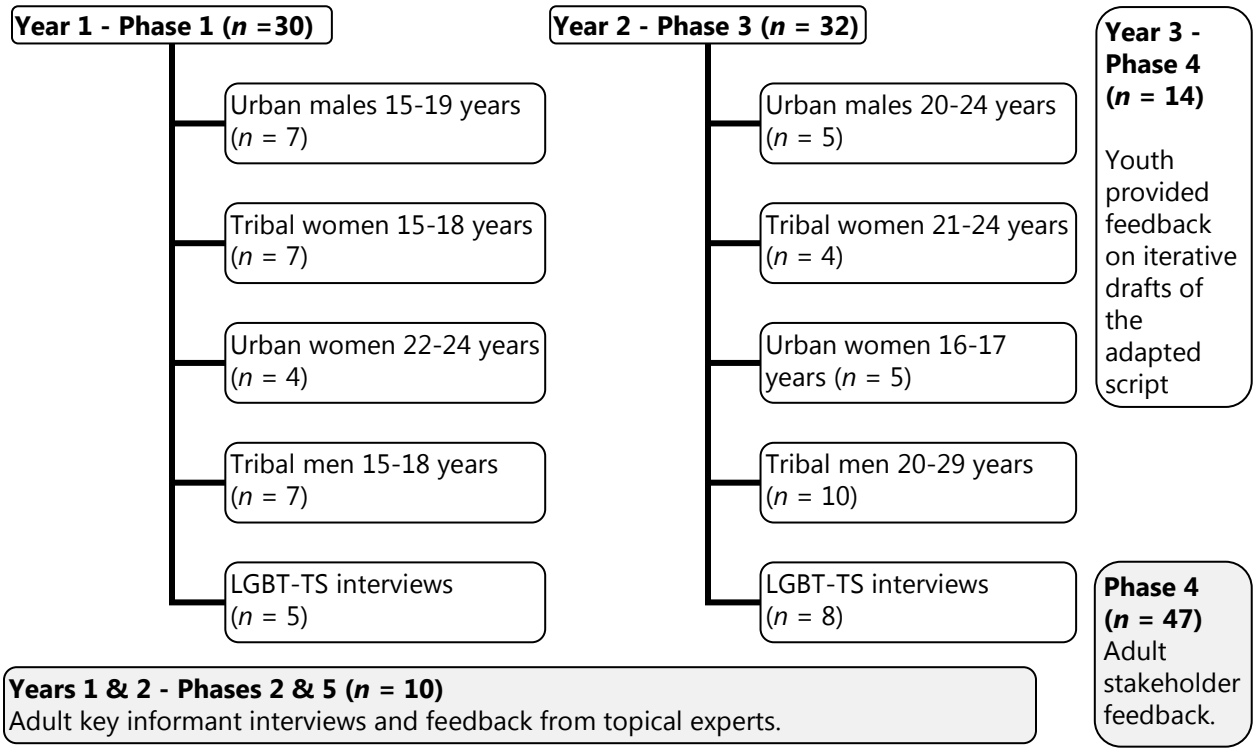
- Phase 1 – Assessment: focus groups, interviews, or needs assessments are done with the target audience to better understand their informational needs.
- Phase 2 – Decision: a literature review is used to identify EBIs, an EBI is selected that aligns with the needs and capacity of the target population, and community partners determine whether the EBI can be adopted or adapted.
- Phase 3 – Adaptation: the original intervention is reviewed and tested by the target audience.
- Phase 4 – Production: a first draft of the adapted EBI is developed for iterative review.
- Phase 5 – Topical Experts: the draft is reviewed by consultants with expertise in topics covered by the intervention.
- Phase 6 – Integration: the experts' feedback is incorporated into draft 2.
- Phase 7 – Training: facilitators are trained to recruit participants and implement the intervention.
- Phase 8 – Testing: two steps are required; the first involves a pilot test of the adapted EBI, and the second involves a randomized controlled trial to assess the efficacy of the adapted intervention (e.g., looking for changes in knowledge, attitudes, beliefs, and relevant behaviors; Wingood & DiClemente, 2008). This paper will describe the process used by Project Red Talon to adapt the *Native VOICES* intervention, covering Phases 1-7 and the first half of Phase 8.

Phase 1 – Assessment

Using an emergent study design, the research team collected a rich body of qualitative data over a 3-year period (2011-2013), to inform the adaptation process (Figure 1). As described by Morgan (2008), emergent data collection is purposefully designed to evolve over the course of a study. Emergent study designs provide flexibility to investigators, allowing them to adjust

the number of focus groups needed during each phase of the study, the segmentation of focus groups by age and gender, and the list of focus group questions, to best achieve study aims (Morgan, 2008).

Figure 1
Emergent Study Design Applied to the ADAPT-ITT Model



A local site coordinator from each of the three partnering Tribes/clinics was actively involved in planning the focus groups, selecting dates, locations, participant meals, and incentives. They circulated recruitment materials (letters and fliers), and reached out to youth eligible to participate in upcoming focus groups and interviews.

In accordance with human protection standards, a signed consent form was obtained from all participants. For youth ages 15-17 years, a parent/guardian consent form also was collected. Participants were given a $20 gift card in appreciation for their time and involvement.

The Project Director and Project Coordinator purposely designed the study's focus group and key informant interview guides to protect the privacy of participants by enquiring about community norms and perceived behaviors among friends rather than about individual behaviors and beliefs. Additionally, focus groups were segmented by age and gender and welcomed both

straight and LGBT-TS participants. The age and gender groupings were purposely distributed across the three study sites to obtain a range of younger and older perspectives, male and female perspectives, and urban and rural perspectives.

When possible, male focus groups were facilitated by a male AI/AN NPAIHB colleague who had experience facilitating focus groups. All female focus groups were led by the Project Coordinator, who had experience in sex education and focus group facilitation. The same set of questions was used for all four focus groups in Year 1, and a second series of standardized questions was used in Year 2.

Due to the sensitive nature of the topic, and to respect the privacy of participants, focus groups were deemed an inappropriate method for collecting sensitive sexual health information from young men who have sex with men (MSM) or women who have sex with women (WSW), many of whom are not "out" to their family and friends, and might not have felt comfortable providing honest feedback in front of their peers. To include these youth in the adaptation process and to elicit group-specific information, the Project Coordinator asked them a subset of the focus group questions in private, one-on-one key informant interviews, at times and locations selected by the participants (n = 13).

During Phase 1 – Assessment, the focus groups and key informant interviews were designed to identify:

- important cultural reproductive health values
- condom communication and negotiation skills
- social norms around contraception and condom use
- socioecological factors that might affect condom use in urban and rural communities

Four focus groups were held with AI/AN youth (n = 25), including 7 urban-based young men ages 15-19 years, 7 tribal-based young women ages 15-18 years, 4 urban-based young women ages 22-24 years, and 7 tribal-based young men ages 15-18 years. Also, five one-on-one interviews were carried out with youth who identified as LGBT-TS.

Phase 2 – Decision

To identify an appropriate EBI for adaptation, the NPAIHB worked with the Red Talon HIV/STI Coalition, which was formed in 2005 to reduce the prevalence of STIs among NW AI/ANs. NW tribal health representatives, teen pregnancy prevention staff, tribal leaders, and other community stakeholders attended quarterly Coalition meetings. In January 2009, an intertribal HIV/STI Action Plan was written by the Coalition and approved by the NW tribes (Project Red Talon, 2009). As a component of the plan, the Project Director conducted a literature review to identify technology-based HIV/STI prevention programs that might be

appropriate for AI/AN youth (Craig Rushing, 2010). During subsequent Coalition meetings, participants selected *VOICES* and *Safe in the City*, as they were deemed to be: (a) community centered, (b) culturally relevant, (c) adaptable, and (d) capable of being disseminated easily across the Indian healthcare system. Coalition members felt the video-based interventions would be well received by youth, and could be used flexibly in a variety of settings by a variety of staff. After reviewing national data on STI incidence reported by the CDC, the research team targeted the adapted *Native VOICES* intervention to the age range with the highest HIV/STI incidence rates for AI/ANs—youth ages 15-24 years.

Phase 3 – Adaptation

During Phase 3 – Adaptation, a second round of focus groups and interviews was designed to elicit feedback on the original *VOICES* intervention; test the relevance of possible "sexual health scenarios" that could appear in a revised script; and gather feedback on important components of the video, including plausible dialogue, styles of communication, and locations, as well as social, environmental, and psychological factors influencing characters' behaviors. During the feedback sessions, participants watched segments of the original *VOICES* video and the *Safe in the City* video, and discussed content, relevance, and tone. The Project Coordinator facilitated four focus groups with AI/AN youth (n = 24), and conducted eight one-on-one interviews with youth who identified as LGBT-TS. The groups included 5 urban-based young men ages 20-24 years, 4 tribal-based young women ages 21-24 years, 5 urban-based young women ages 16-17 years, and 10 tribal-based young men ages 20-29 years.

Phase 4 – Production

Informed by the focus group and interview findings (described in the Results section of this paper), the Project Coordinator drafted initial changes to the original VOICES script. To get diverse youth perspectives on the adapted script, 14 AI/AN teens and young adults from communities across the U.S. read or reenacted iterative drafts of the adapted script and provided feedback on the characters, scenes, tone, and dialogue. These participants were recruited from AI/AN theater clubs, a two spirit youth group, and a summer youth leadership conference, and were compensated for their time. The script was then reviewed and refined by the Project Director and the topical and community experts described below in Phase 5.

Phase 5 – Topical (and Community) Experts

Altogether, 47 adult clinicians, tribal health advocates, teachers, parents, and elders from across the NW were consulted during the 3-year project. The Project Director or Project Coordinator visited each study site once or twice per year to meet with the site coordinator and

other community stakeholders. Site visits were used to support local recruitment efforts, conduct focus groups and interviews, review and discuss study progress and findings, and offer showings of the adapted video to the community at large.

In addition to these informal gatherings, the Project Coordinator conducted 10 scripted key informant interviews in Years 1 and 2 of the project with clinicians and prevention specialists from the three study sites, to identify features that would affect the usability and acceptability of the adapted intervention within the Indian health care system and in other tribal settings.

The research team also consulted subject matter experts and communicated with the original *VOICES* investigators and staff at the CDC to ensure core elements of the intervention were retained. Prior to production, the final script was reviewed and approved by the CDC *VOICES* diffusion team—the body responsible for determining whether new videos meet the inclusion criteria outlined by the *VOICES* intervention package.

Phase 6 – Integration

Following edits to the video script recommended by topical experts, the research team hired a media firm with extensive experience in AI/AN health marketing. After weighing various options, the research team and media firm chose to shoot the *Native VOICES* video in Oklahoma City, OK (rather than in the Pacific Northwest), where the media firm had an existing network of Native actors, film production houses, and other community ties. This decision reduced the cost to produce the video and kept production within the desired timeframe.

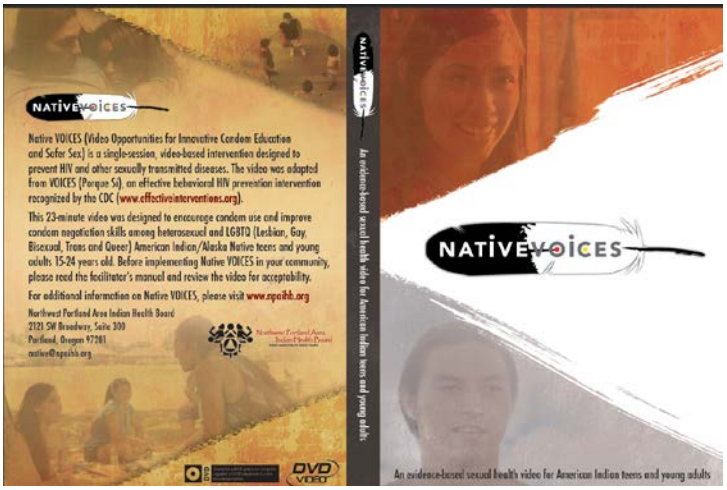
In preparation for shooting the video, the study team collaborated with the media firm to select actors based on short video clips of the actors reading portions of the script, and selected set locations based on photos and recommendations from a location scout hired by the media firm. Finally, in collaboration with study staff, the media firm identified a Native director and film crew, and acquired the necessary filming permits.

The final *Native VOICES* video was shot over a 3-day period in August 2013. During filming, an NPAIHB staff member was present at all times for consultation, acting as the cultural content expert to ensure the integrity of the adaptations made to the script; appropriateness of site locations; and the quality of acting, filming, and treatment of youth actors. The *Native VOICES* video can be viewed on YouTube at https://youtu.be/xaBxwUg_gxU.

Phase 7 – Training

In response to adult stakeholder feedback (collected during study site visits, Adolescent Health Alliance meetings, and NPAIHB quarterly board meetings), NPAIHB staff created a *Native VOICES* toolkit to help support the intervention's dissemination and implementation in diverse urban and tribal settings. The toolkit includes a DVD containing the culturally tailored *Native VOICES* video (23 minutes), a condom demonstration video (1:40 minutes), and a dental dam demonstration video (1:08 minutes) given by a Native health educator; an intervention Users Guide; and a selection of condoms and dental dams. The toolkit can be ordered free of charge by emailing native@npaihb.org.

Image 1
Native *VOICES* DVD



Modeled after the original *VOICES* Video Guide, the *Native VOICES* Users Guide encourages users to facilitate a 30- to 45-minute, small-group discussion after watching the video. The video also can be used independently in settings or situations where the small-group discussion is not practical or appropriate, per *Safe in the City's* implementation guidance.

Phase 8 – Testing

To assess the acceptability, relevance, and cultural appropriateness of the adapted video, the film was premiered at tribal sites involved in the study (at Red Carpet showings open to the public), and at several subsequent Native youth conferences. A brief satisfaction survey (see

Appendix A) was collected from 67 consenting viewers, including youth, parents, and tribal health educators. The survey was based on a questionnaire included in the CDC's *VOICES* Implementation Kit, and was approved during the study's IRB review process.

Data Management and Analysis

All focus groups and key informant interviews conducted during the study were audio recorded and transcribed, and detailed notes were taken at community meetings where the intervention was discussed. Reflecting the emergent study design, qualitative data were analyzed systematically by a single NPAIHB staff member using MAXQDA software (MAXQDA Software, 2014) after each phase of the study, to determine whether thematic saturation had been reached and to adjust study questions for subsequent phases of the study.

Where appropriate, content analyses were used to identify the presence, intensity, and frequency of topics and themes generated by groups and individuals; however, a grounded theory approach was utilized primarily, allowing themes to emerge from the data, prior to the development of the code book (Creswell, 2006).

To ensure the resultant findings resonated with the lived experiences of AI/AN youth and NW tribal members, all study reports were reviewed and discussed with study partners, and with youth during subsequent rounds of focus groups and interviews conducted in Year 2. All script and intervention changes were grounded in data collected by the research team.

RESULTS

Phase 1 – AI/AN Youth Sexual Health Knowledge and Attitudes

The focus groups and key informant interviews provided useful information regarding the unique values and perspectives of AI/AN youth, including their understanding of sexual health, and common questions, misconceptions, and concerns. Data from this phase of the study informed the surface and deep cultural changes that were made to the *Native VOICES* script.

Condom Use

The majority of participants felt that youth in their communities seldom used condoms. If condom use were to occur, most felt it would be likely to happen at the beginning of a relationship, during the first few sexual encounters, or with a short-term sexual partner. Most

youth indicated that they do not feel comfortable initiating conversations about protection with potential sexual partners, and, as a result, condoms and other forms of birth control usually are not discussed prior to sex.

Youth Access to Condoms

Youths' perceptions about low condom use among peers in their community had little to do with physical access to condoms. Youth universally reported a multitude of locations where condoms were available. When asked further about this discrepancy, both tribal- and urban-based young people reported feeling uncomfortable being seen taking condoms in public spaces, like clinic waiting rooms or tribal health pharmacy counters, which made it challenging for youth to access condoms. In addition, young people were reluctant to ask teachers or nurses for condoms, because they feared others finding out that they were sexually active. Some young people reported stealing condoms from stores due to embarrassment or fear of being seen.

Barriers to the Use of Condoms and Other Methods to Protect Against STIs

The majority of participants felt that condoms take away from the pleasure of sex and that is why young people choose not to use them. This viewpoint often was expressed to explain low rates of condom use among youth. Other common explanations included impairment by drugs or alcohol, the desire to not ruin the moment, a preference for "hidden" forms of birth control (like birth control pills), and a strong social stigma against youth carrying condoms around daily, to a party, or on a date. The research team also observed a general lack of knowledge about different ways to prevent pregnancy and STIs, as well as a lack of knowledge about the potential consequences of acquiring STIs.

LGBT-TS Youth: access to condoms and dental dams

LGBT-TS youth reported that accessing condoms was relatively easy and free at clinics, nonprofit organizations, and events for queer youth; however, those seeking dental dams and gloves were often hard pressed to find these forms of protection. Additionally, not all youth felt comfortable accessing protection from mainstream "queer" spaces, like LGBT student centers, because they felt these places did not acknowledge their Native cultural identity adequately.

Native Youth: Oral Sex and Personal Risk

Although several WSW identified dental dams as a way to prevent STIs, none reported having used them. Many expressed a belief that dental dams were "silly" and that they couldn't imagine asking a sexual partner to use one. WSW commonly expressed a belief that WSW are more "clean" than male partners and are thus less likely to spread STIs. Several asserted that STIs are not able to spread between women and that sex between women is less risky.

Notably, youth in focus groups also reported that unprotected oral sex was commonplace. In fact, during every focus group (n = 49 youth) and LGBT-TS interview (n = 13 youth), no participants said that they or anyone else they know use protection during oral sex. This finding is worth highlighting, given that oral sex poses some risk for transmitting STIs, including HIV.

Phase 2 – Results are discussed after Phase 3, along with results from Phases 4-5

Phase 3 – Changes to improve age and cultural appropriateness, and LGBT-TS inclusivity

Youth recommended topics that should be included in a successful sexual health video for Native teens, including: ways to prevent STIs and pregnancy, the consequences of getting an STI, situations that are relatable to youth on the reservation, positive portrayals of LGBT-TS youth, and how to talk to a sexual partner about protection. They also requested that the video not include romanticized Native imagery or make it seem like everyone who has sex gets a disease. They suggested using humor to intiate conversations about sex, and to keep the conversations between characters light and lively.

Focus groups and interview participants were especially insightful when reviewing the original *VOICES* video. During these sessions, youth voiced a great deal of awareness about the importance of cultural relevance, age appropriateness, and video quality. Table 1 shows a list of changes that were made to the *Native VOICES* script, based on feedback from AI/AN youth.

Table 1
Changes to Improve Age and Cultural Appropriateness, and LGBT-TS Inclusivity

Level	Original	*Native VOICES*	Youth Rationale
Surface[a]	When Eddie and Joanna meet, Joanna is alone reading in a park. She and Eddie flirt and make plans to meet again.	When Jamie and Christina meet, both are with friends. They indicate their interest through body language and text message, and chat online before making plans to meet again.	AI teens don't flirt as openly and as confidently as adults. Characters should meet when they are with friends, because that is less intimidating.
Surface/ Deep[b]	Major scene locations include a bar, upscale restaurant, pharmacy, and a hair salon.	Major scene locations include a basketball court, private homes, and a supermarket.	Scene locations need to better reflect the spaces occupied by Native youth.

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Table 1, Continued
Changes to Improve Age and Cultural Appropriateness, and LGBT-TS Inclusivity

Level	Original	*Native VOICES*	Youth Rationale
Deep	Major characters include friends, sexual partners, and healthcare providers.	Trusted family members (an auntie, an elder, and a brother) impart important health messages.	New characters reflect the sources that AI youth typically turn to to get health information.
Surface/ Deep	No out LGBT-TS characters.	Several LGBT-TS characters, including one of the main characters. The message that "two girls - or two guys - can give each other STIs" is featured.	Must include LGBT-TS characters to be more realistic, and reflect a diversity of perspectives.
Surface/ Deep	No LGBT-TS positive role models.	Tyler, Christina's friend who is living with his male partner, is respected in the community, successful, and connected. He participates in safer sex behavior and is in a healthy, happy same-sex relationship.	Need to include positive role models who can inspire LGBT-TS youth to protect themselves and model healthy same-sex relationships. Must be involved, tied to their culture, and valued by their community.
Surface	Discussions about STIs and safer sex occur in public spaces.	Discussions about STIs and safer sex occur in private spaces or public spaces where characters are alone.	It would be "awkward" to have this conversation about sex in public where others might overhear you.
Surface	Promoted condoms as a safer sex tool.	Promotes both condoms and dental dams.	Needed to better meet the sexual health needs of youth.
Surface	After performing a condom demonstration on a beer bottle, the character shakes his friends' hands before leaving the scene.	After performing a condom demonstration on a soda bottle, the character wipes his hands on his shorts, and shakes his friends' hands before leaving the scene.	It bothered several participants that the character shook hands after touching a lubricated condom. They thought it was "gross."
Surface	Characters openly discuss the pleasure of sex.	Specific lines regarding sexual pleasure were removed and conversations were softened regarding sexual desire.	Men and women discussing the pleasure of sex made several teens feel uncomfortable.
Deep	Dialogue between friends discussing safer sex are at times serious and weighty.	When youth talk with each other about sex, they use humor. Dialogue is generally light, interspersed with depth.	Use humor to intiate conversations about sex and keep them lively. Intense conversation about safer sex between youth is unrealistic.

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Table 1, Continued
Changes to Improve Age and Cultural Appropriateness, and LGBT-TS Inclusivity

Level	Original	*Native VOICES*	Youth Rationale
Deep	Carmen, Joanna's cousin, shares a story about how she contracted chlamydia and as a consequence has problems getting pregnant. She quickly advances the dialogue forward.	Christina's Auntie Amanda shares her experience contracting an STI. Unlike Carmen, Amanda is more reluctant to tell Christina about her former infection. She pauses and shows signs of distress, clearly indiating that this is a difficult subject.	In a reservation setting, rumors may spread regarding STI infection, which could impact someone's social standing. Someone would be more guarded and emotional disclosing a past STI, especially if it impacted fertility, because children are highly valued in AI/AN communities.
Surface	Eddie's friend brings him to a drug store to show him the different kinds of condoms and encourages him to buy condoms.	Jamie, along with his brother and a friend, goes to a large urban supermarket to buy condoms using self-checkout.	Participants recommended that the characters use self-checkout, a less intimidating option than buying condoms from a cashier or being seen getting them at a free clinic or pharmacy.
Deep	Eddie and Joanna have unprotected sex after their first date at a restaurant.	Jamie and Christina have unprotected sex after drinking at a house party.	Need to demonstrate the effect of drinking and drugs on decision-making.
Surface	No comparable element in original video.	Jamie is tested for STIs and is positive. He discloses this to his girlfriend, and he tells the viewer they now use condoms. Jamie advises the viewer to "embrace the awkward - even if you're scared. Things can happen to you. They happened to me."	Young people almost universally expressed a fear of bringing up protection with long- and short-term partners because they feared being judged or rejected, and potentially losing the opportunity to have sex. Several said you just "have to do it," even though it may be difficult.

[a] **Surface** – Match intervention materials to observable, 'superficial' characteristics of the target population: people, places, language, music, food, clothing (Resnicow et al., 1999, p. 11). [b] **Deep** – Incorporate the cultural, social, historical, environmental, and psychological forces that influence the health behavior of the target population (Resnicow et al., 1999, p. 12).

Phases 2, 4, and 5 – Adult Stakeholder Recommendations for Intervention Design

In addition to the feedback obtained from youth, key informant interviews and periodic meetings with adult community stakeholders provided valuable feedback on components of the *Native VOICES* script. Adults echoed the desires expressed by youth to include humor in discussions about sexual health, demonstrate the effects of drugs and alcohol on decision making, and interweave cultural references and values. They envisioned using the video to spark youth engagement in local history, traditions, and health resources.

Phase 7 – Intervention Training and Dissemination

Staff at Native youth-serving organizations offered suggestions to improve the usability of the intervention in various settings, and brainstormed resources and tools that would facilitate the program's implementation. They recommended that:

- the intervention offer more than one format for implementation, to accommodate different settings and different sized groups;
- the intervention include time for reflection and group discussion, so the facilitator could gauge comprehension, answer questions, and address misconceptions;
- mini-episodes be relatively short, about 4-8 minutes long; and that
- supplemental activities range from 30-60 minutes.

Phase 8 – Video Acceptability, Relevance, and Cultural Appropriateness

Positive reactions to the video at Red Carpet showings suggest promise for the intervention's acceptability, relevance, and appropriateness for AI/AN youth in diverse urban and rural settings. Sixty-seven AI/AN youth, parents, and tribal health educators returned satisfaction surveys after watching the video. Over 98% thought the video was culturally appropriate for AI people, and 98% felt the information could be trusted. Additionally, 95% thought what the actors did and said about condom use and negotiating safe sex would work for them and 91% thought the video showed real-life situations with characters to whom they could relate. After watching the video, 73% felt more likely to get tested for HIV/STIs and 66% felt more likely to use condoms. These findings support the need for rigorous evaluation of the intervention's effectiveness, as recommended in Phase 8 of the ADAPT-ITT model.

DISCUSSION

This paper describes the study used to adapt the *VOICES* intervention for AI/AN youth (*Native VOICES*), using the ADAPT-ITT model (Wingood & DiClemente, 2008). The emergent study design provided flexibility to refine research questions over the course of the study, based on insights acquired during the process. These data informed the selection of surface and deep cultural changes to the intervention (Kreuter et al., 2003). Surface-level adaptations included changing the intervention's name and logo. The scenes in the video were shifted to those more commonly experienced by AI/AN youth in their day-to-day lives. Deep cultural adaptations included the inclusion of trusted family members (notably an auntie, an elder, and a brother) who imparted important health messages; an LGBT-TS character who was influential and respected

in his community to reinforce positive representations of AI/AN LGBT-TS young people; humor to initiate and forward conversations about sex; and relevant cultural nuances, including the fear of private information becoming public in tight-knit reservation communities.

Because the original VOICES videos were designed for adult audiences, many script and setting changes were made to improve age appropriateness. Youthful slang and come-backs were incorporated throughout, and character interactions were relocated to homes, schools, and outdoor basketball courts. Intentional effort was made to include the needs and perspectives of LGTB-TS young people, a group at heightened risk for HIV/STIs but often overlooked by sexual health programs. To better reflect the current social and cultural contexts of Native youth, characters in *Native VOICES* were placed in multicultural communities, moved seamlessly between urban and rural environments, and blended Western and traditional perspectives and values—all common occurrences in tribal communities.

Despite the persistent need, few evidence-based interventions promoted by state or federal agencies have emerged from, been tested with, or been adapted to the unique social, economic, demographic, and cultural contexts that surround rural and urban AI/ANs (Spence, 2007). To be truly effective, sexual health interventions must build upon existing community strengths and resources, fit sustainably into local health care systems, and, most importantly, be congruent with the cultural values of the population (Mohatt et al., 2008; Walters & Simoni, 2002). By collecting data from diverse AI/AN youth and multiple urban and tribal communities over a 3-year period, the resulting intervention reflects a wide spectrum of perspectives and experiences.

Strengths and Limitations

Due to staffing and budget limitations, only one member of the research team analyzed data collected from interviews and focus group discussions. Because multiple researchers were not available to develop consensus or verify interpretations of the textual data, the researcher identified emergent themes that arose using a grounded theory approach. To identify and limit potential biases, the research team asked participants in subsequent phases of the study clarifying questions to explore areas where a high degree of understanding and interpretation was required.

While the *Native VOICES* intervention was culturally adapted to reflect the informational needs and sexual norms of Native youth living in the Pacific Northwest, the final script was reviewed by young people and adult stakeholders across Indian Country. This decision reflected

a deep desire by the study team to design a sexual health intervention that could be utilized by Native youth both within and beyond the Pacific Northwest. Based on preliminary satisfaction surveys gathered from youth, parents, and tribal health educators, the study team anticipates the intervention will have relevance in other regions and settings. Given that most of the formative research took place in the Pacific Northwest, we concede that a more rigorous evaluation of the intervention is needed to determine its transferability to AI/AN youth in other regions of the U.S.

Next Steps

To fulfill the second step of Phase 8 – Testing (Wingood & DiClemente, 2008), the team conducted a three-armed randomized controlled trial of the *Native VOICES* intervention in partnership with nine tribal sites located throughout the U.S. Pre-, post-, and 6-month follow-up surveys were used to assess changes in sexual health knowledge, attitudes, self-efficacy, and behavior among nearly 800 AI/AN youth ages 15-24 years. If the *Native VOICES* intervention demonstrates positive change, it is positioned to be the first evidence-based HIV/STI intervention for AI/AN youth widely promoted and distributed by the CDC.

CONCLUSION

Native VOICES fills a significant need for evidence-based, sexual health interventions purposefully designed for heterosexual and LGBT-TS AI/AN youth living in reservation and urban settings. The development of *Native VOICES* using a community-based, phased, emergent study design offers a useful model for future research adapting evidence-based interventions for diverse populations.

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Appendix A
Native VOICES Satisfaction Survey

Instructions:
Please take a few minutes to answer the following questions about the Native VOICES video. Please answer as truthfully as possible. There is no right or wrong answer. Your answers will help us improve the video's use for other AI/AN youth in the future. Thank you.

1. What is your sex?
- ☐ Male
- ☐ Female
- ☐ Other (please describe): _____

2. How old are you? (Please check one.)
- ☐ Younger than 15 years old
- ☐ 15 -17 years old
- ☐ 18 - 24 years old
- ☐ I am older than 24 years old

Please circle the answer in each row to describe how you feel about the Native VOICES video.

3	Did you enjoy watching the Native VOICES video?	Yes	No	Don't know
4	The quality of the video's actors, editing, and music were:	Excellent	Average	Poor
5	Would you recommend this video to a friend?	Yes	No	Don't know
6	I think the information I got from this video was:	Right	Wrong	Don't know
7	I think the information I got from this video:	Can be trusted	Can't be trusted	Don't know
8	I think the information I got from this video will help me make healthy life choices.	Yes	No	Don't know
9	How does this video compare to other sexual health lessons that you've had?	Better	About the same	Worse

Continued on next page

Appendix A, Continued
Native VOICES Satisfaction Survey

Do you agree or disagree with the following statements about the Native VOICES video.

10	The video showed real-life situations with characters that I could relate to.	Agree	Disagree
11	The video showed both partners (men and women) taking responsibility for negotiating condom use.	Agree	Disagree
12	I could see myself or my friends in the same situations that were presented in the video.	Agree	Disagree
13	Some of the things the actors did and said in the video about condoms and negotiating safer sex would work for me.	Agree	Disagree

14. Do you think the Native VOICES video is culturally appropriate for American Indian people?
- ☐ Yes
- ☐ No

Comments:

15. Did the Native VOICES video change your views about using condoms?
- ☐ Yes, I am more likely to use condoms
- ☐ Yes, I am less likely to use condoms
- ☐ No, my opinion did not change

16. Did the Native VOICES video change your views about using dental dams?
- ☐ Yes, I am more likely to use dental dams
- ☐ Yes, I am less likely to use dental dams
- ☐ No, my opinion did not change

17. Did the Native VOICES video change your views about getting tested for STDs/HIV?
- ☐ Yes, I am more likely to get tested for STDs/HIV
- ☐ Yes, I am less likely to get tested for STDs/HIV
- ☐ No, my opinion did not change

18. Do you have any other comments that you would like to share with the video's developers?

Thank you for your time!