Type 2 Diabetes

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Diabetes is one of many diseases that you hear more commonly in the world. Diabetes is a disease that involves the malfunction of insulin. Insulin is an important storage hormone that helps maintain normal glucose levels in the body. Without an adequate amount of insulin in the body, it can lead to complications. In diabetes, people have an increased level of glucose. People who have diabetes usually present with early symptoms of polyuria, polyphagia, and polydipsia. Polyuria means that there's frequent urination occurring. Polyphagia is an increase in appetite and polydipsia is an increase in thirst. There are two different types of diabetes. Type 1 diabetes is an autoimmune disorder that causes the antibodies in your body to attack insulin. Type 2 diabetes is caused by your body not producing enough insulin or your body not knowing how to use it (Dickinson et al., 2022, pp. 1110). With type 1 Diabetes, it's only manageable with insulin. With Type 2 Diabetes it can be managed with insulin, oral medications, and lifestyle modification. Type 2 diabetes is the most common type of diabetes. The diagnosis of type 2 diabetes is increasing over the year, it's important to educate and identify risk factors that contribute to it.

Statement of the Problem

According to CDC "More than 37 million Americans have diabetes (about 1 in 10), and approximately 90-95% of them have type 2 diabetes" (CDC, 2022). Type 2 diabetes is a disease that can be preventable. There is a variety of risk factors that can lead to the diagnosis of type 2 diabetes. Risk factors include obesity, elderly, and having a family history of type 2 diabetes. The most common cause of diabetes is obesity. According to the *National Library of Medicine* it states, "Being overweight or obese is a key modifiable risk factor in the development of diabetes, with 90 % of patients with diabetes being classified as overweight or obese" (Grant et al., 2021).

Obesity is attributed from having a sedentary lifestyle and not having a healthy diet. Obesity can be preventable. It's important for the patient to be very adherent with diet recommendations and exercise. There are variety of diagnostic testing that can be done to diagnose type 2 diabetes, but there's one that helps with preventing the diagnosis. This is the Hemoglobin A1c testing. The Hemoglobin A1c is a test that shows the average control of glucose level in a 3-month period. The Hemoglobin A1c notifies healthcare providers if the patient may be at risk for developing type 2 diabetes. Those that are at risk are called pre-diabetic. In the pre-diabetic stage, dietary changes and exercise are enforced. If no changes are made, this may lead to the diagnosis of type 2 diabetes. Maintaining a healthy lifestyle not only contributes to the prevention of type 2 diabetes but also contributes to the management of type 2 diabetes. If people who are already diagnosed with type 2 diabetes are not being compliant with taking their medications or changing their lifestyle, it can lead to other serious health complications. One main complication seen in type 2 diabetes is peripheral neuropathy. Peripheral neuropathy occurs when the person's glucose level is extremely elevated. When the glucose level is extremely elevated it causes the person to have nerve damage. When nerve damage occurs, people with type 2 diabetes lose sensation. When sensations are lost, patients can't determine if an injury is present. Since injury isn't noticeable it can lead to infection and sometimes amputation. Another complication of type 2 diabetes is delayed wound healing, and this is because of the uncontrol glucose level. Decrease wound healing is being more evident in hospital settings. As more patients with wound complications are admitted, it means that more nurses are needed to provide care. Currently right now in the healthcare settings, there are less nursing staff available to assist in the care of these patients. The more patients that are added, the less time that these nurses are able to care for these patients. Not only is this a problem, but also these patients may take up beds from those

who need them the most. Prevention of these complications is essential. It's the nurse's responsibility to provide good education and make sure these patients understand the importance of taking their medication.

Risk Reduction/Treatment of the Problem

Preventing type 2 diabetes and its complications is an essential component of managing type 2 diabetes. According to the *Nursing Reference Center Plus* it states, "The ADA recommends that patients with prediabetes participate in a program with the goal of weight loss of 7% of body weight and an increase in physical activity to at least 150 minutes per week of moderate activity (e.g., walking)" (Herring & Parks, 2021). Since obesity is the main risk factor for type 2 diabetes, losing weight and making healthier lifestyle changes, can help with the reduction of it. For those that are at greater risk for Type 2 Diabetes, it's important for them to get frequent screenings. According to the *National Library of Medicine* it mentions that repeating screening is recommended for those whose hemoglobin is greater than 6.5, whose fasting blood sugar is greater than 126 or if their 2-h oral glucose is greater than 200 (Bowen et al., 2018). These testing are very helpful in identifying if the person is at risk for developing type 2 diabetes. If the clinical practices can detect that they are becoming at risk for developing type 2 diabetes, they are going to recommend that person to make lifestyle changes. The hemoglobin A1c is not only used to diagnose prediabetic but it also assists with compliance to those who are already diagnosed with type 2 diabetes. With type 2 diabetes it's important for these patients to take their medication. If these patients aren't taking their medication, health complications can arise. By using the Hemoglobin A1c to measure compliance, these complications can be reduced. Being compliant with medications, exercise, and healthy eating is important for someone who is diagnosed with type 2 diabetes. Not only does the Hemoglobin A1c contribute to prevention or

compliance but it also allows the healthcare provider with information if changes are needed in the person's medication. Different types of medications can be given to treat type 2 diabetes. With taking the appropriate medication, type 2 diabetes is best control. Examples of medications that the patient might take include insulin and oral agents, like biguanides and sulfonylureas. These medications will prevent hyperglycemia and keep the blood sugar within normal range. Oftentimes, the best treatment for type 2 diabetes is prevention. Following preventative measures such as weight loss, exercise, and following a carb-counted diet can reduce the chance of developing type 2 diabetes. When people are making positive lifestyle choices like being adherent to their medications and following diet recommendations, fewer complications are going to occur. Not only will the complications decrease but so will the population of type 2 diabetes.

Planning of Teaching Content

Educating the population about what type 2 diabetes is and its prevention is important. It's important for the population to know if they have a risk of developing it. By the end of the health fair, I would expect the learner to identify the differences between the 3Ps which are polyuria, polyphagia, and polydipsia. These symptoms are important for the learners to be aware of because these are the early symptoms that present in people who have type 2 diabetes. I would also expect the learner to identify some risk factors leading to type 2 diabetes and identify if they have any of those risks. With people who already diagnose with type 2 diabetes, I would expect them to verbalize different ways on how to manage their type 2 diabetes. A teaching method that I'm planning to do is a matching game. With the matching game, the patient will match the 3Ps with their definition and will show a teach-back method. For those who are already diagnosed with type 2 diabetes, understanding how to check their blood sugar, and administering insulin is

important. Especially if they use a glucometer. I would allow them to demonstrate to me what they know on checking blood sugars and on how to apply the number of glucose to the amount of insulin needed by using the sliding scale method. The tools that I'm planning to use is a trifold and brochures. For the trifold and brochure, I'm planning to put statistics, risk factors, complications, prevention, and the management of type 2 diabetes. Making sure that the learner is aware of all these things can prevent the increase in the percentage of type 2 diabetes.

Conclusion

Type 2 diabetes is a disease that is associated with insulin resistance, which causes to have an increase in glucose levels. When symptoms of type 2 diabetes are present, preventing the diagnosis of type 2 diabetes is important. Not only is preventing type 2 diabetes important but so is managing type 2 diabetes in people who have already been diagnosed. Since obesity is the main risk factor for type 2 diabetes, evidence-based practices are recommending weight loss and early screening. It's a big nursing responsibility to provide education to the population about what type 2 diabetes is, how it affects someone's health, and what actions to take to prevent it from occurring. Responsibility also includes those that already been diagnosed with type 2 diabetes. Prevention for severe complications like peripheral neuropathy and decrease wound healing is essential. This provides better health to those who are diabetic and allows them to maintain a somewhat healthy life. During the health fair, my main goal is to make sure the learner knows that type 2 diabetes can be preventable and manageable. By teaching the information to the learner, the learner should be aware of what preventative measures they should take and what life modifications they need to change. With type 2 diabetes the essential key is prevention.

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