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By the Time You Finish Reading This There Will be 10 Diabetic Foot Amputations

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By the Time You Finish Reading This There Will be 10
Diabetic Foot Amputations

Cassidy Begley

Providence College

April 13, 2023

Abstract:

Dr. Scott: Thoughts on editing abstract to include it is National Foot Health Awareness Month and including “As a graduating senior, I am preparing to apply to podiatric medical school and feel it is incredibly important for individuals to understand how important podiatric care is for the overall health of a person. My hope is that this research amplifies how critical are for persons managing chronic illness.”

Here is my current abstract:

People of color with diabetes in rural low-income communities are more likely to encounter barriers to podiatric care than their white counterparts. Studies show that rural Americans with diabetic foot ulcers have a fifty percent increased risk for foot amputation. Proper foot care is critical to diabetic health by ensuring the maintenance of mobility and quality of life. As the U.S. population ages and diabetes diagnoses increase, individuals across the country develop mobility and foot-related problems. While this is a general issue, nonwhites in low-income rural areas are disproportionately impacted. Podiatrists play a key role in managing a multitude of chronic diseases by providing preventative care that avoids complications in the foot and ankle. Treatment of diabetic foot infections must be thorough and timely to prevent ulcers, gangrene, or amputation This work examines why minorities in rural areas lack access to podiatric care and explores solutions to expand and improve access to podiatric care in these communities. Key questions are addressed including: Why are podiatrists important in managing diabetic patients? How accessible are podiatrists to people of color with diabetes in low-income rural areas? What are the rates of amputation? What is the impact of lack of access to care? What can be done to close gaps in care? Ultimately, improving access to podiatrists in these areas would dramatically improve the overall health of these residents. Having more resources to manage their chronic conditions and regular check-ups would equip this population to better manage their health conditions.

By the Time You Finish Reading This There Will be 10 Diabetic Foot Amputations

The average person walks 100,000 miles in their lifetime.ⁱ What if those miles were painful? While it is easy to take having healthy feet for granted, foot issues are one of the most common health conditions. When individuals are not comfortable on their feet, it can have dramatic and detrimental effects on their health and ability to work, making podiatrists essential for improving quality of life. Studies show that rural Americans with diabetic foot ulcers have a fifty percent increased risk for foot amputation.ⁱⁱ Black people with diabetes in rural low-income communities are more likely to encounter barriers to podiatric care than their white counterparts. Black adults living in rural parts of the United States are nearly two times more likely to die from diabetes related complications compared to whites.ⁱⁱⁱ In California, where doctors performed more than 82,000 diabetic amputations from 2011-2017, people of color were more than two times more likely to undergo diabetic amputations when compared to whites.^{iv} Proper foot care is

critical to diabetic health by ensuring mobility and quality of life. As the U.S. population ages and diabetes diagnoses increase, individuals across the country continue to develop mobility and foot-related problems. While this is a general issue, nonwhites in low-income rural areas are disproportionately impacted.

The striking racial disparities for diabetes-related mortality in rural areas reflects structural inequities that impede access to care for these populations. Common risk factors for type II diabetes include obesity, race and ethnicity, physical inactivity, poor diet, aging, and family history.^v Ultimately, these social determinants of healthcare are disproportionate in rural communities. Individuals in rural areas are more likely to smoke and are less likely to maintain a normal body weight and exercise regularly, largely contributing to their likelihood in developing type II diabetes.^{vi}

Podiatrists are vital to managing a multitude of chronic diseases through preventative care that avoids complications in the foot and ankle. More specifically to diabetes, podiatrists are responsible for early intervention to prevent a loss of limb. Treatment of diabetic foot infections must be thorough and timely to prevent ulcers, gangrene, or amputation. Podiatric physicians are trained to identify diabetes-related complications that often start in the feet that do not cause recognizable symptoms. Additionally, podiatrists teach individuals how to care for their diabetic foot at home by conducting self-checks. Podiatrists are the gatekeepers of the healthcare system for proper diabetic care.

Barriers to healthcare and health education resources in rural communities include fewer healthcare providers, higher rates of the uninsured, distrust in the medical profession, lack of health education resources, hours of operation for medical practices, and lack of transportation.^{vii} Limited access to public transportation prevents patients from attending necessary appointments as well as going to the grocery store to buy healthy foods. Black households are three times more likely to lack access to personal transportation compared to whites.^{viii} This disparity is compounded by the lack of specialty providers, such as podiatrists, in rural areas make continuity of care difficult. Early detection of infection and regular health maintenance for the diabetic foot are often not an option for these communities who lack accessible podiatrists in their area. Furthermore, lack of access to health insurance for many rural-living residents is an additional obstacle to financially covering medical appointments and medications. Blacks are nearly two times more likely to be uninsured when compared to whites.^{ix} Distrust in the medical profession as people of color continue to experience implicit and explicit bias in their daily care may deter nonwhites from seeing a physician until it is necessary. Lastly, hours of operation for medical practices, specifically podiatry offices, may make it impossible for the working class to visit a physician during the hours of nine to five.

Diabetic foot care is a public health problem. Every thirty seconds, a foot amputation happens due to diabetes related complications.^x Over a million patients lose their diabetic foot annually to complications. Recent research conducted on diabetic ulcers, largely responsible for amputations, concluded that 75% of foot ulcers are preventable. 85% of amputations are ultimately due to diabetic ulcers.^{xi} A study in JAMA with 124,487 patients found that overall, 18.3% of rural patients and 28% of rural patients identifying as Black experienced death or major leg amputations due to diabetic ulcers.^{xii} Rural patients identifying as Black had a more than 10% increased risk of major leg amputation or death compared with the overall cohort. This study demonstrates the intersectionality that racial and rural disparities play in amplifying the risk for foot amputation.

Dr. Dean Schillinger, former chief of Diabetes Prevention and Control at the California Department of Health, has a wakeup call for all of us because he states, “If you go into low-income African American neighborhoods, it is a war zone. You see people wheeling themselves around in wheelchairs.^{xiii}” This quote emphasizes the devastating impacts of diabetes when individuals lack regular and quality access to podiatric care.

The story of Jackson Moss, an African American male living in Compton, California where the poverty rate is 35.16% higher than the US average, exacerbates inequities that exist in underserved areas.^{xiv} The culmination of a low wage job, lack of access to insurance/healthcare, and a family history of diabetes left him with a delayed response to what he saw as innocently stubbing his toe. A stubbed toe turned into a leg amputation. Because Moss did not have continuous podiatric care where his infection signs would have been noticed sooner, he ended with an amputation that was largely avoidable. Moss’s story is not unique, which is why we need to improve access to podiatrists in destitute areas.

Ultimately, improving access to podiatrists in these areas would dramatically improve the overall health of these residents. A sustainable rural podiatry workforce is needed to manage chronic conditions and regular check-ups to improve health outcomes for people of color with diabetes in rural areas. In order to attract graduated podiatrists to work in rural areas, it becomes evident that they must foresee job stability and career progression, like the lifestyle, have a background of training or living in a rural area, and have both personal and professional support systems in these areas.^{xv} Studies show that podiatrists with rural backgrounds are 30% less likely to work in metropolitan areas, suggesting favoring selecting university students with rural backgrounds. While there have been multiple government-funded initiatives developed to expand primary care access in rural communities such as loan repayment programs, there is not the same applicability for the rural podiatry workforce. A loan-repayment government funded initiative program that requires podiatrists to host shadowing opportunities is a terrific way to both attract and retain podiatrists in rural low-income communities. To apply to Podiatric Medical School, you must shadow a podiatrist and have them write you a letter of recommendation. Access for opportunity to shadow podiatrists poses an additional barrier for individuals living in these communities without a podiatrist to shadow. Attracting more podiatrists to work in rural communities would further expand access for those interested to learn more about the profession. It is necessary that the podiatric workforce is supported by accepting more podiatric medical school candidates with rural backgrounds or with expressed interest in working in remote areas, as well as research the benefit of government-funded initiatives to attract more podiatrists to work in these underserved areas.

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