

# Raising awareness of diabetes through a community nurse nursing essay



**ASSIGN  
BUSTER**

This paper is written to spot a light on the importance of the community nurse role in preventing the illness or their complication and promoting the overall health for both healthy and sick population, discussing diabetes that affect large number of the population and having many complications , which have consequences on the quality of the life for the patient as well as the community, depending on the case of 24 years old male patient who visited a community health care center, this patient was having history of diabetes mellitus type 2 since two years and he is on oral hypoglycemic agents Metformin 500 milligrams three times per day and Rosiglitazone once. He presented to the center complaining of small unhealed wound on his right big toe after stepping on a nail while walking out door one week ago. On assessment the big toe was swollen and red, but not infected or deep. Patient is obese with BMI of 32. Blood sugar test was 14mmol (252mg/dl). Patient stated that he is not using his medication regularly and not doing the regular checking or monitoring of his blood sugar. He was instructed to buy a glucose checking machine but he totally ignored that , though he has the ability to do so .

He said that he knows that he is diabetic and that he will never be cured, so no use of checking or following the instruction of the health care providers. He is also a smoker, his blood pressure was 145/99mmhg and from his medical records the last HbA1c or the glycosylated hemoglobin was 8% which means uncontrolled blood glucose for the last three months.

What is Diabetes?

Diabetes mellitus refers to a group of clinical syndromes that is characterized by abnormal carbohydrate, fat and protein metabolism that leads to excessive levels of glucose in the blood (hyperglycemia).

The cause of the hyperglycemia is the defect in the pancreatic insulin secretion, insulin sensitivity at cellular level or both. Beta cells that is located in the pancreas secrete insulin which plays an important role in lowering the blood sugar or glucose by acting as a protein transporter of glucose from the blood stream into the cells and is used then as a source of energy. In addition to that, insulin promotes free fatty acids uptake into the adipose tissue and the amino acid uptake for protein synthesis. So under the influence of insulin, glucose is stored by the liver and muscle cells as glycogen and by that fat tissue is deposited and muscle tissue is built.

In the normal conditions insulin is released continuously in small portions for twenty four hours per day and that is the basal supply of insulin, but with the increase of glucose in the plasma after eating a meal, pancreas is triggered to release a post prandial so that the body's cells can benefit from the ingested energy source (Copstead & Banaski 2010).

Most cases of diabetes fall into one of two categories as explained by Casey, (2011). Type 1 of diabetes which counts or takes place in less than 10% of all cases of diabetes and type 2 diabetes, but still there are three other types which are metabolic syndrome, pre diabetes and gestational diabetes. Type 2 diabetes mellitus (DM2) occurs mostly in younger population and it's a result of rapid permanent destructions of the beta cells at the pancreas.

It has been identified that the genetic predisposition with an environmental trigger is the cause of type one. Type two diabetes mellitus, the predominant type of diabetes was known as adult onset diabetes because it was seen in older adult, though it was started to be diagnosed increasingly in younger age and early adolescents. Diabetes mellitus patients still has insulin, but due insulin resistance at the tissue cell level, blood glucose rise in both fasting and postprandial test (Molinaro, 2011)

#### Statistics:

Diabetes mellitus (DM) is predominantly a disease of European people and is less prevalent among African, Asian and other non European, while in type two diabetes mellitus is more in non European population. Type two diabetes mellitus cases are more than 90% of all the diabetes in the world, and cases are rising with about 300 million persons expected to have diabetes by 2025 all over the world. In Australia, Aus Diad data show 100 000 people develop diabetes annually 7. 5% of them over 25 years and 16% over 65 while in UK, over 1. 4 million have DM(Dunning, 2009)

#### Diabetic Foot:

Diabetic foot ulcer is a result of multiple contributing causes, but the main underlying causes are peripheral neuropathy and ischemia which result from peripheral vascular disease as studied by Pendsey, (2010).

Neuropathy is nerve degeneration that often begins early with the diabetic patients, but it can take years till symptoms are seen. These symptoms are usually bilateral and systematic and include tingling sensations in the fingers

and toes, pain suppression of reflexes and loss of sensation. The nerve damage is directly due to sustained hyperglycemia that may cause injury to the capillaries that supply the nerve. Innervations of the intrinsic foot muscles damage

Results in an imbalance between flexion and extension of the affected foot which lead to anatomic foot deformation and this will create abnormal bony prominences and pressure points. The result of that will be skin break down and ulceration. autonomic neuropathy will also cause decrease in the sweating, so the skins become dry and at risk for break down and causing fissures risk to have infections , with the loss of sensation the ulceration will be more and if trauma occurs, patients will not detect the wound as early as possible, so the wound progresses. Combination of motor, autonomic and sensory neuropathies will results in Charcot arthropathy which is change in the arches of the feet due to muscle and joint laxity (Fitzgerald, Mills, Joseph & Armstrong, 2009).

Diabetic neuropathy are reported more than 50%of patients have had type two diabetes mellitus for more than fifteen years and good blood sugar control decreases this incidence. Additionally evidence proved that early detection of the neuropathy leads to reduction in foot complication ( Childs, Cypress& Spollett, 2005) .

Peripheral vascular disease is another cause for diabetic foot ulcer; it is one of the long term complication of diabetes due to macro vascular damage, which is a combination of hyperglycemia and hyper lipidemia.

Assessment Intervention of Community Nurse

<https://assignbuster.com/raising-awareness-of-diabetes-through-a-community-nurse-nursing-essay/>

Assess for the risk factors for development of foot problems in the diabetic people. These factors include continually high blood glucose, smoking, obesity, lack of or inadequate foot care.

Nurse also needs also to assess the patient knowledge of foot care and peripheral pulses plus capillary refill to see the adequacy of circulation. Assessment phase may also include full history about the disease duration, management, nutritional status and socio economic status.

Smoking cessation can be considered as primary prevention if the diabetic person is not having any cardiovascular or other complication or diseases. Quitting smoking decreases the risk of developing many of these conditions; because smoking is associated with reduction of healthy life years, and many studies suggested that smoking do increases the risk of glucose intolerance, impaired fasting glucose and type two diabetes plus peripheral vascular disease that can lead to the development of diabetic foot.

So in the beginning of the treatment the nurse should ask about history of smoking and current habits then document the information at every visits and offer advises, counseling and willingness to support in non judgmental way. Assess the patient interest in quitting smoking and whether the patient has tried to quit before, if so what factors that contributed to the failure of quitting. To explain well the importance of stopping smoking in regular basis with new information always , these information can be about smoking risks and quitting programs.

Nursing intervention include counseling and education about the need about the need for strict glucose monitoring , sign and symptoms of complication, <https://assignbuster.com/raising-awareness-of-diabetes-through-a-community-nurse-nursing-essay/>

encouraging life style modification to have better outcome . nurse should enforce on the message that disease is under control as long the patient is following instructions that aim in reaching the target goal which HbA1 less than 7%, pre-prandial glucose of 90-130 mg/dl, post prandial glucose of less than 180 mg /dl and blood pressure of less than 130/90 mmhg. Blood lipids should be measured and maintained to prevent further blood vessels injuries. Exercise is a very important factor that can control blood glucose and lipids, it improves the circulation as well, so instructing the patient to exercise on regular basis his overall condition, but some important consideration should be taken with neuropathy and foot problem cases and physiologist should be consulted first to create individualized exercise, because in this case the patient should chose a limit weight bearing exercise. Attention should be paid to avoid hypoglycemia during exercise by having a carbohydrate snacks before that and have a quick source and access of sugar (Williams & Hopper, 2007).

Special attention is needed for the foot care as the foot complication from diabetes are one of the main causes of amputation, and it has a great impact on physical and psychological condition as explained by Alwahbi (2010), foot problems are the most frequent hospital admission in most diabetic cases, therefore diabetic patient should be taught to keep the feet clean and dry, washing them with mild soap daily and to dry them with care especially between toes. Family members can also be involved in helping to inspect the feet especially the area that patient can't reach or visualize, or we can teach the patient how to use mirror to inspect for cuts, swollen areas and to emphasize wearing well fitting, comfortable medical shoes. Nurse can help

the patient to be seen by podiatrist to treat corn, calluses and foot sores so more complication can be prevented. Teaching clients to avoid standing on legs dependent for long periods or crossing the legs while sitting are essential due to their effects on blood circulation.

Fitzner et al., (2008) also discussed the telephone based diabetic care as an effective way to handle the increasing number of diabetic cases that will benefit from counseling on line where they are encouraged to call at any time of the day and by that all the patients concerns and questions will be answered . This method showed better self management and self empowerment with an obvious improvement in health outcomes and decrease the cost of caring for such cases in the hospital settings.

Role of community nurse with diabetic patients is very important in preventing the complication and promoting overall health. Diabetes is a disease that can't be cured but it can be controlled, so the care of the patient with diabetes includes regulating the blood glucose level by diet, exercise, hypoglycemic agent, preventing infection and monitoring blood and urine glucose level. The main goal again is enforcing the individual self management, which makes education of the patients an important part of the management.

Case finding and screening, also is another role played by the community health centers by finding suspected diabetic patients who are visiting the center and recognize the pre-diabetic phase patients who are for example obese patient especially the central or abdominal obesity with family history of diabetes mellitus (Peter, et al., 2007).



To promote wellness nurse in community should stimulate the community members to adapt healthy behavior, motivate them to cope with daily stresses and raise their awareness. Those who have chronic disease should be assured and supported to prevent further complication, and those who are healthy to promote positive concepts. Empowering the patient and their families is an important role of community nurse(Funnel, Koutoukidis, lowrence, 2009)

In conclusion, American Diabetes Association stressed on changing lifestyle habits for people who are at risk, so the nurse in the community health setting can provide educational session or classes for group of clients who visits the center, even for the healthy family member those patients can formulate support groups can share experiences, information and relay the message to others, in addition to reducing stress that in turn result in better health.