



Barriers to accessing nutritional and traditional foods on the Navajo Nation

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ABSTRACT

The Navajo Nation is continuing to experience increasing incidence rates of obesity, diabetes, and high blood pressure that could be correlated to the lack of accessibility to nutritional and traditional foods. There are currently only 13 grocery stores to serve an approximate population of 400,000 on the Navajo Nation. The Navajo Nation enacted a health policy known as the Unhealthy food and beverage tax, where a 2% tax is collected on foods and beverages identified as unhealthy, and a 6% exclusion tax on healthy foods and beverages. The allocation of funds from the unhealthy food and beverage tax are utilized to spread awareness on the burden of diseases and promote health and wellness projects in the 110 chapter communities. Future implications for the health policy are suggested recommendations to utilize the allocated funding to build more grocery stores and community gardens first, then implement health and wellness projects as a phase two.

INTRODUCTION

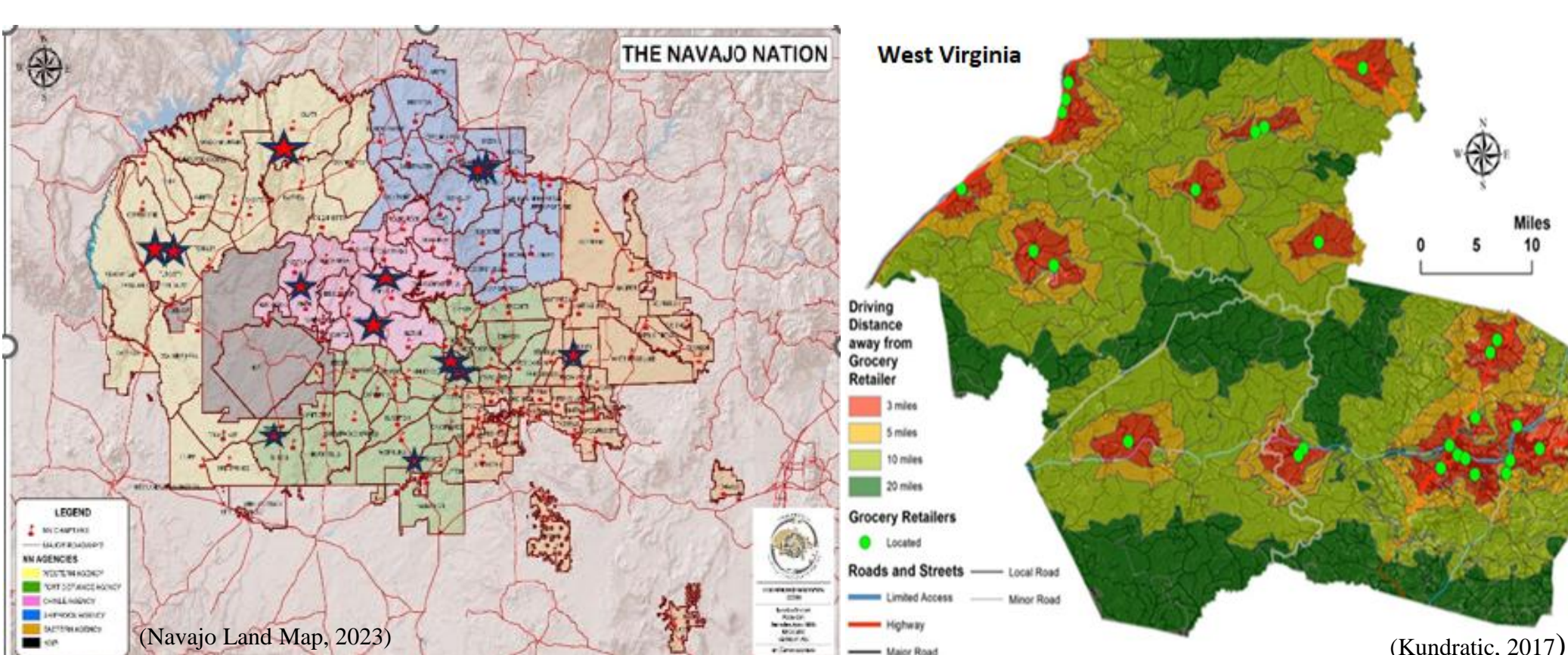
Why is it a Tribal Public Health Problem?

History has shown us that the healthy ways of the Indigenous Peoples have been lost due to colonization. In Navajo traditional stories, the Holy People talk about their admiration of the "Five Fingered Beings" (Vecenti, 2021). The stories and songs given to the Navajo People provide guidance on how-to live-in balance within their environment, and to make healthy lifestyle choices, so the ultimate goal of living to the age of 102 can be achieved (Vecenti, 2021). Traditional stories discuss the appropriate foods to consume, exercise daily by running towards the east every morning and evening, and respecting their environment. Eating the sacred foods provided by the Holy People will keep the Navajo People healthy and safe from disease or illness (Vecenti, 2021). Due to colonization, the Navajo People have adapted to consuming the highly processed foods introduced from Western civilizations.

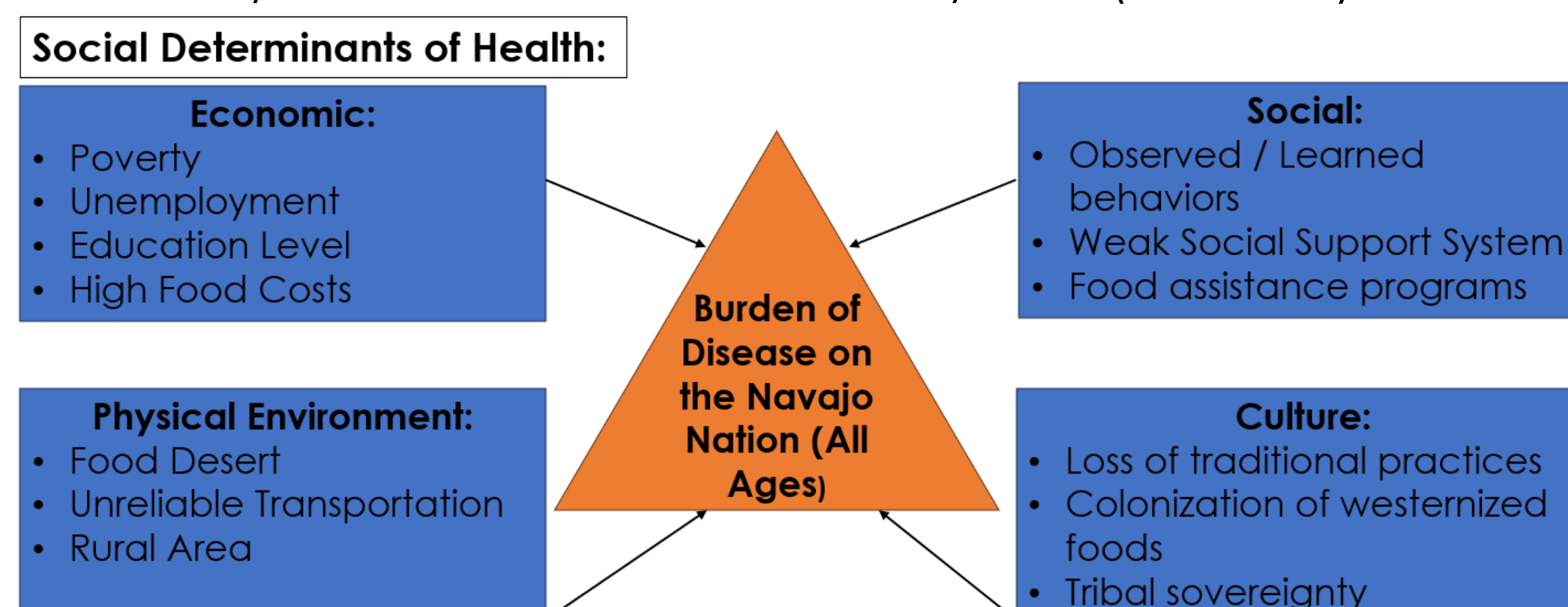
The community issue is the limited access to nutritional and traditional foods on the Navajo Nation. There are increasing incidence rates for obesity, diabetes, high blood pressure, and heart disease. The target population is individuals of various ages residing on the Navajo Nation. The Navajo population experiences barriers to nutritional and traditional foods, social and economic inequalities, and influencing psychosocial risk factors on the Navajo Nation. The social determinants of health, such as: poverty, low educational attainment, loss of traditional knowledge, negative behaviors from social influences, and limited access to nutritional foods increase rates of food insecurity for the Navajo People.

Why should the public care?

Development of the community issue can be correlated to the fact that there are only 13 grocery stores to serve an approximate population of 400,000 (George, et al., 2021). The Navajo Reservation overlaps into Arizona, Colorado, New Mexico, and Utah totaling over 27,000 square miles. Due to the lack of grocery stores, many residents rely on foods from convenience stores or have to travel long distances to the nearest off reservation grocery store.



During a study conducted by the Dine Policy Institute (2014), a community based participatory research (CBPR) method was utilized to conduct a qualitative and quantitative data analysis for five communities on the Navajo Nation. The results stated that 62% of the participants had an annual income of less than \$29,999 and of that percentage, 32% had an annual income less than \$4,999 (DPI, 2014). Food assistance programs, such as Food Stamps (EBT) and Women, Infant and Children (W.I.C.), were used by 63% of the participants to aid in food security (DPI, 2014). These results signify an extremely low monthly budget for food. Even with the additional food assistance aid, participants indicated that they are still challenged with meeting the basic necessity to feed themselves on a daily basis (DPI, 2014).



In addition to the poverty level, according to the Navajo Area Indian Health Services Report (2014), there is an estimated 75,000 enrolled members diagnosed with pre-diabetes and 1 in 5 Navajo's living with a clinical diagnosis of diabetes (Noble, 2017). In comparison to the national rates, there are 29 million individuals living with diabetes, thus making 1 out of every 11 with diabetes, and an estimated 86 million with prediabetes. The Navajo Nation mortality report (2017), stated the causes of death, in both genders, for heart disease moved from third rank in the 2009 mortality report to the second leading cause of death in 2017. As for diabetes, it remained as the fourth leading cause of death on the Navajo Nation (Navajo Nation Mortality Report [NNMIR], 2017).

Top five leading causes of death from 2015 -2017, Age-Adjusted mortality rates per 100,000 population, across the five agencies of the Navajo Nation (NNMR, 2017).

Rank	Cause of Death	Chinle	Eastern	Ft. Defiance	Northern	Western
1	Unintentional Injuries	200.1	182.0	123.1	166.7	153.8
2	Heart Disease	101.5	168.5	124.7	118.7	144.1
3	Malignant Neoplasms	67.3	155.3	108.1	143.9	96.2
4	Diabetes	91.1	102.5	45.4	68.2	41.8
5	Chronic Liver Disease	35.6	104.1	58.4	75.4	31.9

Top five leading causes of death from 2015 -2017, Age-Adjusted mortality rates per 100,000 population, between the Navajo Nation versus United States (NNMR, 2017).

Rank	Cause of Death	Navajo Nation	United States
1	Unintentional Injuries	162.7	49.4
2	Heart Disease	132.9	165.0
3	Malignant Neoplasms	117.9	152.5
4	Diabetes	66.6	21.5
5	Chronic Liver Disease	64.0	10.9

METHODS

An analytical and exploratory research was the approach used by means of descriptive data gathering. The contributing data were collected from primary and secondary sources. The data collected were from published books and articles. Together the data were analyzed and interpreted into an understanding where the researcher could answer the questions purposed in the introduction of the research topic.

The analytical research was conducted from secondary resources by researchers who have discussed how limited access to grocery stores is a tribal health issue. The information collected from the analyzed research provided qualitative data to enhance the researcher's knowledge on food systems and to make connections to the burden of disease on the Navajo Nation.

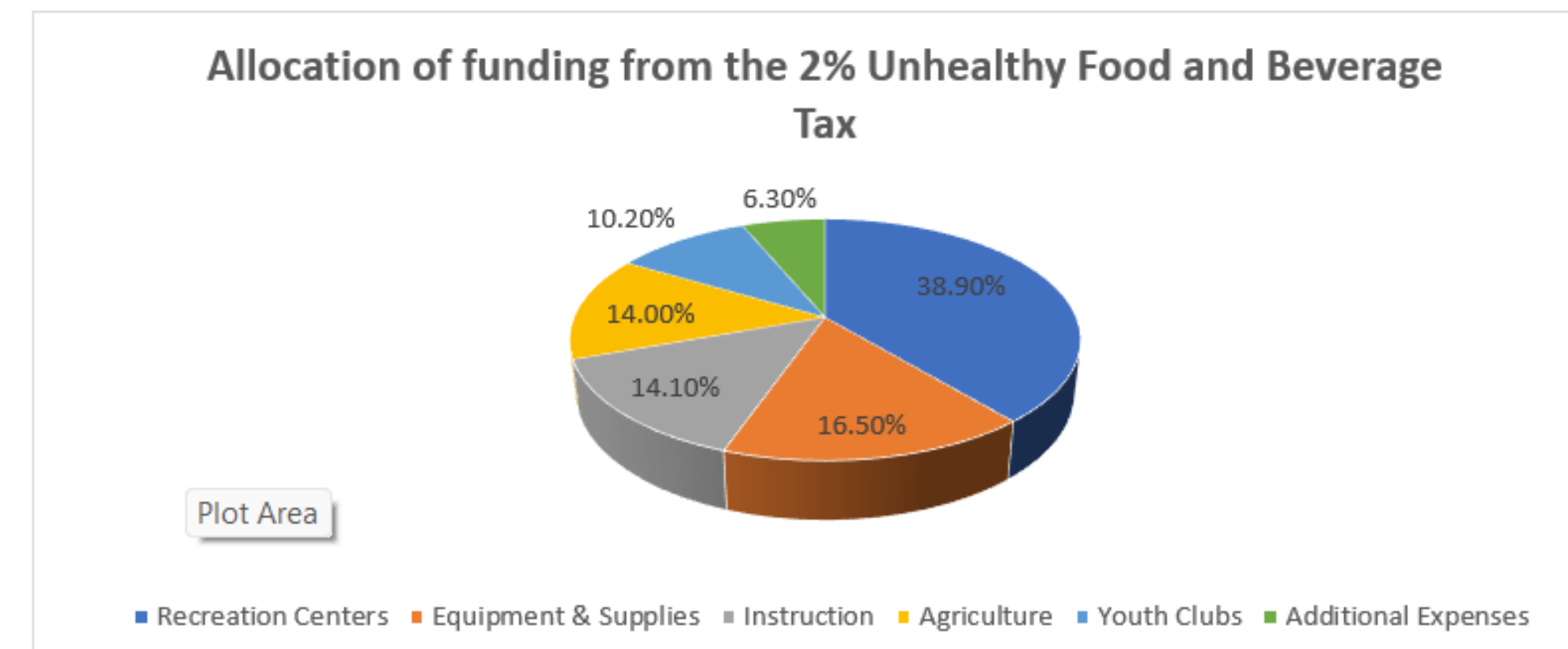
The purpose of an exploratory research approach was for the researcher to further investigate the differences in opinion from previous research conducted. The exploratory research provided a better understanding on the cultural connectedness of the AI/AN population, lack of access to grocery stores, and allocation of the HDNA funding. The exploratory research was transcribed into a literature review and used as a quantitative data collection. A quantitative research method was a way for the researcher to focus on the analysis of the data collected, by testing previous research to different theories and philosophies produced from various data collections. The authors of the published books and articles have conducted research by means of qualitative ethnography, case studies, surveys, and interviews they have conducted on their own.

FINDINGS

How can health equity be achieved? Current efforts?

In an effort to battle the rising incidence rates of diabetes, obesity, and high blood pressure, the Navajo Nation enacted the Unhealthy Food and Beverage Tax (Healthy Diné Nation Act [HDNA] of 2014, 2020). The Unhealthy Food and Beverage Tax is the first of its kind in legislation. The tax law enforces a 2% sales tax on food and non-alcoholic beverages identified as unhealthy (HDNA, 2014, 2020). The definitions of unhealthy foods and beverages are identified within the resolution.

The amount of revenue produced from the Unhealthy food and beverage tax between 2015 and 2018 was 5.8 million (Yazzie, et al., 2022). Each agency qualified for different amounts of allocated funds based on how much revenue each agency produced (Yazzie, et al., 2020). As a result, the disbursement of funds used a 50/50 formula, that allowed an equal allowance for all chapters in that agency, then distributed the remaining 50% of allocated funds based on registered voters (Yazzie, et al., 2020). So, some chapters within a specified agency, may have received more of the allocated funds based on their registered voters (Yazzie, et al., 2020). According to the details from the first disbursement, the Western agency produced the most revenue, and the least amount was produced from the Eastern Agency (Yazzie, et al., 2020).



Stakeholders of the Navajo Nation Food and Beverage Tax		
Primary	Secondary	Tertiary
Navajo Nation Tribal Government	Navajo Businesses	110 Chapters
Office of the Navajo Tax Commission	Non-Navajo Businesses	Navajo budget and Finance committee
Tax Commissioners	Navajo Area Indian Health Services	

Navajo Nation Unhealthy Food and Beverage Tax	
PROS	CONS
Funding source	Inequalities in disbursement of allocated funds
Creating awareness for disease burden on the Navajo Nation	No discussion on addressing food desert (i.e., additional grocery stores)
Exercising Tribal Sovereignty	Supporting off-reservation economy
First enacted tax law on unhealthy foods and beverages	No previous or current laws to compare data within the Federal Government

CONCLUSIONS

Proposed Health Policy Solutions

Things to consider for the Unhealthy Food and Beverage Tax in reference to the allocation of funding should make the funding source equitable across all agencies within the Navajo Nation. "Improving health for all people in all nations by promoting wellness and eliminating avoidable disease, disability, and death" (Institute of Medicine, 2009). Aiming to create equity by achieving food security for all communities across the Navajo Nation

- **Solution #1:** Build more grocery stores across the Navajo reservation
- **Solution #2:** Equally distribute the allocated funds to all 110 chapters every five years
- **Solution #3:** Create farms in each agency

Building more grocery stores on the Navajo Nation

- Support Navajo Economy
 - Creating more employment opportunities
- Decrease contribution to off-Reservation businesses
- Food Security
 - Enact supplementary policies with Navajo and Non-Navajo business to make healthier and traditional foods more accessible (DPI, 2014).
 - Contract agreements (DPI, 2014).
- Train grocery and convenience store employees to share knowledge on healthier food options and statistics on disease burden from unhealthy food consumption (DPI, 2014).

Phase 2

- Build wellness centers in each chapter community
- Provide health literacy to influence healthy eating behaviors and daily exercise
- Implement community gardens and incorporate culturally connected knowledge
- Create mobile grocery stores to travel to rural communities on a weekly basis

Risks for solution

- Community members prefer Off-Reservation grocery shopping
- Continuation of increasing incidence rates in diabetes, high blood pressure, and obesity due to poverty on the Navajo Nation.
- Unable to provide fresh fruits, vegetables, traditional foods, and quality meat products at lower costs
- No behavior changes from community members in choosing healthier food options.

REFERENCES



SCAN ME

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