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Red Lake Nation, Dietary Diseases

Dietary Diseases in the Red Lake Nation

Dietary diseases can be defined simply as medical conditions that result from a poor diet. They are considered one of the biggest issues in the world of nutrition, and are present in even the most modern and advanced countries. In a report published in 2017 in the peer reviewed medical journal the Lancet, it was found that dietary risks and factors were responsible for 22% of deaths worldwide. As dietary disease risk factors can be relatively easy to control when the proper resources are available, 22% is an unacceptable number. In an effort to reduce that number, we naturally should start where the effects of dietary diseases are felt the most. Sadly, Native American communities often feel the effects of dietary diseases more than others, as according to the American Psychological Association, Native Americans are 1.6 times more likely to be obese than caucasians, though statistics on Native American health issues are thought to be underreported. This brings us to the topic of this paper, dietary diseases in Native American communities, more specifically, the sovereign nation of Red Lake.

In the United States, there are 574 federally recognized Native American nations. While all Native American nations are important, this paper will be focused on the one nearest to me, and one where I have some firsthand knowledge, the Red Lake Nation. To understand the issues facing the Red Lake Nation, we must first understand what the nation itself is like. The Red Lake Nation is located around the scenic Upper and Lower Red Lake in northern Minnesota, and is a closed reservation, meaning all land on the reservation is owned by the tribe and not privately. This 1,259 square mile reservation is home to 5,873 people, of which 95% identify as at least partially Native American (Center of Indian Country Development, United States Census Bureau). The city of Red Lake, which is located in the Red Lake Nation, is very similar to any other small town, particularly in northern Minnesota. It contains everything you would normally expect to find in a small town in Minnesota, such as a school, a post office, and more. However, as the main city of a sovereign nation, it's more than a typical small Minnesotan town. It is home to many various government buildings, including a prison, a hospital, and even its own college, the Red Lake Nation College (RLNC), which has about 150 students enrolled in its programs. However, with the good in Red Lake, also comes the bad. According to the Center for Indian Country Development, the poverty rate in Red Lake has been reported at around 35%. This is substantially higher than the rest of Minnesota, which, according to the Minnesota Department of Health, maintains a poverty rate of about 11%. The department also points out that at least 31% of Native Americans in Minnesota live below the poverty line. An Oshkiimaajitahdah (A new path) report, which is a tribal program to promote economic growth in Red Lake reported that in the nation, around 90% of households lived in the 'low income' class, with 65% of households earning less than \$12,000 per year. Along with the high poverty rates, the Oshkiimaajitahdah report points out that the dropout rate of Red Lake Nation high school students is around 60%, which may be both a cause and result of the high poverty rate. In conclusion, the high poverty rate is a major contributing factor to the health and food issues facing the Red Lake Nation, which will be discussed later on in this paper. To help better understand what life is like in the Red Lake Nation, we also need to understand what the typical family structure looks like.

The family structure of the people of Red Lake Nation is very similar to the family structure typical in the rest of the United States. Most adolescents live in their childhood homes until they are a young adult, at which point they move out. The most major difference was noted in a report by the U.S. Department of Indian Affairs, where it was revealed that nearly half of Red Lake Nation children grow up in single parent households. Compared to the rest of Minnesota, where only 29.8% of children grow up in

single parent households, this percentage is astonishingly high. The Department of Indian Affairs cites several factors that contribute to these differences, including alcohol and drug abuse. This common absence of a parent could factor into dietary disease rates in the Red Lake Nation, through ways such as the decrease in household income or a lack in basic nutrition knowledge. Now, with a basic understanding of the Red Lake Nation, and how it compares to the U.S., we need to next understand the challenges of dietary disease facing the Red Lake Nation.

As mentioned previously, dietary diseases affect even the most well off countries, and particularly Native Americans. Exactly why dietary diseases are more prevalent in Native Americans hasn't been confirmed, but we know that the major factors affecting the Red Lake Nation are the same factors affecting any other nation or ethnic group. Most factors can be summarized by saying, like any ethnic group or country, the lifestyle lived is drastically different than in the past. The National Institute of Child Health and Human Development cites the absence of exercise, oversized food portions, a lack of healthy food, the high availability of unhealthy food, previous health conditions, medications, stress, and the poor quality of sleep as the causes of these changes, which have been felt globally as obesity and dietary disease rates rise simultaneously around the world. In the Red Lake Nation, these factors are often amplified by an individual's living conditions, which is a direct result of the poverty rate. Food insecurity is defined as "the inability to afford enough food for an active, healthy life" in an article published in the National Library of Medicine. In this case, it is generally cheaper to buy fast food or junk food, instead of paying more for healthy food, such as fruits or vegetables. Stress is most likely also increased, as the Anxiety and Depression Association of America states that "poverty causes stressors such as insecurity in food, housing, income, and more." With that said, there is some speculation that Native Americans are at a higher risk of obesity and dietary diseases than other ethnic groups for reasons other than impoverished and stressful conditions. In an article published by the National Library of Medicine, the premise of the 'thrifty gene theory' is explained. In short, the thrifty gene theory, first proposed by James V Neel in 1962, states that "Indigenous peoples are genetically predisposed to Type 2 diabetes due to the foodways of their ancestors." It was thought that Native Americans ancestors carried genetic code which caused their bodies to store body fat excessively, which would be extremely useful in times of famine. However, that same genetic code negatively affects their descendants, as it causes their bodies to store excessive amounts of body fat, therefore highly increasing the chances of said individual obese. Although this explanation could make sense in theory, it is heavily debated, and has been 'proven' true and false numerous times. As it stands now, no evidence has been found to prove the existence of the thrifty gene, though its non-existence hasn't been proven either. More research is needed to discover if the thrifty gene is a factor in certain ethnic groups obesity. With that said, no matter the cause, dietary diseases are a major problem for Native Americans and in the Red Lake Nation. As stated previously, dietary diseases are at least a factor of 22% of worldwide deaths. The most prominent effect of dietary diseases in Native Americans and Red Lake is felt through cardiovascular disease or CVD. CVD is the leading cause of death worldwide, with it accounting for 32% of deaths, according to the World Health Organization, and, in accordance with a American Heart Association (AHA) study published in 2020, CVD was also, by far, the leading cause of death for Native Americans. Further into the same AHA study, it is revealed that coronary heart disease (CHD), which is a form of CVD, occurs at a 12% higher rate in Native Americans than any other race, and that those numbers are estimated to be underreported by 21%. The CDC states that, among other risk factors, elevated blood pressure, obesity, high cholesterol levels, and diabetes contribute to CVD. These are all factors directly impacted by an individual's nutrition, which is a major issue in the Red Lake Nation. These issues usually take place at a young age, as an Indian Country Today news article, written by University of Minnesota student Hannah Geressu, points out that the obesity rate of Minnesota 10-17 year olds is 9.9%, while 22% of Native Americans in Minnesota in the same age range were considered obese. The article also goes on to point out that an individual that was obese as a child will spend, on average, \$19,000 in medical costs related to their obesity. Remember, this is a nation where 65% of households live off of \$12,000 per year. This high level of obesity continues into adulthood, where, as stated previously, Native American adults are 1.6 times more likely to be obese than

caucasian adults. While other factors may very well play a role in the poor health in the Red Lake Nation, the main cause of these issues is the poor nutrition of the nation. For a nation full of people that, according to the First Nations Development Institute, “discovered and cultivated food crops that currently account for more than 52 percent of all foods now consumed by people worldwide”, nutrition shouldn’t be an issue. The next question is, naturally, how can we fix this problem?

You might be asking yourself, why can’t Native American nations, more specifically the Red Lake Nation, grow their own food? As stated by the CEO of the Native American Agriculture Fund Janie Hipp, tribal nations, including Red Lake, run into three main issues; the lack of land, equipment, or labor. Red lake doesn’t have the barrier of land, as the nation contains “hundreds of acres of available farmland” (David Manuel), along with other advantages such as fresh fertilizer available for free from the Red Lake walleye processing plant. However, it still has the major obstacles of equipment and labor, which both are poverty related issues. Currently, there are various initiatives and programs that are aimed at improving nutrition in the Red Lake Nation, which we should understand before proposing solutions. In Red Lake, programs such as the 4 Directions Development food initiative, the Red Lake Nation’s food distribution and elderly nutrition programs, and the Red Lake organic food initiative are currently working to improve food security in the nation. First off, the 4 Directions Development food initiative offers workshops which provide the knowledge for Red Lake citizens to grow their own healthy food. In a video on the 4 Directions Development website, the director of the food initiative Micheal Van Horn discussed the initiative. He claims that agriculture is one of the most ideal industries based on the Red Lake Nations land base, and can help improve the economy drastically. Mr. Van Horn also points out that by teaching families how to grow their own food in small gardens, food budget costs would be reduced, the food would be healthier, and the knowledge of how to grow food can be passed down through generations. Touching briefly on the Red Lake Nation’s food distribution and elderly nutrition programs, they aren’t necessarily focused on improving diets to prevent dietary diseases, but do provide food for individuals in need. Finally, the Red Lake organic food initiative is run by David Manuel, and has high hopes to create a system that will, eventually, be capable of providing food to the entire community. This program aims to cultivate healthy and organic food that will be used to feed the nation, and has great potential, as Mr. Manuel states that “Red Lake has plenty of fallow farmland and tons of free, abundant natural fertilizer”. However, these programs aren’t the only solutions for the Red Lake community.

A program I believe would make a substantial difference would be a nutrition program in high school and, potentially, the college. While the 60% dropout rate in Red Lake is high and would be a challenge to overcome for this solution, I believe that at the very least, building a portion of nutritional related curriculum in elementary and middle school, as well as offering a nutrition class in high school would be extremely beneficial. Ideally, the base nutrition class in highschool would be made a graduation requirement, typically being taken by students around underclassmen years of high school. This timeframe would allow the portion of students which would eventually drop out in the later years of high school to still take this class. The class would cover basic nutrition concepts, with an emphasis on healthy nutrition habits and applicable knowledge of how to grow and prepare nutritious food. Nutrition education could then be taken to another level aside from a mandatory nutrition class in high school, by offering more advanced nutrition classes in high school and by utilizing the RLNC. RLNC currently offers two associate degree programs, with them being in liberal education and social and behavioral studies. These programs are mostly designed to transfer to four year universities after a student's time at RLNC is complete. I believe that a program similar to the sustainable ag. & food systems program offered at United Tribes Technical College (UTTC) would be extremely successful. At UTTC in Bismarck, this two year associate's degree program is offered and includes” technical training in food production, student-driven research, and co-creation of community engagement initiatives.”. At UTTC, students “participate in developing food sovereignty strategies that can be trialed and learned from.”. I believe that this program’s low cost would increase the number of students from Red Lake high school attending and eventually from other areas, which would increase the college's enrollment substantially. Students with

this degree would be prepared to tackle the food security and dietary disease issues of the Red Lake Nation head on. The only potential issues with this idea that might come up are the college having to open a new program, employing instructors both in the high school and college, and convincing students that this program would be extremely beneficial and that they would be able to make a living off of it. That leads into my second solution, starting an agricultural economy in Red Lake.

Previously mentioned programs are already attempting to work towards this, and if the nation had a solid plan and combined resources, I believe this solution could benefit the nation in more ways than just one. If a program grew large enough it could help the Red Lake Nation's issues with dietary diseases, provide food sovereignty, and generate income by selling food off the reservation. I believe this could be tied into my first solution, so we'll use a hypothetical situation here. We'll say that a high school nutrition class is mandatory for Red Lake students, with a college sustainable ag. & food systems program offered at RLNC. With some start-up money from either a government fund, investment, or money saved up from the community, the graduates of the program would be tasked with designing and implementing a farming system for healthy and organic foods. Now, the initial years of the program will be by far the most challenging, which could be helped by partnering with other Red Lake food programs. To make a profit to pay for equipment and labor, the produced food would have to be sold, inside the reservation if at all possible but potentially outside the reservation. With the profits, the program would expand food production as quickly as possible. As the program expands, both the profits and need for labor would increase. Once the program is stable (consistently earning profits and paying the program graduates employed by the program), the prospect of steady and relatively high income would entice more students to pursue an education and career in agriculture. The program, while still expanding, could focus more on feeding the nation while also still selling the produce for profit. Ideally, it would become a major part of the Red Lake economy, generating a steady stream of external income, a promise of steady income to those who studied agriculture in college, possibly offer high school students summer jobs, and the ability to feed the entire nation's population. The nation would then effectively be fed by healthy, organic food which would reduce dietary diseases in the Red Lake Nation and simultaneously lower the poverty rate which is the root of many issues. Now, this solution is the most vulnerable by far, as at any point in time the program could collapse. Issues such as not enough start-up money, lack of educated individuals, lack of profits, lack of income for employees, and bad harvests all could threaten the program. With that said, if the program was successful in accomplishing its goals, it would be one of the biggest and most important changes not just in reducing dietary diseases but in all of the Red Lake Nation. If that is too much risk for the reward, there is one other solution to help reduce dietary diseases in the Red Lake Nation.

In the Navajo Nation, which is the largest reservation in the United States, found in northern Arizona and New Mexico, a strategy was developed in an effort to reduce obesity rates. The Navajo Nation struggles with obesity and dietary diseases similarly to the Red Lake Nation, and on top of that, is located in a 'food desert', which can be defined as "a region in the United States where residents can't easily buy fresh, healthy, affordable food." (Pacific Standard). A CDC publication discussed that in 2014, the Healthy Diné Nation Act (HDNA), was passed by the Navajo tribe. This act enacted a mandatory 2% tax on 'unhealthy foods', which includes "sweetened beverages, pre packaged and non prepackaged snacks stripped of essential nutrients and high in salt, saturated fat, and sugar, including sweetened beverages, sweets, and chips and crisps." (CDC). This act was renewed in 2020, and is expected to be kept in effect. It is also important to note that the funds from this tax were given back to the community in ways such as walking trails, exercise equipment, community cleanup, etc., that the total funds from this tax from 2015 to 2019 came out to \$7.58 million, and with this act, taxes on 'healthy' foods such as fruits and vegetables were waived. The results from this tax was a "significant downward trend" in funds from the tax each year, and in other settings, taxes on 'unhealthy food' has been successful. These results lead to a conclusion that a similar tax on 'unhealthy foods', and no tax on 'healthy' food would be successful.

While this would most likely have nowhere near the impact of the first two solutions, this solution would be extremely easy to implement and take nowhere near the effort required for the first two solutions. The only downside to this is that taxing already impoverished people is generally a bad idea, which is what would be done here. With that said, I still believe that a tax on 'unhealthy' foods could be beneficial for the Red Lake Nation.

Shortly after I originally wrote and presented this paper at the MNYI, some news came out pertaining to the Red Lake Nation and their food security issue. In an article featured in the Pilot-Independent, it was stated that the Red Lake Nation has created and started implementing three new agricultural divisions. The article, published on July 13th, 2022, revealed that this new development has been in the works since 2015. According to the article, the Red Lake Nation chairman Mr. Seki Sr held several community meetings pertaining to the food security issues of the nation, and possible solutions. In 2017, these meetings helped create the Red Lake Department of Agriculture. The department created the three divisions previously mentioned, which includes a buffalo ranch, a hemp and hay farm, and community garden acres. These divisions aren't small either, with the buffalo ranch already having fenced in 280 acres of land, and another 300 acres planned to be fenced in this next year. The hemp and hay farm which will be used to feed the buffalo population of the ranch, is set to be 140 acres, and the community garden will be 8 total acres. This is a major step in the right direction for the Red Lake Nation, and it is my belief that it will make a major impact on the community.

At the end of the day, no one action is going to fix the dietary diseases issues that the Red Lake Nation is facing. It also is not the only issue that the nation is facing, however, it is an extremely serious issue which needs to be improved. We can hope the situation improves, or we can take action in fixing this crisis, one step at a time.

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