Tools for Healthy Tribes
Improving Access to Healthy Foods in Indian Country
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Abstract: There is growing recognition that policymakers can promote access to healthy, affordable foods within neighborhoods, schools, childcare centers, and workplaces. Despite the disproportionate risk of obesity and type 2 diabetes among American Indian children and adults, comparatively little attention has been focused on the opportunities tribal policymakers have to implement policies or resolutions to promote access to healthy, affordable foods. This paper presents an approach for integrating formative research into an action-oriented strategy of developing and disseminating tribally led environmental and policy strategies to promote access to and consumption of healthy, affordable foods. This paper explains how the American Indian Healthy Eating Project evolved through five phases and discusses each phase’s essential steps involved, outcomes derived, and lessons learned.

Using community-based participatory research and informed by the Social Cognitive Theory and ecologic frameworks, the American Indian Healthy Eating Project was started in fall 2008 and has evolved through five phases: (1) starting the conversation; (2) conducting multidisciplinary formative research; (3) strengthening partnerships and tailoring policy options; (4) disseminating community-generated ideas; and (5) accelerating action while fostering sustainability. Collectively, these phases helped develop and disseminate Tools for Healthy Tribes—a toolkit used to raise awareness among participating tribal policymakers of their opportunities to improve access to healthy, affordable foods. Formal and informal strategies can engage tribal leaders in the development of culturally appropriate and tribe-specific sustainable strategies to improve such access, as well as empower tribal leaders to leverage their authority toward raising a healthier generation of American Indian children.

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Background

The rapid rise in obesity has forced researchers and policymakers to re-evaluate existing public health interventions, which have traditionally focused on improving an individual’s food and physical activity attitudes, knowledge, and behaviors. Expert reports have called attention to the social determinants of health and have specifically identified how the rapidly changing food and physical activity environments may be negatively contributing to an increase in energy intake, a decrease in physical activity, and the drastic rise in obesity and related chronic diseases. Promising approaches put forth are policy and programmatic changes that help make the healthy choice the easy choice.

Even though calls for government obesity prevention action have increased over the past 5 years, the role of tribal governance is often overlooked. The U.S. founding fathers acknowledged a special government-to-government relationship of the federal government with Indian tribes (Const., Art. 1, §8). The Supreme Court determined in 1913 that the Constitution afforded federally recognized tribes certain inherent rights of self-government and entitlement to federal benefits, services, and protections. More than 16 states have granted tribes state recognition even though the tribes are not federally recognized.

Overlooking tribal governance is problematic because tribal leaders may have untapped potential to address American Indians’ elevated risk for obesity through tribal resolutions and culturally appropriate community
changes. American Indian preschoolers were found to have the highest prevalence of obesity among five major racial/ethnic groups in a recent cross-sectional study using a nationally representative sample of U.S. children, born in 2001 with height and weight measured in 2005: American Indian/Native Alaskan, 31.2%; Hispanic, 22.0%; non-Hispanic black, 20.8%; non-Hispanic white, 15.9%; and Asian, 12.8%. An 8-year obesity prevention program called Pathways was designed specifically to address the alarming rates of obesity among American Indian schoolchildren. The intervention focused on increasing physical activity and healthy-eating behaviors among schoolchildren in Grades 3 to 5, primarily through activities targeting the individual, family, and school. No changes in obesity prevalence rates were found. Pathway investigators recommended that future interventions employ more culture- and tribe-specific strategies, as well as integrate more sustainable environmental interventions and public policy approaches. Since the Pathway findings were published almost 10 years ago, little attention has been focused on how to engage tribal leaders in creating supportive environments to reduce obesity.

This paper presents an approach for integrating formative research into an action-oriented strategy of developing and disseminating tribally led environmental and policy strategies to promote access and consumption of healthy, affordable foods. This paper explains how the American Indian Healthy Eating Project evolved through five phases and discusses each phase’s essential steps, outcomes derived, and lessons learned. The project was created through partnerships between seven North Carolina American Indian tribes and a multidisciplinary research team at the University of North Carolina, Chapel Hill (UNC). Through the support of a Robert Wood Johnson Foundation grant, the project aimed to build the partnerships and evidence base necessary to improve access to healthy, affordable foods within tribal communities. The one federally recognized tribe in the state opted out of the project, citing existing obesity prevention programs. The following seven state-recognized tribes invited us to host a modified Talking Circle and through these discussions agreed to participate in the American Indian Healthy Eating Project: Coharie Indian Tribe, Haliwa-Saponi Indian Tribe, Lumbee Tribe of NC, Occoneechi Band of the Saponi Nation, Meherrin Indian Tribe, Sappony, and Waccamaw Siouan Tribe.

### Phase 1: Starting the Conversation

Using community-based participatory research, researchers at UNC established contacts in fall 2008 with members of the NC Commission of Indian Affairs (www.doa.state.nc.us/cia/). The commission is a division of the NC Department of Administration created by the state’s General Assembly to advocate and assist its American Indian citizens. The commission suggested using Talking Circles (i.e., facilitated discussions commonly used among American Indian communities) to initiate conversations with tribal leaders. The NC American Indian Health Board (ncaihb.org) was also a part of these initial discussions and helped develop a research ethics review process for the current study.

The modified Talking Circle was designed to initiate conversations about research ethics, as well as tribally led approaches to improving access to healthy, affordable foods within tribal communities. The one federally recognized tribe in the state opted out of the project, citing existing obesity prevention programs. The following seven state-recognized tribes invited us to host a modified Talking Circle and through these discussions agreed to participate in the American Indian Healthy Eating Project: Coharie Indian Tribe, Haliwa-Saponi Indian Tribe, Lumbee Tribe of NC, Occoneechi Band of the Saponi Nation, Meherrin Indian Tribe, Sappony, and Waccamaw Siouan Tribe.

### Phase 2: Conducting Multidisciplinary Formative Research

Formative research was conducted by combining methodologies from public health, regional and urban planning, and public health law.

**Qualitative methodologies.** The project used modified Talking Circles, as well as key informant one-on-one interviews to build relationships and garner insights from tribal leaders and key stakeholders because a variety of qualitative approaches was a recommended approach to building trust and gathering input from American Indians. Qualitative research is also a recommended approach to gathering input on the local food environment, particularly from a variety of perspectives. Two community liaisons, along with community advisors from participating tribes, assisted with the development of the modified Talking Circle protocol. One community liaison facilitated all seven modified Talking Circles. This liaison, in addition to two additional community liaisons, recruited and facilitated all key informant interviews.

Tribal leaders were recruited for the Talking Circles and were identified by each tribe. The categories of key informants were chosen by community advisors, and the individuals recruited were identified by community advi-
sors, tribal leaders, or responded to seeing a recruitment flyer. Common themes arising during the modified Talking Circle discussions included concerns about obesity among tribal youth, facilitators and barriers to purchasing and preparing affordable, healthy meals, and the role of the family, church, and tribal community in moving forward healthy-eating initiatives.

Additional community insights were garnered from 40 key informants through one-on-one interviews with community and spiritual leaders (n = 13); health professionals (n = 8); Indian educators (n = 10); food-sector professionals (n = 5); and parents (n = 4). Key informants who were also parents were asked about their insights on these issues as parents too, totaling 13 parent participants. The key informants added invaluable perspectives on how to utilize Native traditions and empower tribal leaders to improve access to healthy eating within tribal communities.

Spatial analysis. Food-environment assessments were conducted to identify the types and locations of all food retail outlets within each of the seven participating tribal communities.21 Information was gathered from secondary data sources (i.e., health county food-registry lists and state agriculture registry lists, Dun & Bradstreet, InfoUSA, and online Yellow Pages) and through a canvass by car of all primary roads within each of the communities. More than 1502 miles were canvassed; 711 food outlets were identified; evidence for validity of secondary food retail data sources was calculated; and inter-rater reliability of the methods was verified. The food landscapes of the tribal communities were characterized by country stores, gas stations with convenience stores, and fast-food restaurants.22 Two tribes had to travel more than 15 miles to reach the nearest full-service grocery store.

Public health law research. Informed by the qualitative and spatial preliminary findings, the American Indian Healthy Eating Project used methodologies from public health law research to identify the authority, as well as develop suggestions for feasible community changes that the participating tribes can implement to improve access to healthy, affordable foods within their tribal communities. Specifically, a systematic online collection and analysis of constitutions and websites of more than 500 tribes and urban Indian organizations in the U.S. was conducted. Three researchers coded with high agreement if and how constitutions, resolutions, and websites discussed food, nutrition, and health.
Preliminary findings indicate that tribal constitutions acknowledge the role of tribal government in health. For the more than 300 tribes with official websites, the health programs featured were the DHHS Indian Health Services and the U.S. Department of Agriculture Food Distribution Program on Indian Reservations. Some examples of obesity policies or resolutions were identified through website reviews such as Cherokee Nation’s Healthy Nation initiative (healthynation.cherokee.org).

To develop appropriate guidance for participating tribes, expertise was sought from several participating tribal leaders, Indian health law scholars, and relevant agencies that promulgate regulations regarding Indian health, home preservation and canning, farmers’ markets, and Pow Wow concessions (i.e., food sold at a special form of gathering of North American Native Americans).

**Phase 3: Strengthening Partnerships and Tailoring Policy Options**

To avoid historical and contemporary research ethics-related injustices experienced by American Indians, the research and community partners worked informally and formally to regularly meet and discuss the data and how they should be disseminated to the participating tribes. Tribal leaders expressed their appreciation of the project’s frequent in-person and written communications. The participating tribes were generally led by volunteers who often had a full agenda of items to discuss at their Tribal Council meetings, so the project regularly created short project updates in written or oral form.

Through intermittent review of preliminary findings (Table 1) and of the proposed toolkit table of contents, several suggestions were provided by tribal liaisons and leaders in person, over the phone, and via e-mail that assisted the success of the dissemination of policy options within the tribal communities. For example, a number of tribes requested that the toolkits be visual, integrating pictures of and artwork by tribal members. A website was also regularly requested as a way to make accessible, for multiple people, the study results and suggested policy strategies.

During conversations with tribal leaders, the name of the project itself emerged to emphasize American Indian and healthy eating versus the original name that focused more on food access. Further, the tribes felt it was important to continue discussions with relevant community partners, especially spiritual and church leaders. Although the project’s main focus was healthy eating, to respond to frequent requests about ideas for promoting physical activity, the toolkit and project website provided ideas on improving active living in general and, more specifically, about creating or renovating places to be physically active within tribal communities.

**Table 1. Community-generated ideas translated into American Indian Healthy Eating Project actions**

<table>
<thead>
<tr>
<th><strong>Revitalizing Traditional Ways:</strong></th>
<th>&quot;I want there to be resurgence and a re-education of young Indian families to understand how we ate traditionally.&quot;</th>
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<td></td>
<td>• Integrated traditional messages, stories, and information on existing American Indian programs into the toolkit on traditional food preparation and preservation practices</td>
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<tr>
<td><strong>Empowering Tribal Council and Community Sparkplugs:</strong></td>
<td>&quot;The people don’t want to be beat down and beat down and beat down with what they need to do. The people need to be empowered on how they can do what they do with what they got.”</td>
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<td></td>
<td>• Created opportunities for tribal liaisons, community liaisons, and tribal members to engage in the project and take leadership roles in shaping the project process and outcomes</td>
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<td><strong>Using Intergenerational Approaches:</strong></td>
<td>&quot;If we incorporate our elders and especially our women, then we’ll make change. But not only our elders because they’re dying out. We need to also incorporate the children. And a lot of times people focus on the elders and children and they leave out the middle generation so there needs to be something done with the ones who are being affected right now.”</td>
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<td></td>
<td>• Emphasized the whole family, as well as extended family activities and ways to negotiate healthy habits among family members and friends</td>
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<td><strong>Facilitating Economic Development:</strong></td>
<td>&quot;Working with the youth, empowering the youth around healthy nutrition, empowering the youth around the health benefits from produce, empower the youth around economic opportunities with fresh produce.”</td>
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<td></td>
<td>• Joined several community change healthy-eating ideas with community and economic development and job creation facets in the toolkit, website, and during informal and formal presentations</td>
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<td><strong>Addressing Historical Trauma:</strong></td>
<td>&quot;So the problem is . . . how do you create real big catalyst for someone to really understand that getting sugar diabetes isn’t a fate of your whole entire family, that you actually can break that generational curse so to speak by just changing a mindset.”</td>
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<td></td>
<td>• Emphasized American Indian youth and adults who live long and healthy lives</td>
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<td><strong>Organizing the American Indian Community:</strong></td>
<td>&quot;If you can bring these minds together, you’re gonna get more of a consensus. So . . . think about planning a general round table discussion about this issue with everybody that you interview and meet with.”</td>
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<td></td>
<td>• Supported collaborative workshop among the seven participating tribes and project partners to discuss possible next steps and coordinated proposal that was awarded funding to further project momentum</td>
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Note: Themes and quotes are drawn from the seven modified Talking Circles (n=33) or key informant interviews (n=40).
Overall, tribal leaders expressed that they felt their opinions were valued since they were regularly asked for their opinions. More importantly, they felt their insights and ideas were reflected in the project as it evolved. The frequent engagement encouraged further interest and action on this project, along with other health endeavors among community partners and members.

Phase 4: Disseminating Community-Generated Ideas
A toolkit and web-based resources known as “Tools for Healthy Tribes” (americanindianhealthyeating.unc.edu/tools-for-healthy-tribes/) was created. The kit’s format and content was largely based on community insights on the local food environment and ways to stimulate action by their tribal leaders and at the grassroots level, because community members felt dissemination should be leveraged to stimulate action, not just hand out information. Tribal leaders and members grew increasingly interested in the project as opportunities to disseminate the project’s process and products developed.

Leaders and members also appreciated the “empowering tone” and how dissemination materials focused on what tribes can do, rather than just describing a problem “they are all well aware of.” Showing the food-assessment results using maps was helpful but often not as interesting as they are all well aware of.” Showing the food-assessment results using maps was helpful but often not as interesting to community members who expressed that they “know where they eat and why.” Many leaders expressed more interest in hearing about low-cost, immediate approaches they can take to address both economic development and health.

Phase 5: Accelerating Action While Fostering Sustainability
Building awareness about the project and its potential within the seven participating tribes helped accelerate action while fostering sustainability. State-recognized tribes are not recognized by the federal government and thereby not permitted to participate in the Indian Health Services or the Food Distribution Program on Indian Reservations. Both of these programs increasingly provide opportunities, funding, and staff to focus on obesity prevention strategies. The support in data, technical assistance, as well as direct financial support of time, space, and staff, helped provide some critical funds to tribes to take action on healthy-eating strategies.

The Haliwa-Saponi Indian Tribe invested their grant support and additional grant funds awarded through another art project into their tribally owned and operated farmers’ market and started a community garden. These were great achievements considering state budget cuts at the time laid off the farmers’ market manager, who was instrumental in moving healthy-eating ideas forward. Finally, the American Indian Healthy Eating Project benefited from transitioning into Healthy, Native North Carolinians, a capacity-building project funded by Kate B.

Table 2. Translating lessons learned from the American Indian Healthy Eating Project into recommendations

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<tr>
<th>Lessons learned</th>
<th>Recommendations for future research and practice</th>
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<tr>
<td>Building awareness among tribal leaders about their authority and opportunity</td>
<td>Use culturally appropriate strategies to initiate conversations with tribal leaders and develop guidance that is</td>
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<td>to create community changes for improving access to healthy, affordable foods</td>
<td>tailored to their unique authority and opportunity to develop policies and resolutions within their tribal</td>
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<tr>
<td>and partnerships that can help address health disparities in Indian Country</td>
<td>communities that can improve access to healthy, affordable foods</td>
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<td>while addressing historical trauma</td>
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<td>Tailoring the partnership building process and approach to identifying</td>
<td>Learn to recognize commonalities and differences among American Indian tribes from recognition status, governance</td>
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<td>particular community change strategies for an individual tribal community is</td>
<td>structure, key sparkplugs and champions, community priorities and resources, and means of moving an idea forward</td>
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<td>necessary</td>
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<td>Changing political dynamics of a tribe’s leadership can alter the direction</td>
<td>Create and re-create relationships with tribal policymakers as they are elected and re-elected</td>
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<td>the tribe was currently pursuing regarding healthy-eating community changes</td>
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<tr>
<td>Connecting tribes to learn from and work together on community changes about</td>
<td>Stimulate discussions and partnerships within and among tribal communities while recognizing long-standing working</td>
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<td>healthy eating can maximize project potential</td>
<td>relationships among particular tribes or historical or contemporary conflicts</td>
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<tr>
<td>Seeking approval for each step taken and dissemination strategy is not</td>
<td>Seek guidance from American Indian researchers and tribes with active research programs occurring within their</td>
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<td>necessary if memorandums of understanding clearly identify when and how tribal</td>
<td>communities on developing an operating memorandum of understanding that formally governs all aspects of the</td>
</tr>
<tr>
<td>approval is needed on a specific dissemination activity</td>
<td>project including dissemination strategies and how the data can be used in further programs, presentations,</td>
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<td></td>
<td>papers, and grant proposals</td>
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</table>
Future research is needed on how to engage tribal leaders at federal levels on the importance of engaging tribal leaders. Healthy Tribes raised awareness at the tribal, state, and participating communities and throughout Indian Country regarding the role of tribal-level obesity prevention strategies within Indian Country (Table 2). In addition, the project process and emerging products have been shared through in-person, phone, and e-mail consultations with other initiatives focusing on tribal or rural food access. That is, these findings have been discussed with more than 50 tribal leaders and stakeholders interested in responding to the call to action from Let’s Move! in Indian Country28 and maximizing funding opportunities such as the Association of American Indian Physicians’ Communities Putting Prevention to Work mini-grants.29

**Lessons Learned and Recommendations for Future Research and Practice**

To our knowledge, this is one of the first projects that began working with multiple tribes in one state to explore the potential for tribally led efforts to maximize environmental and policy strategies to improve access to healthy, affordable foods. In addition, although toolkits and other forms of guidance on developing and implementing obesity prevention strategies have been increasingly created for policymakers, few of these guidance-oriented projects have shared the process by which they worked to engage policymakers—successfully or unsuccessfully—in developing evidence-based strategies to promote equitable access to healthy, affordable foods.26,27

Key lessons learned about initiating and sustaining partnerships with tribal communities to foster community changes regarding healthy eating were identified and translated into recommendations for future actions to address the alarming obesity and type 2 diabetes rates within Indian Country (Table 2). In addition, the project process and emerging products have been shared through in-person, phone, and e-mail consultations with other initiatives focusing on tribal or rural food access. That is, these findings have been discussed with more than 50 tribal leaders and stakeholders interested in responding to the call to action from Let’s Move! in Indian Country28 and maximizing funding opportunities such as the Association of American Indian Physicians’ Communities Putting Prevention to Work mini-grants.29

**Conclusion**

This innovative process has relevance to advancing the role of tribal-level obesity prevention strategies within participating communities and throughout Indian Country. Specifically, the steps taken to develop *Tools for Healthy Tribes* raised awareness at the tribal, state, and federal levels on the importance of engaging tribal leaders in obesity prevention and the need to “make it Native.” Future research is needed on how to engage tribal leaders and grassroots movements to prevent obesity in Indian Country.

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**References**

3. IOM of the National Academies Committee on Accelerating Progress in Obesity Prevention Food and Nutrition Board. Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation. Washington, DC; 2012


8. Indian Arts and Crafts Act, 25 USC §305e (d).


28. Let’s Move! in Indian Country: Toolkit and Resource Guide. This toolkit was produced by the Let’s Move! in Indian Country interagency workgroup led by the White House, Domestic Policy Council, the U.S. Department of Agriculture, the U.S. Department of the Interior, DHHS, the U.S. Department of Education, and in collaboration with the Office of the First Lady’s Office, the CDC, the U.S. Department of Transportation, and the Corporation for National and Community Service.


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