NB3 GRANT BACKGROUND

Despite this growing body of evidence describing the challenges to food access in Navajo Nation, there have been few attempts to translate these findings into workable solutions. In an effort to work toward designing effective strategies to increase food access in Navajo, we sought to complement the existing literature with a Food System Report that focuses on understanding the issue of food access from the perspective of community members, in particular to highlight the resiliency and adaptive strategies of many community members and seek their insight to inform potential solutions. By representing the voices and experiences of community members and community decision-makers, we hope that this report will provide insight into community-driven solutions that will ultimately reinforce tribal and economic sovereignty and contribute to the prosperity of healthy communities.

REGIONAL PARTNERS AND INITIATIVES

- Dine Community Advocacy Alliance
- Dine Policy Institute
- Navajo Nation Division of Health
  - Harvard Food Law & Policy Clinic
  - Centers for Disease Control

UNDERSTANDING CHILDHOOD OBESITY IN EASTERN NAVADO NATION

Responding to the growing literature that supports early interventions on healthy child development to reduce the burden of chronic disease, we sought to better understand the severity and distribution of childhood overweight and obesity in Eastern Navajo. In order to do so, we evaluated data on Body Mass Index (BMI) and weight status for children age 3-6 years in Crownpoint Service Unit.

Among the 629 children surveyed in the sixteen Chapters of Crownpoint Service Unit, 51% were boys. A total of 13% were classified as overweight, and 58% were classified as obese. As shown in Figure 4, 74% percent of girls and 68% of boys were overweight or obese, although these rates did not differ significantly by gender.

Figure 4: Percent of children’s weight status, by sex, N=629
Interestingly, when comparing this data segregated by age (3 and 4 year old compared to 5 and 6 year olds), a time effect becomes apparent (Fig 5). Namely, as children age, a greater percentage are overweight or obese and a greater proportion of those are obese. Among the younger children, 16% were classified as overweight and 33% were considered obese (49% as overweight or obese). In the older kids, only 10% were overweight and 74% were found to be obese (84% as overweight or obese).

These findings suggest that not only are kids becoming overweight at very young ages, most of those who become overweight are becoming obese. These data highlight the potential for poor health outcomes for children living in these sixteen Chapters within Crownpoint Service Unit. With over a third of three and four year olds (33%) and almost three-fourths of five and six year olds (74%) from the children sampled categorized as obese, the need for intervention at an early age is clear.

**COMMUNITY-BASED FOOD ASSESSMENT IN EASTERN NAVAJO**

Our findings confirmed what conversations and home visits with CHRs had suggested: people access food through a variety of sources in order to meet their household’s monthly food needs and travel great distances to do so. Community members feel that the healthy foods they want to consume are not available and often expensive; thus, they are not able to consume enough healthy foods. The majority of respondents shop 2-3 times a month (57%), independent of household size (Fig. 7). A quarter of respondents (26%) only shop once a month, and most worrisome, a small number (4%) do not shop every month, raising concerns about the extremely vulnerable. Distance to the store came up in every conversation around barriers to accessing healthy foods. Indeed, only 6% of respondents live less than 30 minutes from the place where the majority of their food purchases are made, and over half of participants (51%) travel more than an hour. While the majority of respondents (62%) drive themselves to the store, over a third (32%) rely on others to take them to the store.

When asked “if there was one thing you could share with young people in your community about tradition and culture around food, what would it be,” community members felt that teaching youth to learn how to grow and prepare food was fundamental. Passing on this knowledge was regarded as fundamental to ensure that the next generation felt connected to food and their cultural traditions, as well as the vital relationships between food and health.
We found that at the level of the structural environment, income and lack of transportation were significant barriers to accessing healthy food, consistent with our prior work as well as research on American Indian reservations. (Mullany, et al., 2012) (O’Connell, Buchwald, & Duncan, 2011) Food insecurity among community members was described as cyclical, increasing as the month progressed and available income as well as food options declined. Transportation was linked to income, as community members faced challenges in purchasing gas for traveling the long distances required to shop for food. There was a seasonal cycle to food insecurity as well: roads become dangerous and impassable during the winter, preventing community members (most especially the elders and most economically disadvantaged) from leaving their home.

At the community level, community members described that their options and decisions were influenced by how close they were to retail sources, as well as their ability to access local resources, including Chapter House support, Senior Centers and School Food programs, and distribution points for the commodities food program (FDPIR). Due to the limited number of food retail establishments on the reservation, access varied considerably from Chapter to Chapter. Despite higher prices, community members frequently resorted to buying food at nearby convenience stores, gas stations and trading posts. Chapter Houses provided support in terms of emergency social assistance, either financial or through food packages, but these resources were sometimes limited or difficult to access.

As a whole, these community-based surveys all support the premise that one of the greatest challenges to eating healthy foods is the lack of availability of competitive, high-quality healthy foods within Navajo communities and the vast distances and lack of transportation to access market centers. Based on these findings and stakeholder feedback, we concluded that the provision of healthy foods and non-food sundries at a proximal location (likely the Chapter House) could potentially address barriers to food access in a way that would be acceptable to community members. Any such intervention must be affordable for those with limited income (e.g. redeemable using SNAP, competitive pricing), offer high-quality, fresh healthy foods, and take place within the communities. Participants also emphasized the importance of linking food access with teaching, including food demonstrations, nutrition education, and inter-generational teaching related to food traditions.

**Final Mile**

Given the findings of the Community Needs Assessment, COPE has since partnered with the Haas School of Business at the University of California, Berkeley to further understand how food could be brought to remote rural communities. We called this concept the “Final Mile,” meaning how can we design food systems that bring food into Navajo Nation in a way that provides a sustainable, acceptable, and affordable selection of healthy foods to community members?

Among all participants, a third each stated they would shop for produce locally twice a week (27%), weekly (31%) or every other week (25%) (Fig. 15). In thinking about distance that consumers would be willing to travel to shop for produce, 71% wanted to travel under thirty minutes.

Given that our past work highlighted the financial difficulty that many people face towards the end of the month, we wanted to gauge people’s preferred ways to pay for local produce
purchases. About a third of respondents (27%) wanted to pay at the beginning of the month, while another two-thirds (65%) preferred to pay at the time that they shop.

When asked about which products provided respondents would like to be available for purchase locally, almost one-fifth (18%) said that all of the items provided would be things they would buy (Fig. 18). Seasonal fruits and vegetables, such as corn, chilies, tomatoes, cucumbers, peaches, strawberries, and oranges were popular choices. Of items not provided, dairy and meat were the most common requests to be made available locally.

Figure 14. Of the products available, what would you purchase if made available? N=55

HAPPY HOMES INTERVENTION

In January 2014, we trained 16 coaches (health educators, preschool teachers, community health representatives, etc.) in the curriculum. From February – May 2014, these coaches delivered the curriculum in four communities (Teec Nos Pos, Hanaadli, Kayenta, and Crownpoint). A total of 45 families (at least one parent and a child age 3-8) attended a total of 30 sessions.

After the pilot of the curriculum, we gathered and analyzed participant evaluation forms. Baseline survey data indicated that many children were not meeting clinical recommendations for physical activity (61%), sleep time (74%), fruit and vegetable intake (47%), and screen time (26%). Although the number of families completing an exit survey was too small to evaluate for changes in specific habits, all participants reported that attending the sessions led to some or a lot of changes in their homes.

This childhood obesity prevention curriculum taught us that marrying food distribution with health education was synergistic. Receiving groceries was an incentive for families to attend the teaching sessions; conversely, coaching on healthy behaviors was reinforced by hands-on experiences through take-home groceries, recipes, and food demonstrations. We also learned that utilizing existing food distribution systems was feasible but labor intensive, terms of potentially bringing this work to scale. Finally, the project also highlighted the important
contributions of health care providers, educators and community health workers as part of the solution to increase access to healthy foods on Navajo Nation.

**NEXT STEPS FOR COPE**

We believe that COPE’s role is in large part to amplify the efforts made by others, as a way of drawing attention, resources, and deepening engagement across Navajo Nation and beyond. In addition, COPE will continue to implement and evaluate community-based interventions, as long as these projects have strong community buy-in and promote community development. In the coming year, COPE plans to pursue the following activities, based on the findings described above:

1. **“Final Mile Project”** COPE will pilot strategies to bring healthy foods into remote rural communities of Navajo Nation. We hope to pilot small-scale retail events within communities to bring affordable healthy food to geographically and economically vulnerable communities, and better understand whether consumers would actually shift their purchasing behavior to buy at such local venues. Such a model would ideally be community-led and could potentially generate local economy by encouraging purchases within the community.

2. **Happy Homes Expansion.** We plan to expand the project to reach approximately 300 families, working with a broad coalition of health educators and food suppliers. We will evaluate the impact of the expanded intervention in terms of changes in food security, healthy behaviors, and body mass index among children.

3. **Increasing purchasing power among vulnerable families.** With support from a non-profit food organization, Wholesome Wave, we hope to pilot interventions that increase food access for vulnerable community members. One intervention – the Fruit & Vegetable Prescription Program (FVRx) – targets households with children who are overweight or obese or with adults who living with diabetes. Participants meet with a health care provider on a monthly basis for health education and coaching. At each visit, they are given a prescription for healthy fresh fruits and vegetables, redeemable at grocery stores and farmers markets. Initiatives like this could thus not only change purchasing behavior in vulnerable families, but also stimulate local economy and food sovereignty in Navajo Nation by supporting local business.

4. **Increasing availability of healthy food and beverage options in local stores.** The CDC Navajo Store Survey demonstrated the importance and profound potential of working with local stores to increase the options that they have available. By strengthening the ability of stores to provide healthy options and sell traditional products from local producers, we have identified this as a strategy to promote local economy and utilize an existing network of resources within the Navajo food system.

5. **Community Food Asset Mapping.** Our needs assessment revealed not only challenges and critical barriers but also profound resources within Navajo communities. While
there is ample documentation of unparalleled rates of food insecurity in Navajo Nation [Pardilla et al], less systematic work has been carried out to describe the resources – both formal and informal – that exist within Navajo communities to address food access needs through place-based, community-driven approaches. Pending availability of funds, we seek to work with Navajo communities to develop a user-friendly interactive map of food assets that will use GIS mapping to allow community members and service providers (e.g. CHRs, providers, PHNs) to identify food resources within the region.