



## COMMENTARY

## More Than Just 1200 Foot Care Nurses in America are Needed for 30.3 Million People Who Have Diabetes

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“Every 20 seconds a lower limb is amputated due to diabetes, 85% of all amputations are caused by a foot ulcer, and 12% of the world’s health budget is spent on diabetes. \$673,000,000,000 per year” [1]. It will soon be 2020. It was predicted that, “The number of adults with diabetes in the world will rise from 135 million in 1995 to 300 million in the year 2025” [2]. The year 2025 is just six years from now. Data from the World Health Organization (WHO) stated that the number of people with diabetes has risen from 108 million in 1980 to 422 million in 2014. In eleven years from now, until 2025, what will that number really be? This rapid increase in numbers before 2025 demonstrate that diabetes is now a pandemic.

Dr. Margaret Chan [3] pointed out the global burden of diabetes and that world leaders have committed to reducing the burden of diabetes as one of four priority noncommunicable diseases. The World Health Organization defines diabetes as a chronic, and largely preventable, disease that can lead to cardiovascular disease, blindness, kidney failure, loss of limbs and loss of life. It causes suffering and hardship for the approximately 60 million people in the European Region currently living with the disease, while also straining the Region’s economies and health systems. Regarding the diagnosis of diabetes, are we prepared for these changes?

What is a diabetic foot ulcer? A diabetic foot ulcer is defined by the World health Organization as “The foot of a diabetic patient that has the potential risk of pathologic consequences, including infection, ulceration, and/or destruction of deep tissues associated

with neurological abnormalities, various degrees of peripheral vascular diseases and/or metabolic complications of diabetes in lower limb”. Diabetic foot ulcers are “one of the most serious and disabling complication of diabetes, with 25% of patients with diabetes, developing them in their lifetime, and 15% having to undergo hospitalization and lower extremity amputations” [4]. It is public knowledge that heart disease, stroke, and cancer are well known as health disparities. Information about foot care may not be part of the educational intervention. There are some community activities, such as health fairs, and church picnics that focus on providing information to the local community, but often that information does not include diabetic foot care. It is because of the research conducted by the international community that the dire consequences of the diabetic foot are now widely published. It is time now for the findings from the international researchers to be carried out to the community regarding preventive care.

According to Jeffcoate, Vileikyte, Boyko, Armstrong and Boulton, [5], “Despite considerable advances made over the last 25 years, diabetic foot ulcers (DFUs) continue to present a very considerable health care burden-one that is widely unappreciated”. These authors also pointed out the enormous cost to health care services for DFUs and that diabetic foot care has been traditionally neglected. In a recent exploratory study conducted by Bonner, Guidry, and Jackson [6] about the diabetic foot, one of their findings was that insurance status had considerable influence on extended care knowledge. The diabetic foot is well known among many international researchers but not as well known



**Citation:** Sharpe JE (2019) More Than Just 1200 Foot Care Nurses in America are Needed for 30.3 Million People Who Have Diabetes. Int J Diabetes Clin Res 6:111. doi.org/10.23937/2377-3634/1410111

**Accepted:** September 21, 2019; **Published:** September 23, 2019

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among those who have the disease, the patients. The application of research findings needs to be applied to communities worldwide. One of the most feared complications of diabetes is amputation [7].

There is an outstanding group of registered nurses who specialized in the care of wounds and working with DFUs. Since there are only about 1200 of them in the US and 30.3 million people who have diabetes, these nurses need some help and that help can come from the community. Looking at the increasing number of people with diabetes and their need to know preventive care information, there is no time better than this for community organizing and community building for health and wellness. One does not have to be a registered nurse in teaching a person how to keep their feet clean-some people do not realize the importance of also keeping between the toes not only clean, but also dry. Diabetic patients need preventive knowledge in care of their feet, before ulcers start, preventive care. However, there is an increase amount of research that is being conducted internationally that now focuses on diabetic foot ulcers. Perhaps, this surge is due to the fact that the World Health Organization projects that diabetes will be the 7<sup>th</sup> leading cause of death in 2030. Most important, research supports the fact that diabetic persons do not have to lose their life because of a DFU. Research has supported the steady cry for preventive care.

It is time for action to service more newly diagnosed diabetic persons in our communities that have no insurance or who are underinsured. Insurance does not pay for everything pertaining to health care. Despite the international research done and being done by researchers, the knowledge and the implementation of the findings for the people with the disease seems to stop with a select few. Pertaining to diabetes, educational interventions must start as soon as a diabetic person is diagnosed. We need to prevent foot ulcers. There has been adequate international research already performed to state the risk factors and the reasons that support preventive measures. Community activists who care about those in their community who have health disparities must continue to give and to assist. Promoting health requires more than just handing out educational pamphlets to be read and a 2-minute talk. Somehow, it does not seem that the diabetic patient with potentials for foot ulcers are receiving as much attention as other disparities, despite calls from the review of literature for more patient educational interventions. There is a very strong need to increase educational interventions before the foot ulcer develops. People need their legs to walk and to live, not to become leg amputation statistics. For example, Baig and others [8], in *Medical Care Research and Review* stated that, "Differences in rates of diabetes-related lower extremity amputations represent one of the lar-

gest and most persistent health disparities found for African Americans and Hispanics compared with Whites in the United States, p. 1635". In the *International Journal for Equity in Health*, Bidulescu and others (2017) wrote this article, "Educational health disparities in hypertension and diabetes mellitus among African Descent populations in the Caribbean and the USA: a comparative analysis from the Spanish town cohort (Jamaica) and the Jackson heart study (USA)." They explored the inequalities in hypertension and diabetes prevalence between African-descent populations with different levels of educational attainment in Jamaica and in the United States. Interesting to note, in the short review of about 67 journal articles, is the number of international authors who also have written about the diabetic foot, foot ulcers and the importance of early interventions to prevent foot ulcers. Such authors represent countries as the following: Indonesia, India, Saudi Arabia, Denmark, the United States (especially California), Japan, Bucharest, Craiova, Jamaica, Taiwan, Iran, Canada, United Kingdom, Spain, Khyber Pakhtunkhwa, China, Nigeria, South Africa, and Pakistan.

So, the findings from all these researchers, representing many countries, are concluding the same about diabetic foot ulcers. There is a need for preventive care. Diabetic care is more than teaching the diabetic person about how to take their medications or how to administer their insulin injection, and information about meal planning. Preventive foot care must be included. It has been very difficult for families to see their loved ones lose a limb and eventually lose their life to diabetes. Having diabetes does not have to be a death sentence nor loss of quality of life. Diabetics are people who live and love life as others. As health professionals, we preserve and support life. Everything about the community is important for the diabetic person. We must be concerned about their environment and the food in the community that is available. For those who do not have transportation, are there bus routes or other means of transportation available? Services in the public health departments are meaningless if the consumers have no way to get to the health department or a doctor's office.

Nurses have been a strong supporter for care of patients since before Florence Nightingale. Registered nurses that belong to the Wound, Ostomy, and Continence Nurses Society play a vital role in care of all patients with wounds. However, pertaining to just the diabetic patients alone, their numbers are not adequate for the millions of those requiring their assistance in the United States. Research continues to point out possible solutions. In some countries patients stand in line for very long hours to see a health provider, that may not be a physician, but instead a nurse practitioner, skilled in providing primary care. The work of the

International Working Group on the Diabetic Foot published a *Diabetic Foot Care Education Programme* for the training of certified Foot Care Assistants in 2008 [9]. Due to the rise of diabetes all over the world, in developing and developed countries, there is a very strong need for continuance of diabetic foot care. The importance of this education of diabetic foot care assistants is because in some countries there are no licensed podiatrists and, in those countries, where podiatrists exist, some people do not have insurance or adequate insurance to assist with their health care needs.

Nobody wants to lose their leg or legs for any reason. Being able to walk allows all persons to carry out activities of daily living. Diabetics does not need to be a death threat. The health care community needs to do more because the numbers affected with this disease is so rapidly climbing that even the predictions cannot keep up with the numbers of those being affected. As health care professionals, the way we teach and what we teach to the diabetic patient needs to be re-evaluated. We must ask ourselves what can communities do to help decrease diabetic foot ulcers and amputations? Preventive care is still being strongly advocated worldwide. There is a need to create or update our action plans for community involvement for diabetes.

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