

Addressing Prenatal Alcohol and Other Drug Exposure in Tribal Communities

Key Takeaways From an Environmental Scan

Identification and Care of Children Prenatally Exposed to Alcohol and Other Drugs

Introduction

Tribal child welfare (CW) programs are an essential support to caregivers and their children who have been affected by prenatal alcohol or other prenatal substance exposures (PAE/PSE). Tribal Nations throughout the United States are developing and using practices to support and promote family and cultural preservation to heal families and communities. To support this important work, this brief reflects on an environmental scan (ES) focused on identification and care of American Indian/Alaska Native (AI/AN) children impacted by PAE/PSE.

An ES is a method for gathering and organizing a range of voices and information to understand a phenomenon more clearly (Graham et al., 2008). The goals of the scan were to (1) raise key themes about what is currently known and unknown about the scope of PAE/PSE in tribal communities, (2) explore how PAE/PSE is identified as well as how children and families experiencing PAE/PSE may be cared for in tribal communities, and (3) identify current resources that are used or available in tribal communities. Information was gathered from a structured library search database, a website/gray literature search, and interviews with six consultants with expertise on various aspects of PAE/PSE and its impact on tribal communities. The 49 resources were systematically reviewed and summarized in documents for analysis. Information was organized according to relevance with eight general construct codes related to PAE/PSE:

- Prevalence
- Services for children
- Services for caregivers
- Resources for providers/practitioners
- Impact
- Service needs

- Identification (of PAE/PSE in children and/or caregivers)
- Innovative tribal programs

Interviews were transcribed and coded using the same codes.

This brief is not intended to present a comprehensive review of all the resources identified through the ES (see appendix for reviewed resources and expert consultants). However, the information offers (1) a window into the critical issues facing tribal communities and tribal CW programs as they seek to address and heal from PAE/PSE and (2) a glimpse at programs and communities paving a new path forward through innovative and effective tribal practices. The brief describes the scope of PAE/PSE in tribal communities, critical issues facing tribal CW programs, and opportunities for enhancing approaches to addressing PAE/PSE.

Background

The intentional and planned introduction of alcohol to American Indian and Alaska Native communities as a means of colonization is the precipitating factor in the disproportionate burden of prenatal substance use experienced by AI/AN communities (Johnston & Boyle, 2013; Unger et al., 2020). In addition to this history, contemporary conditions in many AI/AN communities are associated with an increased risk of alcohol and drug use. These conditions include historical trauma, poor employment prospects, poverty, housing insecurity, and lack of access to healthcare (Brownell et al., 2019; U.S. Department of Health and Human Services, n.d.).

Experts and resources identified within the ES spoke to difficulty in determining patterns of substance use. A recent study indicated that AI/AN women drink less during pregnancy than White women, but those who do drink tend to binge drink more frequently (Ye et al., 2020). Binge drinking at any time during pregnancy, but especially during the first trimester, can increase the likelihood of cognitive impairment in the developing fetus (Plaiser, 1989; Ye et al., 2020).

“One out of every 830 kids with an FASD is currently diagnosed. I’m going to repeat that. One out of every 830.”

—Expert consultant

PSE, and particularly PAE, can lead to a host of physical and psychosocial impacts for the individuals affected. Physical impacts include growth impairment, distinguishable facial differences, and in some cases, withdrawal-like symptoms that can persist for up to 2 weeks after birth (American Academy of Pediatrics, n.d.; Bagheri et al., 1998; May et al., 2010). Psychosocial impacts

of prenatal alcohol exposure can include cognitive impairment; impaired executive function skills such as behavior regulation, decision making, and planning; a greater likelihood of experiencing mental health challenges such as depression and anxiety; and higher rates of contact with juvenile justice and CW systems (Bagheri et al., 1998; Beckett, 2011; Brownell et al., 2019; Kaemingk & Halverson, 2000; Rai et al., 2017). These impacts can rise to the level of diagnosable conditions (e.g., fetal alcohol syndrome, alcohol-related neurodevelopmental disorder, neurobehavioral disorder associated with prenatal alcohol exposure) that collectively are referred to as fetal alcohol spectrum disorders (FASDs).

Prevalence rates vary widely across resources, but in general there appear to be higher rates of FASDs for AI/AN than for non-AI/AN children. Studies report prevalence rates for FASDs ranging from 1 to 41 per 1,000 births (Beckett, 2011; Montag et al., 2019). These variations are largely due to differences in identification or surveillance, study methodologies, geographic location, and ongoing challenges with data accuracy. AI/AN women frequently are oversurveilled for substance use in pregnancy, and yet FASDs are frequently underdiagnosed.

Critical Issues for Tribal CW Programs

Services for children can provide early intervention and address the immediate concerns of those who have been identified as having PAE/PSE and/or an FASD. Services for caregivers can help prevent FASD/PAE/PSE and preserve families.

“[In a community I worked in]...one out of six babies was born with fetal alcohol syndrome... We figured out a way to offer some [preventive] intervention... over the 12 years we did that, we produced [the equivalent of] four classrooms full of children who would have but did not now have fetal alcohol spectrum disorder.”

—Expert consultant, describing a tribal training and screening intervention

Community Outreach and Education

ES resources revealed that information is a critical tool in preventing PSE within tribal communities. Tribal CW programs can play an important role in dispelling myths about substance use during pregnancy. A survey of First Nations caregivers in Manitoba found that 61 percent believed some alcohol use in pregnancy was safe (Williams & Gloster, 1998). This information can directly impact behavior. In a sample of urban AI/AN women, 22 percent reported drinking during pregnancy and 90

percent noted that they reduced use when they learned they were pregnant (Westphal, 2000). Education alone, however, may not be sufficient for reducing PSE, as education efforts often fail to address the root causes of substance use, specifically unaddressed mental health challenges, trauma, and poor socioeconomic conditions (Gameon & Skewes, 2021). ES resources spoke to the promise of a multipronged approach to intervention that includes community-level education on the impacts of prenatal substance use, early screening and intervention for at-risk parents and impacted children, and mental health and economic support services (Ye, 2020; Plaiser, 1989).

Early Identification and Intervention

Innovative Tribal Program

[Maternal Outreach and Mitigation Services \(MOMS\)](#) through the White Earth Band of Ojibwe provides holistic emotional and medical support for mothers impacted by drug use.

Early identification of individuals with PSE is crucial so services can be offered to support AI/AN children and their caregivers facing these challenges. Experts shared that tribal CW programs and allied agencies must build community-wide trust and credibility so pregnant women feel safe seeking support for their substance use challenges. For many tribal CW programs, this credibility starts with an emphasis and a track record of promoting family preservation and taking a relational approach.

Once children are born, tribal CW programs can be a critical player in nonjudgmentally supporting exposed infants and their families. Native children who are impacted by FASDs are more likely to interact with CW systems (Brownell et al., 2018), so those interactions should be a supportive touchpoint for families and an

opportunity to connect children with services to address all aspects of behavioral, physical, and mental health.

“Every tribe is different... Making [funding mechanisms] so whoever is the champion has the funding they need to move things forward. That could be child welfare, that could be TANF, that could be public health... it really needs to be flexible.”

—Expert consultant

Culturally Grounded Wraparound Services

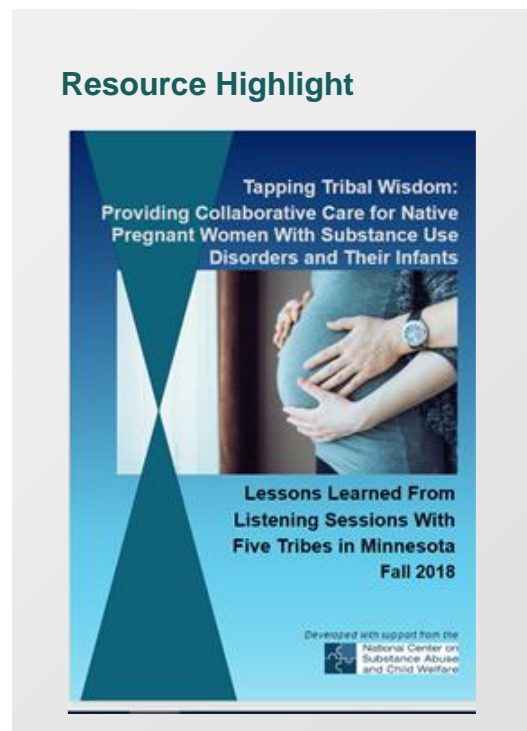
Because the impacts of PAE/PSE and FASDs are exacerbated by environmental conditions such as poverty, it may be most effective to offer wraparound services and concrete supports aimed at

addressing family socioeconomic needs as well as child health, mental health, and education needs. One guidebook emphasized the importance of treatment teams in addressing the needs of tribal children impacted by FASDs. Team members were to include “a health professional, social worker, teacher, family advocate, counselor, and case manager” (LaDue, 2002, Practical Native American Guide to FASD, pg. 21). The incorporation of culture and cultural traditions can be a source of healing, support, and successful coping for AI/AN individuals impacted by FASD (Brown, Dickerson, D’Amico, 2016; Practical Native American Guide to FASD, n.d.; Unger et al., 2020). Findings by Unger et al. (2020) and Brown, Dickerson, and D’Amico (2016) indicate that connection to a distinct cultural and ethnic identity, even when the identity faces oppression in society, is associated with a reduced likelihood of substance use. Taken together, these findings suggest that substance abuse interventions addressing the lived experiences and past and present realities of AI/AN people are likely to be successful (Brown et al., 2016).

One report, compiled in collaboration with five Minnesota tribes, indicated that treatment outcomes for substance use during pregnancy were most successful with wraparound supports (Tapping Tribal Wisdom: Providing Collaborative Care for Native Pregnant Women with Substance Use Disorders and Their Infants; Lessons Learned From Listening Sessions With Five Tribes in Minnesota, Fall 2018, pg. 12). These can include cognitive behavioral therapy, traditional healing methods, cultural programming, and medication assisted treatment. In all cases, mothers identified for services should be empowered to pursue treatment options that work for them.

Some of these treatment options might include cultural engagement programming within substance use treatment programs, increased access to culturally specific traditional healing, and family support models.

The Family Spirit and Maternal Outreach and Mitigation Services (MOMS) programs from the White Earth Band of Ojibwe in Minnesota are two examples of models designed to support AI/AN families. They provide parenting education for AI/AN parents and holistic services for parents struggling with substance use and related emotional challenges, and have been shown to reduce parental substance use (Barlow et al., 2015; Barlow et al., 2006).



“[Evidence-based tribal parenting classes are] ...so needed in Indian Country because it is incorporating the traditions into the parenting practices. Because our parents and grandparents, when they were forced into the boarding schools, they lost those traditional parenting methods they used to have. So we have to help those more recent parents reestablish those traditions.”

—Expert consultant

Opportunities for Enhancing Approaches to Addressing PSE in Tribal Communities

A valuable contribution of the ES is to identify areas for additional investment, knowledge growth, and research.

Investment and Training in Effective Approaches

The ES resources and experts identified service approaches that have shown promise in identifying and addressing PSE. Tribal CW programs are already using many of these practices, but more work could be done to fund, train, and expand effective approaches.

Key investment opportunities are described below.

Supporting practices that emphasize family preservation and aim to decouple help-seeking behaviors from child removal to increase accessibility and remove barriers for women who use substances during pregnancy. Approaches identified in the ES to further explore include harm reduction, community outreach, community health nursing, Head Start, supportive housing, economic support, traditional birthing supports, and mental health support services. These approaches have the added benefit of helping to address the root causes of substance use in tribal communities, such as historical trauma and economic disadvantage.

Improving tribally led early identification processes for mothers, infants, and children and the necessary follow-up services. Many experts spoke to the importance of early identification of PAE/PSE in order to provide critical services and referrals that prevent child removal. Understanding what referral partners exist and are most appropriate for families was also raised as a need. Process mapping can help identify points in case pathways where referral partners are missing or where intervention points are commonly missed. By improving early identification processes and

documentation, service providers can use information on the prevalence of PAE/PSE and FASDs within their service populations to determine children's needs, while also building trust with families and ensuring identification of PAE/PSE does not necessitate child removal. These improved processes can promote cultural interventions and healing and build important referral partners for programs.

Providing education on the prevalence and impact of PSE to families and service providers.

The ES identified three major areas for additional education: (1) the myths and realities of alcohol and other drug use during pregnancy, (2) the physical and psychosocial impacts of prenatal substance exposure including FASDs, and (3) culturally informed resources and referral sources for caregivers who suspect their child may be showing signs of an FASD. Service providers need to develop alternative responses to child removal and focus on parental and infant supports to build family resilience.

Targeted, Tribally Driven Research

Innovative Tribal Program

[My Two Aunties](#) is a trauma-informed home visiting program in Southern California focused on utilizing community and traditional supports for caregivers struggling with substance abuse.

The ES drew attention to gaps in current understanding and areas in which additional research was needed. Key opportunities for investing in more research are described below.

Updating and standardizing studies on the scope of PSE for AI/AN populations.

Multiple studies identified through the ES examined either prevalence of substance use during pregnancy or prevalence of affected infants and children. The estimates varied widely, in large part due to differences in geography, methodology, and quality of existing data. In addition, many of the estimates were 10 years old or older.

Additional efforts to standardize methods and update current estimates could shed light on the scope of PSE and identify trends more clearly to help design effective prevention, intervention, and treatment options.

Exploring the lived experiences of people impacted by FASDs. Studies could yield valuable information about the strengths, challenges, and needs of people affected by FASDs and the perceived usefulness of interventions and supports.

Examining and highlighting community and culturally based interventions. Few studies have described or assessed the effectiveness of traditional pregnancy and parenting supports or programs focused on building positive cultural identity and restoring the belief that children are

sacred beings. These efforts hold tremendous promise in addressing PSE in AI/AN communities, and research could support and inform the use of these practices.

Researching the prevalence and impacts of using substances other than alcohol during pregnancy. Few of the studies identified through the ES focused on nonalcohol substance use, and many of the experts spoke of the need to better understand the ways in which methamphetamine, heroin, and other substances impact fetuses and children. Pregnant women and mothers who use alcohol often use multiple substances.

Examining issues that may affect prevalence rates. Research should explore issues such as drinking patterns, connections to historical or current trauma, and systemic challenges leading to underidentification of FASDs or oversurveillance of AI/AN families.

Conclusion

Tribal CW programs are a critical partner in preventing and addressing PSE in tribal communities. To effectively support families, CW workers and administrators need to understand both the scope of the issue and tribally developed solutions. This brief offers reflections from an ES that included a review of peer-reviewed and gray literature as well as six expert consultant interviews. The ES suggests that in tribal communities, community outreach and education efforts to inform parents about the potential impacts of substance use on fetal development are important in reducing incidences of PSE and FASDs. These strategies can aid tribes in successfully identifying parents who might be at risk for prenatal substance use, provide support to these parents, and intervene early with children. With investment from funders and policymakers, tribal CW programs can increase the availability of culturally grounded, wraparound services that address the root causes of substance use—including experiences of racial marginalization and persistent environmental conditions, such as poverty, that impede recovery.

This brief also offers suggestions for education and training as well as research to better identify and support families impacted by PSE. Training suggestions include supporting practices that orient tribal CW programs toward healing and family preservation and away from child removal as a first-step response. Training can serve also to expand tribally led screening and follow-up services. Directions for valuable investments in future research include centering tribal research efforts across all topic areas, updating and standardizing research efforts aimed at determining the scope of PSE in tribal communities, examining and highlighting culturally based interventions to increase their evidence base, and exploring the lived experiences of people impacted by FASDs and PSE.

References

- American Academy of Pediatrics. (n.d.). *Recommendations to the Indian Health Service on neonatal opioid withdrawal syndrome*. U.S. Department of Health and Human Services, Office on Women's Health.
- Bagheri, M. M., Burd, L., Martsof, J. T., & Klug, M. G. (1998). Fetal alcohol syndrome: Maternal and neonatal characteristics. *Journal of Perinatal Medicine*, 26, 263–269.
- Beckett, C. D. (2011). Fetal alcohol spectrum disorders: A Native American journey to prevention. *Family & Community Health: The Journal of Health Promotion & Maintenance*, 34(3), 242–245. <https://doi.org/10.1097/FCH.0b013e31821962a8>
- Brown, R. A., Dickerson, D. L., & D'Amico, E. J. (2016). Cultural identity among urban American Indian/Native Alaskan youth: Implications for alcohol and drug use. *Prevention Science*, 17(7), 852–861. <https://doi.org/10.1007/s11121-016-0680-1>
- Brownell, M., Enns, J. E., Hanlon-Dearman, A., Chateau, D., Phillips-Beck, W., Singal, D., MacWilliam, L., Longstaffe, S., Chudley, A., Elias, B., & Roos, N. (2019). Health, social, education, and justice outcomes of Manitoba First Nations children diagnosed with fetal alcohol spectrum disorder: A population-based cohort study of linked administrative data. *Canadian Journal of Psychiatry*, 64(9), 611–620. <https://doi.org/10.1177/0706743718816064>
- Center for Children and Family Futures, & Earle, K. (2018). *Tapping tribal wisdom: Providing collaborative care for native pregnant women with substance use disorders and their infants; lessons learned from listening sessions with Five Tribes in Minnesota*. Submitted to the Substance Abuse and Mental Health Services Administration, Administration on Children, Youth, and Families, Children's Bureau.
- Edwards, F., & Rocha Beardall, T. (n.d.). *AIAN state-level child welfare outcomes: Preliminary results*. [Provided by expert consultant].
- Gameon, J. A., & Skewes, M. C. (2021). Historical trauma and substance use among American Indian people with current substance use problems. *Psychology of Addictive Behaviors*, 35(3), 295–309. DOI: <https://content.apa.org/doi/10.1037/adb0000729>
- Graham, P., Evitts, T., & Thomas-MacLean, R. (2008). Environmental scans: How useful are they in primary care? *Canadian Family Physician*, 54(7), 1022–1023.
- Indian Health Services TeleBehavioral Health Center of Excellence. (2016). *Historical trauma and FASD* (Webinar, recorded). <https://ihs.adobeconnect.com/p5yva1zqx87/>
- Johnston, S., & Boyle, J. S. (2013). Northern British Columbian aboriginal mothers: Raising adolescents with fetal alcohol spectrum disorder. *Journal of Transcultural Nursing*, 24(1), 60–67. <https://doi.org/10.1177/1043659612452006>
- Jorda, M., Conant, B. J., Sandstrom, A., Klug, M. G., Angal, J., & Burd, L. (2021). Protective factors against tobacco and alcohol use among pregnant women from a tribal nation in the Central United States. *PLOS ONE*, 1–14. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0243924>
- Kaemingk, K. L., & Halverson, P. T. (2000). Spatial memory following prenatal alcohol exposure: More than a material specific memory deficit. *Child Neuropsychology*, 6(2), 115–128. <https://doi.org/10.1076/chin.6.2.115.7058>
- Kuerschner, S. (n.d.). *Life is sacred: Invite it, nurture it, celebrate it*. Strategies for Prevention, Intervention and Resilience in Teaching for Success (S.P.I.R.I.T.S.).
- Kuerschner, S. (n.d.). *Life is Sacred Fact Sheet*. S.P.I.R.I.T.S. program.

- May, P. A., Gossage, J., Smith, M., Tabachnick, B. G., Robinson, L. K., Manning, M. Cecanti, M., Lyons Jones, K., Khaole, N., Buckely, D., Kalberg, W. O., Trujillo, P. M., & Hoyme, H. E. (2010). Population differences in dysmorphic features among children with fetal alcohol spectrum disorders. *Journal of Developmental Behavioral Pediatrics, 31*(4), 304–316. <https://doi.org/10.1097/DBP.0b013e3181dae243>
- National Indian Child Welfare Association. (2022, June 21). *Beyond the gloom and doom: Tools for help and hope with Native people affected by Fetal Alcohol Syndrome and related neurodevelopmental disorders*. Citation retrieved from <https://adai.washington.edu/fasdtookit/docs/weavingbasket.pdf>
- Rai, J. K., Abecassis, M., Casey, J. E., Flaro, L., Erdodi, L. A., & Roth, R. M. (2017). Parent rating of executive function in fetal alcohol spectrum disorder: A review of the literature and new data on Aboriginal Canadian children. *Child Neuropsychology, 23*(6), 713–732. <https://doi.org/10.1080/09297049.2016.1191628>
- Rasmussen, C., Horne, K., & Witol, A. (2006). Neurobehavioral functioning in children with fetal alcohol spectrum disorder. *Child Neuropsychology, 12*(6), 453–468. <https://doi.org/10.1080/09297040600646854>
- Rebbe, R., Mienko, J. A., Brown, E., & Rowhani-Rahbar, A. (2019). Child protection reports and removals of infants diagnosed with prenatal substance exposure. *Child Abuse & Neglect, 88*, 28–36. <https://doi.org/10.1016/j.chiabu.2018.11.001>
- Skewes, M. C., & Blume, A. W. (2019). Understanding the link between racial trauma and substance use among American Indians. *American Psychologist, 74*(1), 88–100. <https://doi.org/10.1037/amp0000331>
- U.S. Department of Health and Human Services. (n.d.). *Fetal alcohol spectrum disorders among Native Americans*. U.S. Department of Human Services, Substance Abuse and Mental Health Services Administration.
- Unger, J. B., Sussman, S., Begay, C., Moerner, L., & Soto, C. (2020). Spirituality, ethnic identity, and substance use among American Indian/Alaska Native Adolescents in California. *Substance Use and Misuse, 55*(7), 1194–1198. <https://doi.org/10.1080/10826084.2020.1720248>
- Plaiser, K. J. (1989). Fetal alcohol syndrome prevention in American Indian communities of Michigan's upper peninsula. *American Indian and Alaska Native Mental Health Research, 3*(1), 16–33.
- Practical Native American Guide to FASD (n.d.). Guide to the accompanying manual: LaDue, R. A. (2000). *A Practical Native American Guide for Caregivers of Children, Adolescents, and Adults with Fetal Alcohol Syndrome and Fetal Alcohol Related Conditions*. Indian Health Service.
- Werk, C. M., Xinjie, C., & Tough, S. (2013). Fetal alcohol spectrum disorder among Aboriginal children under six years of age and living off reserve. *First Peoples Child & Family Review, 8*(1), 7–16.
- Ye, P., Angal, J., Tobacco, D. A., Williams, A. R., Friedrich, C. A., Nelson, M. E., Burd, L., & Elliott, A. J. (2020). Prenatal drinking in the Northern Plains: Differences Between American Indian and Caucasian mothers. *American Journal of Preventative Medicine, 58*(4), 113–121.

Appendix A: Expert Consultants Interviewed for Environmental Scan

- **Lorraine Brave, M.S.W.** (Mohawk Nation, NY); Faculty/Consultant from Portland State, OR for NICWA, Capacity Building Center for Tribes
- **Larry Burd, Ph.D.**; North Dakota Fetal Alcohol Syndrome Center and a Professor in the Department of Pediatrics at the University of North Dakota School of Medicine
- **Shirley Cain, J.D.** (Red Lake, MN-Anishinaabe); Minnesota Department of Health Services, Behavioral Health
- **Suzanne Garcia, J.D.**; Child Welfare Specialist and Attorney for Washoe Tribe
- **Karen Kolb, M.A.** (Rincon Band, Luiseno Indians, CA); Social Service Director, Indian Health Council-CA
- **Annika Montag, Ph.D.**; Faculty/Scientist University of California San Diego Department of Pediatrics
- **Melissa Walls, Ph.D.** (Bois Forte, MN and Couchiching First Nations, Canada-Anishinaabe); Director of the Great Lakes Hub for the Johns Hopkins Center for American Indian Health, Associate Professor at Johns Hopkins Bloomberg School of Public Health

Appendix B: Screened-In Peer-Reviewed and Gray Literature

Peer-Reviewed Articles

- Aragón, A. S., Kalberg, W. O., Buckley, D., Barela-Scott, L. M., Tabachnick, B. G., & May, P. A. (2008). Neuropsychological study of FASD in a sample of American Indian children: Processing simple versus complex information. *Alcoholism: Clinical and Experimental Research*, 32(12), 2136–2148.
- Bad Heart Bull, L., Kvigne, V. L., Leonardson, G. R., Lacina, L., & Welty, T. K. (1999). Validation of a self-administered questionnaire to screen for prenatal alcohol use in northern plains Indian women. *American Journal of Preventive Medicine*, 16(3), 240–243.
- Badry, D. (2009). Fetal Alcohol Spectrum Disorder Standards: Supporting children in the care of children's services. *First Peoples Child & Family Review*, 4(1), 47–56.
- Bagheri, M. M., Burd, L., Martsof, J. T., Klug, M. G. (1998). Fetal alcohol syndrome: Maternal and neonatal characteristics. *Journal of Pediatric Medicine*, 26, 263–269.
- Beckett, C. D. (2011). Fetal alcohol spectrum disorders: A Native American journey to prevention. *Family & Community Health: The Journal of Health Promotion & Maintenance*, 34(3), 242–245.
- Brownell, M., Enns, J. E., Hanlon-Dearman, A., Chateau, D., Phillips-Beck, W., Singal, D., MacWilliam, L., Longstaffe, S., Chudley, A., Elias, B., & Roos, N. (2019). Health, social, education, and justice outcomes of Manitoba First Nations children diagnosed with fetal alcohol spectrum disorder: A population-based cohort study of linked administrative data. *Canadian Journal of Psychiatry*, 64(9), 611–620.
- Burd, L., & Moffat, M. (1994). Epidemiology of fetal alcohol syndrome in American Indians, Alaska Natives, and Canadian Aboriginal peoples: A review of the literature. *Public Health Reports*, 109(5), 688–693.
- Burd, L., Shea, T. E., & Knull, H. (1987). "Montana gin": Ingestion of commercial products containing denatured alcohol among Native Americans. *Journal of Studies on Alcohol*, 48(4), 388–389.
- Edwards, F., & Beardall, T. R. (n.d.). *AIAN state-level child welfare outcomes: Preliminary results*.
- Fortin, M., Muckle, G., Jacobson, S. W., Jacobson, J. L., & Bélanger, R. E. (2017). Alcohol use among Inuit pregnant women: Validity of alcohol ascertainment measures over time. *Neurotoxicology and Teratology*, 64, 73–78.
- Fuchs, D., Burnside, L., Marchenski, S., & Mudry, A. (2010). Children with FASD-related disabilities receiving services from child welfare agencies in Manitoba. *International Journal of Mental Health and Addiction*, 8(2), 232–244.
- Hanson, J. D., Winberg, A., & Elliott, A. (2012). Development of a media campaign on fetal alcohol spectrum disorders for Northern Plains American Indian communities. *Health Promotion Practice*, 13(6), 842–847.
- Hoyme, H. E., May, P. A., Kalberg, W. O., Kodituwakku, P., Gossage, J. P., Trujillo, P. M., Buckley, D. G., Miller, J. H., Aragon, A. S., Khaole, N., Viljoen, D. L., Jones, K. L., & Robinson, L. K. (n.d.). A practical clinical approach to diagnosis of fetal alcohol spectrum disorders: Clarification of the 1996 Institute of Medicine Criteria. *Pediatrics*, 115(1), 39–47.

- Johnston, S., & Boyle, J. S. (2013). Northern British Columbian aboriginal mothers: Raising adolescents with fetal alcohol spectrum disorder. *Journal of Transcultural Nursing*, 24(1), 60–67.
- Jorda, M., Conant, B. J., Sandstrom, A., Klug, M. G., Angal, J., & Burd, L. (2021). Protective factors against tobacco and alcohol use among pregnant women from a tribal nation in the Central United States. *PLOS ONE*, 1–14.
<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0243924>
- Kaemingk, K. L., & Halverson, P. T. (2000). Spatial memory following prenatal alcohol exposure: More than a material specific memory deficit. *Child Neuropsychology*, 6(2), 115–128.
- Kaskutas, L. A. (2000). Understanding drinking during pregnancy among urban American Indians and African Americans: Health messages, risk beliefs, and how we measure consumption. *Alcoholism: Clinical & Experimental Research*, 24(8), 1241–1250.
- May, P. A., Gossage, P., Smith, M., Tabachnick, B. G., Robinson, L. K., Manning, M., Cecanti, M., Jones, K. L., Khaole, N., Buckley, D., Kalberg, W. O., Trujillo, P. M., & Hoyme, H. E. (2010). Population differences in dysmorphic features among children with fetal alcohol spectrum disorders. *Journal of Developmental and Behavioral Pediatrics*, 31(4), 304–316.
- May, P. A., & Hymbaugh, K. J. (1989). A Macro-Level Fetal Alcohol Syndrome Prevention Program for Native Americans and Alaska Natives: Description and evaluation. *Journal of Studies on Alcohol*, 50(6), 508–518.
- Montag, A. C., Brodine S. K., Alcaraz, J. E., Clapp, J. D., Allison, M. A., Calac, D. J., Hull, A. D., Gorman, J. R., Lyons Jones, K., & Chambers, C. D. (2015, June 11). Effect of depression on risky drinking and response to a screening, brief intervention, and referral to treatment intervention. *American Journal of Public Health*.
- Montag, A. C., Calac, D. J., & Chambers, C. D. (2019). Community-specific risk and protective factors for risky alcohol consumption in American Indian women of reproductive potential: informing interventions. *International Journal of Indigenous Health*, 14(1), 8-28.
- Montag, A. C., Dusek, M. L., Ortega, M. L., Camp-Mazzetti, A., Calac, D. J., & Chambers, C. D. (2017). Tailoring an alcohol intervention for American Indian Alaska Native women of childbearing age: Listening to the community. *Alcoholism: Clinical and Experimental Research*, 41(11), 1938-1945.
- Montag, A. C., Romero, R., Jensen, T., Goodblanket, A., Admire, A., Whitten, C., Calac, D., Akshoomoff, N., Sanchez, M., Zacarias, M., Zellner, J. A., Del Campo, M., Jones, K. L., & Chambers, C. D. (2019). The prevalence of fetal alcohol spectrum disorders in an American Indian community. *International Journal of Environmental Research and Public Health*, 16(12), 2179.
- Plaiser, K. J. (1989). Fetal alcohol syndrome prevention in American Indian communities of Michigan's upper peninsula. *American Indian and Alaska Native Mental Health Research*, 3(1), 16–33.
- Rai, J. K., Abecassis, M., Casey, J. E., Flaro, L., Erdodi, L. A., & Roth, R. M. (2017). Parent rating of executive function in fetal alcohol spectrum disorder: A review of the literature and new data on Aboriginal Canadian children. *Child Neuropsychology*, 23(6), 713–732.
- Rasmussen, C., Horne, K., & Witol, A. (2006). Neurobehavioral functioning in children with fetal alcohol spectrum disorder. *Child Neuropsychology*, 12(6), 453–468.
- Rebbe, R., Mienko, J. A., Brown, E., & Rowhani-Rahbar, A. (2019). Child protection reports and removals of infants diagnosed with prenatal substance exposure. *Child Abuse & Neglect*, 88, 28–36.

[the Gloom and Doom: Tools for Help and Hope with Native People ... - Suzanne L. B. Kuerschner - Google Books](#)

Kuerschner, S. (n.d.). Weaving a Resilient Basket of Hope and Filling with Tools of Help. Written by Suzie Kuerschner. [Shared by Expert consultant]. [Microsoft Word - 9.7-WeavingResBasketHopeMANUAL.doc \(uw.edu\)](#)

LaDue, R. A. (2002). A practical Native American guide for professionals working with children, adolescents, and adults with fetal alcohol syndrome and fetal alcohol spectrum disorder. <https://keepitsacred.itcmi.org/wp-content/uploads/2015/06/Practical-Guide-TOC.pdf>

National Congress of American Indians (2019). Promoting healthy pregnancies and families through the advancing FASD Research, Prevention, and Services Act. The National Congress of American Indians RES #REN-19-037. [The National Congress of American Indians \(ncai.org\)](#)

Native American Connections (n.d.). Documentary on Native American connections in Phoenix, AZ [Provided by Expert Consultant]. [Videos | Native American Connections \(nativeconnections.org\)](#)

S.P.I.R.I.T.S. (n.d). *Life is sacred* [Fact sheet]. [2016 06 07 General FASD Plain Cover.pub \(uw.edu\)](#)

S.P.I.R.I.T.S. *Suzie Kuerschner biography*. [Shared by Expert consultant].

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