

Developing the Feast for the Future Program through a Community Visioning Process

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Submitted 24 August 2022, revised 17 March 2023, accepted 26 May 2023.

ABSTRACT

Background: Three tribal communities in the Southwestern United States have a long-standing partnership with the Johns Hopkins Center for Indigenous Health (JHCIH).

Objectives: In response to community concerns about obesity, three tribal communities and JHCIH partnered to develop culturally relevant plans for a new program.

Methods: Using a “community visioning” process, a Community Advisory Board (CAB) from each community identified opportunities, challenges, goals, and visions for their communities.

The CABs consulted with experts in pediatrics, nutrition, food distribution, agricultural restoration, and community and school gardening.

Results: The CABs developed 7 components for Feast for the Future: 1) Edible School Gardens; 2) Traditional Foodways Education Program; 3) Community Gardens, Orchards, and Greenhouses; 4) Farmers Markets; 5) Farmers Workshops; 6) Family Gardens; and, 7) a Mobile Grocery Store.

Conclusions: A Community Based Participatory Action Research (CBPAR) process was critical to developing a culturally appropriate program that built on community strengths.

KEYWORDS: Nutrition promotion, community-based participatory action research, American Indian, food and agricultural systems environment, culture

BACKGROUND

In response to the three tribal communities identifying obesity as an emerging concern, the Johns Hopkins Center for Indigenous Health (JHCIH) supported a “community visioning” process to develop community-specific and culturally relevant plans to address obesity. The three communities leading the initiative have a long-standing partnership with the Johns Hopkins Center for Indigenous Health (JHCIH). The partnership began in the 1980s with preventing infant deaths from diarrhea using oral rehydration therapy, and has continued to evolve to address community priorities. The communities and JHCIH have led public health work focused on infectious disease prevention, behavioral health promotion, and training of American Indian scholars. Community partners were involved in all aspects of the process and several are co-authors on this publication.

Community Based Participatory Action Research

Community Based Participatory Action Research (CBPAR) is a partnership between communities and researchers that focuses on locally relevant issues and builds on community strengths to realize social change to reduce inequities.¹ When academic institutions work with American Indian communities, CBPAR methods provide a meaningful and culturally grounded approach. The CBPAR method allows for a natural translation between research to practice that can result in sustainable community change.² By grounding research in cultural values and community needs, a CBPAR framework allows community members to identify relevant issues and appropriate intervention strategies.^{3,4} The CBPAR framework can lead to sustainable and culturally-appropriate interventions that address health disparities, prioritize equity, and support community capacity development.³⁻⁷ CBPAR also recognizes the inherent capacity and strength

of a community. The three leading communities in this project not only identified a community concern and took the initiative to address it, but developed initiatives that drew from thousands of years of cultural knowledge and community strength. This manuscript describes the formative development of a CBPAR project in three American Indian communities in the Southwestern US. This process developed initiatives to address community concerns about obesity by supporting healthy food access and traditional food systems. The process was locally known as “community visioning,” and the program that was developed was named “Feast for the Future.”

Childhood Obesity among American Indian Populations

The Feast for the Future Program was initiated in response to community concerns about obesity, a disease prevalent among children and families in each of the three communities involved in the project. Obesity is defined as a body mass index (BMI) categorization of 30.0 or greater. BMI is based on measurements of weight and height. Obesity has rapidly emerged as a growing public health challenge in the United States, and American Indian populations bear a disproportionate burden.⁸⁻¹⁰ While individual community level data is not available, and current epidemiologic data is often lacking for rural, Indigenous communities, the communities’ concerns point to an anecdotal increase in childhood obesity in their communities, and we have included the most precise and recent data available. In 2019, in the state of New Mexico where some of the involved communities are located, an estimated 24.6% of American Indian adolescents were obese, as compared to 11% of non-Hispanic White adolescents.¹¹ In 2015, when the Feast for the Future program was implemented, the rates of overweight and obesity among American Indian youth between the ages of 2 and 19 was 18.5% and 29.7% respectively, almost double the rate of obesity of the US general population.¹²

Nutrition Context and Food Access in American Indian Communities

Many factors contribute to the disparate obesity rates among American Indian children and families. With a shift away from traditional foods such as vegetables, nuts, fruits, and wild game, and the lack of access to healthy alternatives, American Indian communities are burdened by a loss of the physical activity involved in traditional foodways, as well as an increasingly obesogenic environment saturated with sugar sweetened beverages and packaged foods high in calories from sugar and saturated fats.^{14–16} Some American Indian communities also experience limited water access and land tenure issues that stem from early discriminatory land allotment policies that disrupted traditional farming practices, creating challenges in continuing traditional agricultural practices.^{17–19} Climate change has also disrupted access to traditional foods.²⁰ For example, tribal communities across the Southwest have experienced the impacts of climate change related drought, such as drinking water wells running dry, losses of crops, livestock, and medicinal plants and animals. As the climate continues to change, American Indian communities will likely face increased hardships, making them especially vulnerable to obesogenic environmental pressures.²¹

With limited access to traditional foodways, many American Indian communities rely on store-bought foods. However, in the rural Southwest, reservation-based stores are remote and generally lack healthy affordable foods such as whole grains, low-fat dairy products, and fruits or vegetables.²² If available, produce is often in poor condition, and energy-dense foods made of refined grains, added sugars, and saturated fats are often the lowest-cost options, which contribute to high obesity rates among low-income families.^{23–25}

Simultaneously, the limited access to traditional ways of life has caused American Indian people to become more sedentary and less physically active.^{14,15} American Indian people also experience disproportionately high rates of food insecurity,^{26,27} as well as chronic uncertainty over the ability to acquire enough food for household members.²⁸ Food insecurity is associated with numerous poor health outcomes among children, including nutritional deficiencies, learning and developmental deficits, emotional and behavioral problems, and overweight/obesity.^{29–40} The Feast for the Future Program sought to address these challenges in a community-guided process. The initiative aimed to develop programs to revitalize traditional foodways and facilitate community access to healthy foods.

METHODS

Community Advisory Boards

To respond to community concerns about obesity, key community leaders partnered with community members employed by JHCIH. Each community team invited a wide range of stakeholders to join a Community Advisory Board (CAB) to guide the program development process. Beginning in August 2009, each CAB met semi-monthly for seven months to develop a vision for activities that could help curb obesity in their communities. Each CAB's vision focused broadly on improving healthy food access for youth and families, and revitalizing traditional food systems.

Cross-Site Planning Meeting

After the CABs developed their community visions, all three CABs convened in Santa Fe, NM for a cross-site planning meeting in March 2010. At the request of the CABs, national consultants in areas of pediatrics, nutrition, food distribution, agricultural restoration, and community and school gardening attended the cross-site meeting and shared their expertise to inform the community visioning process. During this meeting, the CABs spent time identifying specific goals and opportunities to achieve their visions, as well as barriers they would likely have to overcome. A group facilitation team, which included a representative from each of the CABs, as well as the JHCIH Director, facilitated the discussion as each of the CABs identified: 1) project goals and visions; 2) opportunities for promoting nutrition and healthy foods; and 3) barriers to promoting nutrition and healthy foods.

Goals and Visions

Each CAB shared their specific project goals and vision. The overarching program goals across the three sites were to reduce the incidence and prevalence of obesity and obesity-related diseases in their communities by initiatives to: 1) increase access and availability of healthy foods; 2) improve gardening and nutrition knowledge, attitudes and practices; and 3) build capacity to create a sustainable practice of traditional farming. The specific goals and visions for each site are included in Table 1.

Barriers

Each CAB identified potential barriers to promoting nutrition and healthy food access in their community. The CABs identified four common themes: 1) **Lack of connection with traditional foodways and knowledge** including communities not being connected with food production; a

disconnection between elders and youth that resulted in traditional knowledge on planting and harvesting not getting passed down; disconnection from traditional foods and crops; and disconnection from the spirituality of planting and harvesting; **2) Challenges with land/ infrastructure** including soil degradation; shortage of traditional seeds; orchards that died; overgrazing by cattle; degraded irrigation systems; restrictive land use policies; land ownership disputes; transportation to farmable lands; distance to markets/ healthier food; wildlife damaging crops; and fencing expenses; **3) Socioeconomic and access challenges** were identified as including high unemployment rates that created financial strain; families needing other income sources beyond farming; high cost of healthy and organic foods; low cost and easy access to convenience foods; lack of money for materials, equipment, and irrigation systems; and **4) Lack of education and interest** in farming, and that community members are not aware of the negative effects of convenience foods.

Opportunities

Each of the three CABs shared opportunities for promoting nutrition and healthy food access. During the group facilitation, the three CABs identified four common themes: **1) Collaborating with existing programs in communities that support wellness**, such as engaging local farm boards and health promotion programs; **2) Garnering support from tribal governments to establish the Feast for the Future initiative**, such as working with tribal councils to change zoning to allow for farmers markets, and creating policies that allow schools to purchase products from local community farms; **3) Identifying elders/farmers willing to share their knowledge and expertise** and cultural knowledge with youth and communities to help educate future generations about planting and harvesting Indigenous crops; and, **4) Incorporating**

existing cultural practices and ceremonies that support the program goals, such as seed preservation, language preservation, and participation in ceremonies. After each CAB presented their goals, opportunities, and potential barriers, they named the initiative “Feast for the Future (FFF).” The title was chosen to reflect the vision of the CABs to create an abundance of healthy accessible foods for their communities.

Community Engagement via Video

After the cross-site planning meeting, between March – November 2010 JHCIH worked with the CABs to create videos to promote the Feast for the Future Program as each community began to develop their initiatives. These videos were envisioned as a way to generate community conversations and community engagement around access to healthy foods and traditional foodways, as well as to garner community support for the Feast for the Future initiative. A 10-minute video was produced in each community that included footage of local farms and food systems, as well as clips from videotaped conversations with community stakeholders.

Community-based JHCIH staff interviewed key stakeholders to document and share their perspectives on healthy nutrition and traditional food systems. A total of 12 videotaped conversations were conducted in each of the three communities (total = 36), including two interviews in each community with each of the following groups: farmers, youth, elders, teachers, diabetes educators, and tribal officials. Many of these individuals were not members of the CAB. JHCIH staff reviewed the interview transcripts for common themes from all conversations. The seven common themes identified were: **1) Local food transition:** there has been a transition from “natural” foods such as wild game and native plants to more “processed” foods that are easier to access and faster to prepare; **2) Importance of traditional foods:**

traditional foods are still significant as they are shared at feasts and other ceremonies/events; **3) Decline of farming:** an overall decrease in farming activities with youth less interested in farming; **4) Barriers to healthy food access:** a lack of local produce, a lack of healthy foods in stores, and a lack of affordable healthy foods; **5) Importance of engaging tribal leaders:** tribal support and tribal policies can lead to healthy lifestyle changes; **6) Importance of engaging elders/farmers:** elders/farmers should be engaged to teach Indigenous knowledge to younger generations; and, **7) There is great hope in the community for the Feast for the Future Program.**

The videos reinforced concepts identified in the cross-site planning meeting, and provided an engaging format to interview key stakeholders and share local perspectives. The videos were shared many times at local community meetings and were a useful tool to recruit and engage local champions and partners for the Feast for the Future program activities.

RESULTS

Program Components

The three CABs drafted initial plans for the creation of seven key Feast for the Future Program components: 1) Edible School Gardens; 2) Traditional Foodways Education Program; 3) Community Gardens, Orchards, and Greenhouses; 4) Farmers Markets; 5) Farmers Workshops; 6) Family Gardens; and 7) a Mobile Grocery Store. Components 1-5 were relevant to all communities while the Family Gardens and Mobile Grocery Store were each specific to just one community.

The Edible School Garden (ESG) program was envisioned as the development and implementation of a culturally-relevant garden-based curriculum for 3rd, 4th, and 5th graders, with classes both during the school year and the summer. The ESG program vision also included building and maintaining school gardens at a local school in each community. The Traditional Foodways Education Program (TFEP) was envisioned as the development and implementation of tribal-specific curriculum that incorporated local knowledge and practices regarding traditional farming, harvesting, and cooking. TFEP was intended to bring together farmers, elders, and youth ages 5-18 weekly during the spring, summer and fall months at community farms/orchards/gardens where elders and farmers would guide youth through traditional planting, tending, harvesting, and food processing practices. Community Gardens, Orchards, and Greenhouses were envisioned to be community-owned farms where community members could grow their own food using traditional agricultural practices. Farmers Markets were envisioned to be a mechanism for local farmers to sell their produce as well as for community members to access fresh, local, healthy, affordable food. Farmers Workshops were envisioned as a way to build on the capacity and knowledge of local farmers so they could expand their existing crops and introduce new ones as well as incorporate culturally relevant planting techniques. Family Gardens were envisioned to engage families to learn about and plant their own personal gardens to further increase access to healthy foods and develop engagement in local farms and agriculture. A Mobile Grocery Store was envisioned as a way for healthy food to travel to communities to allow for affordable access. Public awareness was envisioned as a way to communicate information about the project, and inspire broader community engagement, through key stakeholder interviews and community engagement videos.

Conceptual Framework

A conceptual framework was drafted by the JHCIH project team, with CABs providing input, edits, and guidance (Figure 1). The framework provided an explanation of how each Feast for the Future objective would impact participants, including youth, families, farmers, and elders. The conceptual framework includes a reference to the “Farm to Market system (MoGro),” that refers to the Mobile Grocery store.

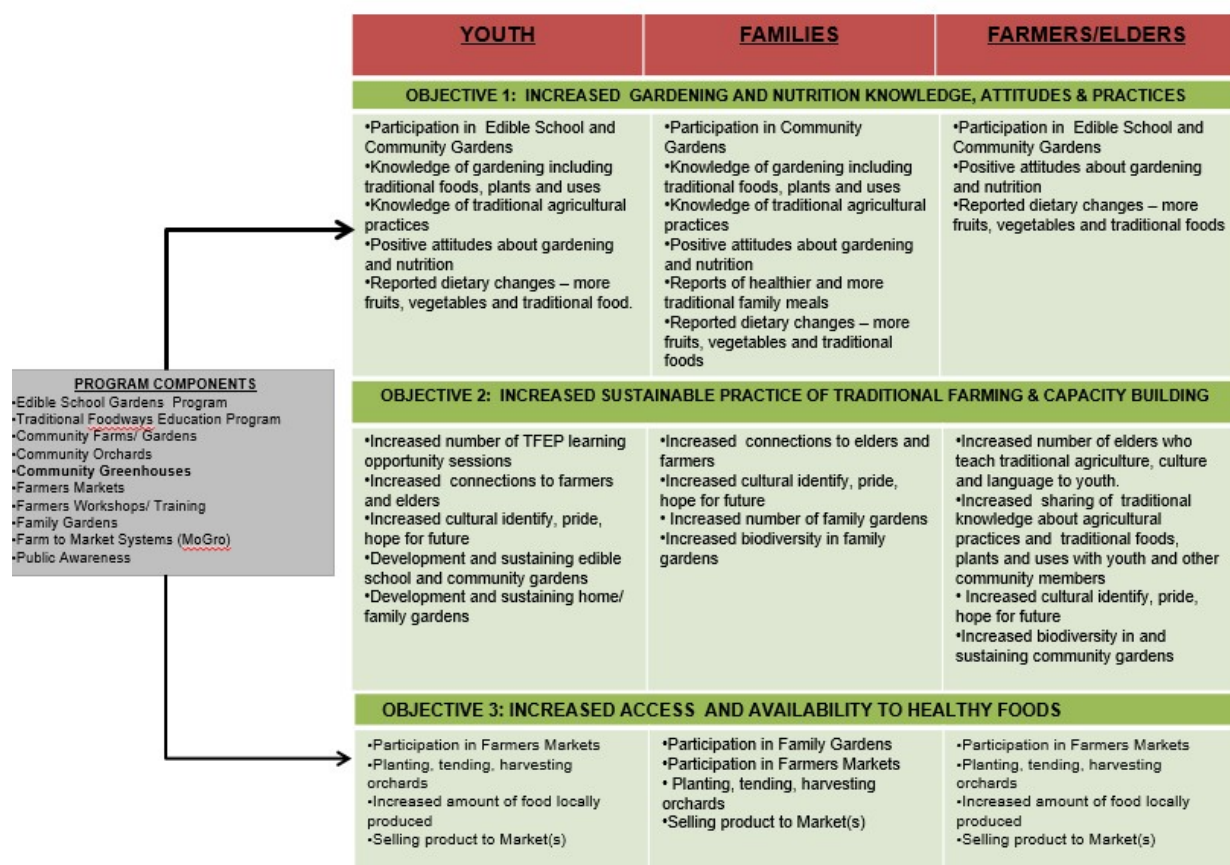


Figure 1. Feast for the Future Conceptual Model

Program Implementation and Evaluation

Each community implemented the Feast for the Future in fall 2011. JHCIH community-based staff worked in partnership with local schools, farms, tribal leaders, farmers/elders, and a variety of local health promotion leaders to implement the program. Each CAB met on a monthly or quarterly basis (depending on the community). Each CAB guided Feast for the Future implementation in their community, and liaised between tribal councils/governments and the project team. This communication helped to ensure continued support and approval by community leadership, and guided sustainability planning. By fall 2017 each site had successfully transitioned program components to school or community partners, so that the program activities could be sustained by local leaders. All curriculum and other implementation tools developed through this process were made available to the three participating communities, and are available to all through a public website. Several program components were evaluated between 2011-2017. Findings described programs as supporting cultural connections, elder/youth exchange, and traditional food revitalization ⁴¹⁻⁴³.

LESSONS LEARNED

The community visioning process described in this manuscript supported three tribal communities to develop the Feast for the Future Program to address a community health priority. A CBPAR process was critical to ensure the development of a culturally relevant and culturally appropriate program built on community strengths. Local CABs were key to the formative and implementation phases of this project. There are several significant lessons learned from the formative phase of the Feast for the Future initiative that may be translatable to the formation of other health promotion programs in Indigenous and rural communities.

Allow adequate time for a formative phase. This formative planning phase spanned seven months. This time allowed the communities to assemble CABs, and gave the CABs time to meaningfully assess the needs, barriers and visions for their communities. This process resulted in a high level of community engagement, commitment and ownership of the Feast for the Future program.

Establish Diverse Community Advisory Boards. The CABs included stakeholders that represented a broad spectrum of community members. The CABs were comprised of 10-20 key stakeholders in each community, including elders, medicine people, youth, medical clinicians/healthcare organization representatives, community-based programming providers, and tribal leaders. This allowed for perspectives to be shared that included those deeply rooted in the strong cultural traditions of the communities, based on current active involvement in community programming, as well as those informed by western systems and medical knowledge. As a result of the diverse membership on the CABs a wide range of perspectives were offered. For example, in one of the communities, some CAB members felt the Traditional Foodways Education Program would most benefit pre-teens and teens. However, elders on the CAB spoke about the importance of opening the program to younger children as well to involve young people early in the passing down of knowledge from elders to youth on traditional foodways. The CAB decided to broaden the age range to include younger children. The CABs had authority over all aspects of the program, including design, implementation, evaluation and sustainability.

Engage Tribal Leadership. After the CABs were formed, the teams met with tribal leadership to ensure they were aware of the program, could provide advice and guidance, and sought their input and approval of the project. A specific example of guidance provided by one of the tribal administrations was directing where the Community Farm and Farmers Markets would be located in the community, and facilitating access to the land for that use.

Think of Program Sustainability from Inception. Early on in the formative phase the CABs worked together to think of how the Feast for the Future could be sustainable in their communities. For example, the Edible School Garden component was initially conceived of as an after-school program. However, representatives from the local schools that served on the CABs advised that the curriculum be taught during the school day as a part of the standard curriculum. They felt this would address the school's need for a science curriculum and ensure consistent attendance by students. The CABs heard this suggestion and decided this option would also support sustainability of the program, and the Edible School Garden program was consequently offered as in-school learning.

Partner with Existing Programs. The CABs brought together existing programs in the community, which allowed the Feast for the Future to build on a network of local capacity and support. For example, there were collaborations with clinical initiatives throughout the project. Clinicians and healthcare organization representatives who were on the CAB advised on the content and activities of the Feast for the Future components and clinicians referred clients to participate in the Traditional Foodways Education Program, purchase local fruits and vegetables at the Farmers Market, and engage in harvests in the community orchards. A partnership with the

existing clinic in one community included a “produce prescription program” that gave vouchers to patients to use at the Farmers Markets.

Rely on Wisdom from the Communities. The answers to community concerns existed within the communities. The formative process described in this paper gave space for CABs and other community members to articulate ways to access protective traditions and design culturally appropriate interventions. The CABs led the visioning of the initiatives, outlining program components that were culturally relevant and community-supported.

Support Intergenerational Connections. A core element identified in the planning phase was the importance of intergenerational teaching and learning. Connections between elders/farmers and youth became a cornerstone of the program. The Traditional Foodways and Education Program (TFEP) component of the Feast for the Future initiative is an example of supporting and enhancing intergenerational connections. In this program component American Indian elders and farmers taught youth ages 5-18 years the TFEP curriculum. The TFEP took place in the community gardens, orchards and/or greenhouses where students would participate in hands-on activities taught by the elders and farmers. TFEP allowed the youth to gain a deeper appreciation and respect for the cultural teachings from the famers and elders and the farmers and elders to feel a deeper connection with the youth.

Support Community Ownership and Pride. During this formative phase, community enthusiasm and confidence in community capacity to develop and implement the Feast for the Future program was palpable. While traditional farming and associated sense of connection to

the land had waned in the three communities, the prospect of its resurgence brought a sense of community pride, efficacy and ownership. There was a renewed sense of hope among farmers that there was support and a market for their produce, elders/farmers were excited to be working with and teaching youth, and youth were curious, engaged and eager for the programming.

CONCLUSIONS

The Community Visioning process allowed for community-engaged program development led by CABs. The CABs were critical throughout the process from developing the initiative, guiding implementation, and ensuring continued support from the community and tribal leadership. The community visioning process described in this manuscript is a way for community members to think through their community's challenges, opportunities, and ultimately, create a vision for a healthier community. The programs have been implemented, transitioned fully to community-leadership for sustainability, and are ongoing. The description of this process, and the lessons learned, may allow other communities to identify community priorities and develop culturally relevant strategies to address their own community concerns.

ACKNOWLEDGEMENTS

We are deeply thankful for the guidance and partnership of the three tribal communities and JHCIH community-based staff who participated in the formative phase of the program. A particular note of thanks goes to the CAB members who guided and led the community visioning process and Feast for the Future initiative. We are also grateful to the tribal leadership for their participation and approval of the project. Finally, we are grateful to the funders of the Feast for the Future Initiative.

Funding: The formative phase of Feast for the Future was supported by the Schnieders Family Foundation. Funding for implementation of the Feast for the Future was provided by the Schnieders Family Foundation, W.K. Kellogg Foundation, Christensen Fund, Milagro Foundation, McCune Foundation, Simon Foundation, Klein Family Foundation, and the Walmart Foundation.

Ethics Approval: The formative phase of the project did not involve human subjects research. The project received tribal approval from leadership of the three involved communities. The manuscript received tribal approval from leadership of the three involved communities. The names of the tribes involved have been omitted to protect community privacy.

REFERENCES

1. Viswanath K, Orleans CT, Glanz K, Rimer BK. Health Behavior and Health Education : Theory, Research, and Practice. San Francisco, CA: Jossey-Bass; 2008.
2. Jernigan VBB. Community-Based Participatory Research With Native American Communities: The Chronic Disease Self-Management Program. *Health Promot Pract.* 2010;11:888–899.
3. Jernigan VBB, Salvatore AL, Styne DM, Winkleby M. Addressing food insecurity in a Native American reservation using community-based participatory research. *Health Educ Res.* 2012;27:645–655.
4. Brown BD, Harris KJ, Harris JL, Parker M, Ricci C, Noonan C. Translating the diabetes prevention program for Northern Plains Indian youth through community-based participatory research methods. *Diabetes Educ.* 2010;36:924–935.
5. Duran BG, Wallerstein N, Miller WR. New Approaches to Alcohol Interventions Among American Indian and Latino Communities: The Experience of the Southwest Addictions Research Group. *Alcohol Treat Q.* Taylor & Francis; 2007;25:1–10.
6. Wallerstein NB, Duran B. Using community-based participatory research to address health disparities. *Health Promot Pract.* 2006;7:312–323.
7. Donovan DM, Thomas LR, Sigo RLW, et al. Healing of the canoe: preliminary results of a culturally tailored intervention to prevent substance abuse and promote tribal identity for Native youth in two Pacific Northwest tribes. *Am Indian Alsk Native Ment Health Res Online.* 2015;22:42–76.
8. Story M, Stevens J, Himes J, et al. Obesity in American-Indian children: prevalence, consequences, and prevention. *Prev Med.* 2003;37:S3-12.
9. Zephier E, Himes JH, Story M. Prevalence of overweight and obesity in American Indian School children and adolescents in the Aberdeen area: a population study. *Int J Obes Relat Metab Disord J Int Assoc Study Obes.* 1999;23 Suppl 2:S28-30.
10. Ogden CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, Flegal KM. Prevalence of overweight and obesity in the United States, 1999-2004. *JAMA.* 2006;295:1549–1555.
11. Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion, Division of Nutrition, Physical Activity, and Obesity. Data, Trend and Maps [online] [online]. *Nutr. Phys. Act. Obes. Data Trends Maps.* Accessed at: https://nccd.cdc.gov/dnpao_dtm/rdPage.aspx?rdReport=DNPAO_DTM.ExploreByTopic&islClass=OWS&islTopic=&go=GO. Accessed March 14, 2023.

12. Bullock A, Sheff K, Moore K, Manson S. Obesity and Overweight in American Indian and Alaska Native Children, 2006-2015. *Am J Public Health*. 2017;107:1502–1507.
13. Echo Hawk Consulting. *Feeding Ourselves: Food Access, Health Disparities, and the Pathways to Healthy Native American Communities*. Longmont, CO: Echo Hawk Consulting; 2015.
14. Compher C. The nutrition transition in American Indians. *J Transcult Nurs Off J Transcult Nurs Soc*. 2006;17:217–223.
15. Story M, Strauss KF, Zephier E, Broussard BA. Nutritional concerns in American Indian and Alaska Native children: transitions and future directions. *J Am Diet Assoc*. 1998;98:170–176.
16. Lytle LA, Dixon LB, Cunningham-Sabo L, et al. Dietary intakes of Native American children: findings from the pathways feasibility study. *J Am Diet Assoc*. 2002;102:555–558.
17. Carlson LA. Land allotment and the decline of American Indian farming. *Explor Econ Hist*. 1981;18:128–154.
18. Lombard KA, Beresford SAA, Ornelas IJ, et al. Healthy gardens/healthy lives: Navajo perceptions of growing food locally to prevent diabetes and cancer. *Health Promot Pract*. 2014;15:223–231.
19. Marley TL. A Longitudinal Study of Structural Risk Factors for Obesity and Diabetes Among American Indian Young Adults, 1994-2008. *Prev Chronic Dis* [online serial]. 2015;12. Accessed at: https://www.cdc.gov/pcd/issues/2015/14_0469.htm. Accessed December 12, 2020.
20. Lynn K, Daigle J, Hoffman J, et al. The impacts of climate change on tribal traditional foods. *Clim Change* 120 545-556. 2013;120:545–556.
21. US EPA O. *Climate Impacts in the Southwest* [online]. Accessed at: [/climate-impacts/climate-impacts-southwest](#). Accessed February 2, 2020.
22. Kumar G, Jim-Martin S, Piltch E, et al. Healthful Nutrition of Foods in Navajo Nation Stores: Availability and Pricing. *Am J Health Promot AJHP*. 2016;30:501–510.
23. Frisvold G, Fonte A. *The Cost and Availability of Healthier Foods for the Pascua Yaqui Pueblo and the Old Nogales Highway Colonia: Community Baselines and Benefits of MobileMarkets*. University of Arizona; 2007.
24. Pareo-Tubbeh S, Shorty M, Bauer M, Agbolosoo E. *The variety, affordability, and availability of healthful foods at convenience stores and trading posts on the Navajo Reservation* [dissertation]. Tsaile (AZ): Diné College; 2000.

25. Drewnowski A, Specter SE. Poverty and obesity: the role of energy density and energy costs. *Am J Clin Nutr.* 2004;79:6–16.
26. Jernigan VBB, Huyser KR, Valdes J, Simonds VW. Food Insecurity among American Indians and Alaska Natives: A National Profile using the Current Population Survey-Food Security Supplement. *J Hunger Environ Nutr.* 2017;12:1–10.
27. Pardilla M, Prasad D, Suratkar S, Gittelsohn J. High levels of household food insecurity on the Navajo Nation. *Public Health Nutr.* 2014;17:58–65.
28. Nord M, Andrews M, Carlson S. Household Food Security in the United States, 2006 [online]. Economic Research Service, United States Department of Agriculture; 2007 p. 66. Report No.: ERR-49. Accessed at: <http://www.ers.usda.gov/publications/pub-details/?pubid=45902>. Accessed December 12, 2020.
29. Alaimo K, Olson CM, Frongillo EA. Food insufficiency and American school-aged children’s cognitive, academic, and psychosocial development. *Pediatrics.* 2001;108:44–53.
30. Casey PH, Szeto K, Lensing S, Bogle M, Weber J. Children in food-insufficient, low-income families: prevalence, health, and nutrition status. *Arch Pediatr Adolesc Med.* 2001;155:508–514.
31. Casey PH, Szeto KL, Robbins JM, et al. Child health-related quality of life and household food security. *Arch Pediatr Adolesc Med.* 2005;159:51–56.
32. Casey PH, Simpson PM, Gossett JM, et al. The association of child and household food insecurity with childhood overweight status. *Pediatrics.* 2006;118:e1406-1413.
33. Cook JT, Frank DA, Berkowitz C, et al. Food insecurity is associated with adverse health outcomes among human infants and toddlers. *J Nutr.* 2004;134:1432–1438.
34. Cook JT, Frank DA, Levenson SM, et al. Child food insecurity increases risks posed by household food insecurity to young children’s health. *J Nutr.* 2006;136:1073–1076.
35. Gittelsohn J, Kim EM, He S, Pardilla M. A Food Store–Based Environmental Intervention Is Associated with Reduced BMI and Improved Psychosocial Factors and Food-Related Behaviors on the Navajo Nation¹²³. *J Nutr.* 2013;143:1494–1500.
36. Murphy JM, Wehler CA, Pagano ME, Little M, Kleinman RE, Jellinek MS. Relationship between hunger and psychosocial functioning in low-income American children. *J Am Acad Child Adolesc Psychiatry.* 1998;37:163–170.
37. Olson CM. Nutrition and health outcomes associated with food insecurity and hunger. *J Nutr.* 1999;129:521S-524S.
38. Rose D, Oliveira V. Nutrient intakes of individuals from food-insufficient households in the United States. *Am J Public Health.* 1997;87:1956–1961.

39. Tanumihardjo SA, Anderson C, Kaufer-Horwitz M, et al. Poverty, obesity, and malnutrition: an international perspective recognizing the paradox. *J Am Diet Assoc.* 2007;107:1966–1972.
40. Weinreb L, Wehler C, Perloff J, et al. Hunger: its impact on children’s health and mental health. *Pediatrics.* 2002;110:e41.
41. Cueva K, Lovato V, Nieto T, Neault N, Barlow A, Speakman K. Increasing Healthy Food Availability, Purchasing, and Consumption: Lessons Learned from Implementing a Mobile Grocery. *Prog Community Health Partnersh Res Educ Action.* 2018;12:65–72.
42. Cueva K, Lovato V, Carroll D, et al. A Qualitative Evaluation of a Community Based, Culturally Relevant Intervention to Promote Healthy Food Access in American Indian Communities. *J Community Health.* 2020;45:458–464.
43. Cueva K, Speakman K, Neault N, et al. Cultural Connectedness as Obesity Prevention: Indigenous Youth Perspectives on Feast for the Future. *J Nutr Educ Behav* [online serial]. Epub 2020 Jan 8. Accessed at: <https://www.sciencedirect.com/science/article/abs/pii/S1499404619311066>. Accessed January 13, 2020.

| Community | Goal | Vision |
|------------------|--|---|
| 1 | To improve community-wide nutrition | Create a community garden hosting 50+ families. We will also create an outdoor and indoor learning center in which farmers and elders will teach traditional farming to youth and community members. Produce from the farm will be sold to families in the initial stages and later sold outside the community to create a larger revenue source. |
| 2 | To address lack of water and water distribution across the community to enable farming to thrive | Revitalize local farms by involving youth, elders and community members with a focus on creating sustainable land and food production. We will also re-introduce a local Harvest Celebration at an annual fair to provide a forum for educating community members. Finally, we will build a Living History Museum at the Community Farm. |
| 3 | To increase orchards, provide education for youth and farmers | Create the healthiest possible environment to raise children where they learn how to live, eat healthy, listen to the land and its spirit. A model gardening program will be developed for homes, schools and tribal lands that will restore healthy bodies, minds and communities. |

Table 1. CAB Community Goals and Visions