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Syria, Dietary Disease

Evaluating the Syrian Refugee Crisis as Relates to Diabetes

Food insecurity and threats causes many issues besides the immediate effects of malnutrition and famine. The Syrian Civil War, which has lasted six years, has caused widespread food insecurity, with much of the population relying on cheap, highly processed grains for their source of food. However, this food insecurity is affecting people with diabetes greatly. The lack of quality food supply combined with extremely limited access to medical help has left many Syrian civilians and displaced persons struggling to deal with their conditions.

Diabetes is an autoimmune disease that can affect anyone. It is characterized by a person's blood sugar being too high. This is caused by incorrect levels of the hormone insulin. Insulin helps glucose enter the cells from the bloodstream to be processed for energy. However, if the glucose is not able to enter your cells due to a lack of insulin, it can cause many health complications (What). There are two different, common types of diabetes, Type 1 Diabetes and Type 2 Diabetes. Type 1 Diabetes, often called Juvenile Diabetes because of its development at an early age, is the more serious of the two types. Type 1 Diabetes is when the pancreas entirely stops making insulin. This is caused by the body's misidentification of insulin producing cells. The body views the cells as foreign and destroys them. The specific cells the body destroys are called islets. These are the cells that sense glucose in the blood and release insulin to deal with and process the glucose. Type 1 Diabetes is often considered a balancing act due to the sensitive nature of the condition. A whole plethora of different factors influence blood sugar and each affects every individual differently (What). People who have Type 1 Diabetes are entirely insulin dependent and cannot survive for more than a few days without insulin. Lastly, Type 1 Diabetes is a genetic condition and is often passed through generations. Type 2 Diabetes is different from Type 1 Diabetes as it is caused by environmental factors and not genetics. It is often tied with people that are overweight and live a sedentary lifestyle. People with Type 2 Diabetes may produce their own insulin, but it is often not sufficient to account for all the glucose in the bloodstream. Common treatments for Type 2 Diabetes are exercise and a healthy diet. However, if this is not enough, doctors can also prescribe oral medication or insulin.

Type 2 Diabetes is the much more common condition than Type 1 Diabetes. However, both conditions are growing at a rapid rate. According to the American Diabetes Association, there are roughly 30 million cases of diabetes in the United States alone. Worldwide, there are an estimated 371 million cases but many have not been diagnosed (Castillo). Due to the Western lifestyle that places heavy emphasis on carbohydrates (one of the main foods that an excess can cause Type 2 Diabetes), both conditions are expected to grow in numbers. It is estimated that by the year 2030, there will be 552 million people worldwide with some form of diabetes (Catillo).

You may be wondering how food, or food scarcity, relates to diabetes. However, the two are greatly connected, with many doctors concluding that diet may make the largest impact on how

your diabetes is managed. One of the first things doctors teach a patient after being diagnosed is how to count

carbohydrates. Carbohydrates are sugars, starches, and fibers found in many types of food (Szalay). Carbohydrates are common throughout most foods people eat today. In fact, most staples of people's diets are loaded with carbohydrates (Szalay). Foods such as fruits, pastas, bread, and potatoes all have high contents of carbohydrates while many other foods such as dairy and vegetables contain lesser amounts of carbohydrates as well. In fact, the most commonly consumed foods that do not have any carbohydrates are meats and eggs. As previously stated, many doctors consider diet an important part of managing diabetes. Foods with high numbers of carbohydrates should generally be avoided. Also, many starches, such as potatoes, can cause issues due to the way the human body breaks these down. However, common knowledge tells us that eating healthier is often much more expensive than eating poorly. Many ready-to-eat snacks and meals are extremely cheap at local grocery stores, but are quite bad for diabetics to eat. In contrast, healthy options such as vegetables, fresh meat, and controlled amounts of fruit can be extremely expensive and difficult to get in impoverished countries. People like the Syrian population, who has been living under a civil war for the last six years often have issues dealing with diabetes due to the lack of available healthy foods combined with lack of medical help.

The Syrian Civil War has had detrimental effects on the country's hospitals and aid workers. Due to constant fighting, many hospitals have been shut down. There has been constant fightings in cities for many years, jeopardizing hospitals. This lack of safety has caused many of the hospitals to shut down. This threat has worsened to the point that many hospitals have been forced to relocate into deep caves or fortified basements to attempt to remain safe from the bombings and attacks (Allen-Ebrahimian). Since 2011, 454 airstrikes have targeted 310 hospitals (Allen-Ebrahimian). Since the Russian involvement in the war, attacks on hospitals and medical staff have increased greatly. There have even been reports of certain hospitals being attacked roughly once every twenty-nine hours (Allen-Ebrahimian). This is caused by the total attack on civilian life in rebel-held areas. This attack in turn has both displaced many people causing a refugee crisis and made the lives of diabetics living in this war-torn country extremely difficult.

According to the World Health Organization, one in ten Syrians have diabetes and it is now in the top ten causes of death and disability in Syria (Grodzovsky). This high number of deaths and disabilities is due to the lack of ability to manage good blood sugar levels and a lack of education about diabetes. Before the conflict in Syria grew to the magnitude we see now, there were a wide range of clinics specifically designed to help educate and treat diabetes. Due to the conflict, the support system and infrastructure for diabetics is no longer in place. This has resulted in diabetics not having the proper care or support needed to deal well with their conditions. Instead, they are trying to deal with their conditions anyway necessary.

One logical step that a diabetic would take is to cut carbohydrates out of their diets. Many diabetics in the developed world engage in this approach because it is recommended and logical. If a person is having blood sugar issues, it makes logical sense to cut out what causes the issues in the first place. An approach like this would require the diabetic to consume more meats and eggs as both have very few amounts of carbohydrates. Along with meats and eggs, controlled amounts of fresh and healthy vegetables and fruits added for nutritional value. However,

carbohydrate heavy foods such as breads, pastas, and rices should be avoided due to their high content of carbohydrates. However, this is often difficult for those refugees as Syria lacks these necessary fresh foods to maintain a healthy diabetic lifestyle. If these foods are available, they may be too expensive. This leads to bad circumstances where a diabetic may not have the necessary help from medical staff to treat their diabetes and the best way of dealing with these circumstances is often unattainable due to food insecurity.

Another issue facing these diabetics in Syria is the lack of available insulin and other medications. Many factories that formerly produced these medications have been shut down due to the war. Medications, such as insulin, previously were given out by the government for free. Now, many people are having to turn to the black market to find supplies of these medications (An). This approach is extremely dangerous as there is no way to tell if the medication is truly authentic or expired not to mention extremely expensive. Dr. Baraket, a doctor who has worked extensively in Syria, has estimated that as many as 80% of the people that need insulin are struggling to get it. Also, due to the war, power has been shut down completely in some areas and is extremely sporadic in others. This causes many issues for those who can afford and get insulin because of insulins sensitivity to temperatures. If insulin becomes too warm, bacteria will begin growing in the insulin. This can make the insulin extremely dangerous and can even be fatal to the user.

Due to the war, many Syrians have fled Syria to other countries as refugees. These refugees flee to wherever is possible, often attempting daring escapes to reach safety. This has caused an influx in the refugee camps throughout Africa, Southwest Asia, and Europe. These refugee camps have quickly become overcrowded and lack the necessary funds to continue their operation of giving quality care to those who need it. Refugee camps often have extremely poor sanitation and struggle to provide good medical services. Like the Syrians living in Syria currently during the conflict, Syrian diabetic refugees are having an extremely difficult time getting healthy foods to help maintain good control of their condition. There is a lack of fresh healthy foods and many have to resort to eating carbohydrate intense foods. Many refugees cannot follow doctors orders and instructions due to this lack of healthy foods (Lebanon). These refugee camps lack the necessary food security to get safe, healthy foods to their refugees.

Another issue facing Syrian diabetics in refugee camps is lack of available medicine. There is a very large number of refugees that require medical attention and many that require constant medications. However, these refugee camps often do not have sufficient funds to have an adequate staff and lack the infrastructure and funds to bring in all of the life saving medicine that is needed by refugees. There have been many instances when organizations and groups raise money to send supplies to these refugees. Due to the lack of insulin and medication, and the lack of healthy food, diabetics suffer greatly.

There have been various solutions to this issue. The first solution presented is increasing the number of home gardens in Syria. Before the war broke out, many families planted gardens to provide both healthy nutrients and fresh foods to the owners. These gardens were quite common throughout many parts of the country before the war (Revived). However, the war caused many to stop gardening for numerous reasons. One reason was that supplies for gardening were difficult to come by and the cost ended up being to expensive. USAID attempted to reverse this

trend in 2017 by distributing vouchers to be used to purchase gardening equipment. They also educated those receiving these vouchers in numerous areas. They were taught many different important agricultural practices and techniques to help increase yield, such as irrigation. When the first crops were harvested in September of 2017, the results were promising (Revived). Those families struggling with hunger had an alternative source of food. And those with diabetes greatly benefited. Due to the healthy, fresh nature of the food harvested, they required less insulin in many cases. This both helped improve their blood sugar levels to acceptable ranges and their insulin has often been seen to be used more efficiently by their bodies.

Another solution that has been tested is giving food vouchers and donations of insulin to refugees to help meet the difference between a healthy diet and needed medication. These donations often include blankets and bags of grain or rice. However, refugees often get surplus amounts of these items, eliminating the effectiveness of these donations. Also, grain and rice are not good for diabetics due to their high carbohydrate contents. For example, nearly 70% of Syrian refugees in Iraq sold rice (MacBride). These donations do not often help diabetics greatly. Insulin is donated, but the system for supporting diabetics (and other refugees) through donations is not sustainable.

My proposed solution is giving refugees money instead of food vouchers and donations. When you give a refugee money, you complete multiple different objectives at the same time. First, you provide help to those who need it. However, you address their specific needs more than general donations and food vouchers do. With cash, the recipients are able to purchase what they specifically need. They could buy things such as shoes and backpacks. Or, if they are diabetic, could be needed medications. There are multiple different solutions to the issue of medications. The first is, if there is a reliable place to consistently get insulin, to increase the amount of money given each month to allow them to purchase it themselves when they require it. Another solution would be to give them the medication at a certain time when they need it. Providing the persons of need with the extra money for medication would put money back into the economy. The Syrian Civil War has destroyed much of Syria's former economy and attempting to stimulate what is left would provide great benefits when the war is over and the economy is trying to rebuild. This could keep the businesses alive. Giving refugees money could also allow them to purchase healthier foods whether they are receiving an increased budget for insulin or not. The combined factors of insulin and better foods would allow many diabetics to properly care for themselves. Andrew Harper put the basic idea of given cash as aid to refugees to the test in the Zaatari refugee camp in Jordan (MacBride). The effectiveness of this experiment is still being studied, but the impact so far has been good. After the refugees who received cash left the camp, many have been seen appearing to get some semblance of steadiness back into their lives and have been seen starting to sustain for themselves (MacBride). Overall, this solution has been quite successful so far, and with some minor tweaks and adjustments, could prove extremely effective in helping diabetics in Syria in future years.

When giving the money out, certain circumstances would need to be considered. First of all, ideally the money would be given out in two different forms. The goal would be to provide a card with a certain amount of money and cash. With the card, you would be able to put limits on what they spend money on. Ideally, you have a card with a certain amount of money for food, clothing, medicine, and housing. This would ensure that some of the money went for human

necessities. With the cash, the recipients would be able to do what they want with it and you trust that they use this money for good. As we have previously seen, this would greatly help the people. Another circumstance you would have to take into consideration is who is receiving how much. A single person does not need as much as a family of five and this would be considered. There would be a set bracket of how much each recipient would receive based off the number of people in the family. There would also be special considerations, like if one adult could not work or medical conditions existed. Another option would be to offer families less than the bracket says each month in exchange with assistance in developing a garden. This would help save the nonprofit save money will provide citizens with an access to nutritious meal. With these circumstances in place, you would be able to accommodate many needs and help the citizens.

There are multiple ways to raise the funds required. The first step I would take is making this solution a nonprofit company. When this occurs, multiple paths to helping open up. The first thing to do would be to try to find corporate partners and sponsors. According to Double the Donations, 65% of Fortune 500 companies donate to nonprofits (Fritz). Likewise, it would be possible to partners with different foundations. Examples of the foundations would be the Bill and Melinda Gates Foundation, the Ford Foundation, the W.K. Kellogg Foundation. If none of these paths worked, last efforts could be to try to pair with the World Health Foundation or the United Nations to make this a reality. Likewise, there are many grants that nonprofits are able to apply for to help raise funds. Donations from people would also be a possible source of income, though not a source that should be the primary source of funding. According to Giving USA, more than 290 billion was donated by individuals in 2017 alone (51). Though this is spread throughout many organizations, this cash flow does exist. The difficulty would be getting support from the general public. Many people view diabetes as a disease that is international treated. This is not the case. Effective campaigning could be used to raise awareness. Receiving anything from the Syrian government would also likely not happen because due to the war. With all of these different options, along with other potential opportunities, the nonprofit would be able to have enough funds to make a difference.

Ultimately, the issue is that diabetics in Syria and Syrian refugees have been unable to properly take care of themselves. Due to the Syrian Civil War, these refugees have been unable to get consistent access to medicine. When they seek out different ways to help mitigate the effects of not having insulin such as healthy eating, this is unattainable as well. These issues need to be corrected immediately. If the diabetics due not die in the short-term due to diabetic-related issues, they will become an extreme cost to the healthcare system in future years due to long-term complications. The best way to address this issue is to provide those in need with money so they can not only purchase their own medicine, but also be able to buy healthy foods to get their condition under control.

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