

A review paper on addressing healthcare disparities in diabetes in a community health center: borinquen medical centers of miami-dade

Abstract

Diabetes is a growing problem in the U.S. Currently; 25.8 (23.6 in 2007) million people have Diabetes, which accounts for 8.3% (7.8% in 2007) of the total population. In Miami-Dade County over 180, 000 adults live in Miami-Dade County with diabetes, with 7.6% of the population in the county being reported to have been diagnosed with diabetes, majority Blacks. Miami-Dade has a large Black population, a group that has historically experienced health disparities (**). The leading causes of these disparities are: disease incidence and prevalence, detection and diagnosis, access to care and engagement and retention in treatment. Our minorities do have some access to healthcare, but the difference between biological racial outcomes is minimal and that the real and proper intervention is to establish effective self care, in complicated diseases, such as diabetes; that are affected by multiple factors, including changes of the patient and the healthcare behavior improving outcomes. Different models have been proposed to ensure that the practice of medicine can target multiple factors, mainly the patient behavior and how the institutions respond to the needs of the patient, which have resulted in a patient oriented program: The Patient Centered Medical Home. By implementing a program within the Medical Home, Borinquen Medical Centers had decided to determine the healthcare needs of the minorities in the community, creating opportunities by engaging peers and family members to actively participate in their care ensuring understanding from both parties, in order to allow their needs to be met and decreasing the disparity among the individuals in Miami-Dade County.

Keywords: community health center, complications, biological racial outcomes, correlated

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Abbreviations: AAFP, american academy of family physicians; HRSA, health resources and services administration; TUA, targeted urban areas; NRSA, neighborhood revitalization strategy areas; HCSF, health council of south Florida; HUD, housing and urban development; HCSF, health council of south Florida; BHCC, borinquen health care center; NCQA, national committee for quality assurance; AAAHC, accreditation association for ambulatory health care; PCMH, patient centered medical home; FQHC, federally qualified health care center; DSME, diabetes self-management education

Introduction

Diabetes is a growing problem in the U.S. Currently; 25.8 (23.6 in 2007) million people have Diabetes, which accounts for 8.3% (7.8% in 2007) of the total population. Of these 25.8million, 7.0 (5.7 in 2007) million are undiagnosed. Among U.S. residents that are 65years and older, 10.9million, or 26.9 percent, had diabetes in 2010. In addition, about 215,000 people younger than 20years had diabetes type 1 or type 2 and 1.9million people ages 20years or older were newly diagnosed with diabetes in 2010 in the United States. In the years between 2005–2008, based on fasting glucose or hemoglobin A1C (A1C) levels, 35 percent of U.S. adults ages 20years or older had pre-diabetes-50 percent of adults ages 65years or older. Applying this percentage to the entire U.S. population in 2010 yields an estimated 79million American adults ages 20years or older with pre-diabetes. Research has also revealed that higher incidence of diabetes is also accompanied by end stage target organ, which means that diabetic

patients are suffering more from kidney, eye and cardiovascular disease. In Miami-Dade County over 180, 000 adults live in Miami-Dade County with diabetes, with 7.6% of the population in the county being reported to have been diagnosed with diabetes.¹ In contrast with the mortality rate of diabetes in the U.S., diabetes is the third most common cause of death in Miami-Dade County, where 23% of diabetics are over the age of 60years old. In Miami-Dade County, Diabetes affects the Black community disproportionately, having almost twice the number of deaths, related to diabetes, than Whites or Hispanics (Figure 1).

Prevalence rates of diabetes in Blacks are 14.1, higher than the national average (11%) as opposed to Hispanics with only 6.2%, which is similar to the national average (Figure 2). Minorities and mainly African Americans and Hispanics, have a higher prevalence of diabetic related complications, such as retinopathy and amputations between 50-100% more than the white population. A strong correlation of diabetes, obesity and visceral body fat, is observed in minorities and is correlated to a high fat diet and sedentary lifestyle. It has also been shown that obesity starts early in childhood in these groups. Miami-Dade has a large Black population, a group that has historically experienced health disparities.² As per the Racial Health Disparities in Miami-Dade County, Black Community Forum-Health Council of South Florida, 2008; the leading causes of these disparities are: disease incidence and prevalence, detection and diagnosis, access to care and engagement and retention in treatment. Studies like NHANES III have shown that minorities do have access to healthcare,

but the difference between biological racial outcomes is minimal and that the real and proper intervention is to establish effective self care, in complicated diseases, such as diabetes; that are affected by multiple factors, including changes of the patient and the healthcare behavior improving outcomes.³ Different models have been proposed to ensure that the practice of medicine can target multiple factors, mainly the patient behavior and how the institutions respond to the needs of the patient, which have resulted in a patient oriented program: The Patient Centered Medical Home.

right care at the right time. Here the Care Team will be responsible for providing for all the patient's health care needs arranging care with other qualified professionals for all stages of life; acute care; chronic care; preventive services; and end of life care. The decisions in this model are evidence-based medicine and clinical decision-support, but it also allows patients to actively participate in decision-making and feedback is sought to ensure patients' expectations are being met.

Borinquen Medical Centers of Miami-Dade began in 1972 as a grass-roots community effort from a group of community organizers in the Puerto Rican community with a small grant from the Public Health Service to establish a health clinic in Wynwood. Over the years Borinquen Medical Centers of Miami-Dade have grown to become a Comprehensive Primary Health Care, Dental and Behavioral Health Center serving Miami-Dade County. In order to understand the close relationship between the programs they manage and how they are oriented to address health disparities and minorities' access to healthcare, our mission states: "Borinquen Medical Centers of Miami-Dade provide a comprehensive range of health and social services to our culturally diverse community in Miami-Dade County. Our quality services are accessible to all people throughout the County through a multi-discipline approach."

Borinquen's service areas include the underserved communities of Wynwood, Allapattah, Melrose, Little River, Little Haiti, Little Havana, North Miami, Brownsville, Overtown, Sweetwater and West Dade. These communities are deemed Medically Underserved Areas/Populations by the Health Resources and Services Administration (HRSA) as having: too few primary care providers, high infant mortality, high poverty and/or high elderly population. Several of the aforementioned service areas are also located in Targeted Urban Areas (TUA), these are areas which are traditionally the most under-served and underdeveloped neighborhoods in Miami-Dade County; TUA's that fall in Borinquen's service areas are: Little Haiti, Overtown, Model Cities, Brownsville, Liberty City, North Miami, West Little River and portions of the 27th Avenue Corridor. Lastly, the communities of West Little River and Melrose are also considered Neighborhood Revitalization Strategy Areas (NRSA), a program created by the Department of Housing and Urban Development (HUD) to revitalize an area that is a community's most distressed.⁴⁻⁹

In the 2009 the report card from the Health Council of South Florida (HCSF), revealed that Miami-Dade continues to compare negatively to the State (631,000 uninsured individuals) and comparable counties nationwide and Borinquen's main site and West/Central Dade target zip codes especially demonstrated high levels of cardiovascular disease, high diabetes rates and complications from diabetes. Our target zip codes fared worse than the County and Comparable Counties as seen in the North Miami Dade Health Profile. This report used hypertension hospital admission as the proxy for cardiovascular disease rates. For our target zip codes, located within the Biscayne Corridor, the rate is 220.4/100,000; for Miami-Dade County the rate is 122.0/100,000 and for the comparable counties the rate is 69.9/100,000 populations. In order to address the aforementioned disparities that are observed not only in Miami-Dade county but also affect directly the community Borinquen serves, deciding to provide a variety of primary healthcare services from its main and satellite sites.⁸ Primary care services include adult medicine (including HIV/AIDS care); ob/gyn (including delivery services); pediatrics; oral health care; podiatry; nutritional care; and an in-house pharmacy (offering 340b discount pricing). Borinquen also delivers social and

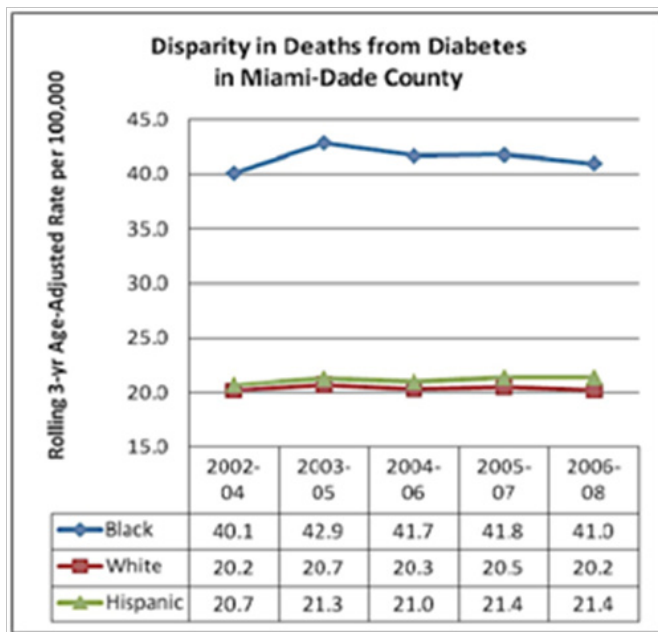


Figure 1 Disparity in Deaths from Diabetes in Miami-Dade Country.

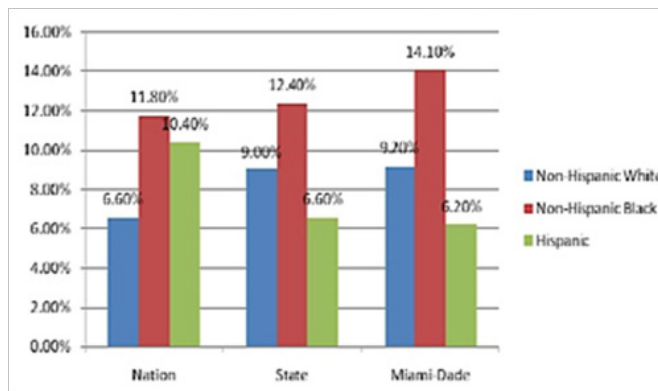


Figure 2 Diabetes Diagnosis by Race/Ethnicity.

In a patient-centered model, patients become active participants in their own care and receive services designed to focus on their individual needs and preferences, in addition to advice and counsel from health professionals.⁴ The shift toward patient-centered care has meant that a broader range of outcomes from the patient's perspective needs to be measured in order to understand the true benefits and risks of health care interventions. The American Academy of Family Physicians (AAFP) has found out that there is a higher patient adherence in medications by having an improved relation based on education and management with the patients. Under this model, the healthcare team uses information technology and other tools to help patients get the

educational services such as medical case management, Chronic Disease Management, HIV and STD Testing and Counseling, Healthy Start prenatal and postnatal services, benefits eligibility assistance in an attempt to alleviate the disparities observed in our community. All services provided have been given in the past as separate teams and not in an integrated manner, which is what we believe needs to be coordinated in order to improve the communication and cohesiveness of patient treatment and management to become efficient and improve outcomes.¹⁰⁻¹²

In striving to improve the quality of care and to promote more effective and efficient utilization of facilities and services; Borinquen Health Care Center (BHCC) pursued to become accredited by a national recognized organizations such as the National Committee for Quality Assurance (NCQA) and the Accreditation Association for Ambulatory Health Care (AAAHC) in order to standardize and implement a measurable quality of its services and performance against nationally recognized standards. In 2013 Borinquen obtained Patient Centered Medical Home (PCMH) level 3(maximum recognition) from NCQA and AAAHC, being the first Federally Qualified Health Care Center (FQHC) in the State of Florida to accomplish such recognitions.¹¹

Services at Borinquen have become patient-centered, physician directed and comprehensive to meet the needs of the patients and their families. By implementing a program within the Medical Home, Borinquen can proactively determine the healthcare needs of the minorities in the community, creating opportunities by engaging peers and family members to actively participate in their care ensuring understanding from both parties, in order to allow their needs to be met and decreasing the disparity among the individuals in Miami-Dade County. Using evidence-based guidelines and demonstrating the use of “best practices”, Patient Care Teams use Electronic Health Records, to be able to use population management strategies to analyze the disease incidence and prevalence of our patient population to help implement cost containment methods that will improve the delivery of care and reduce the cost of services to the population. It is estimated that well designed interventions can save overall upto \$160million dollars a year (RAND, 2005) by decreasing the development of associated co-morbidities in the short term and in the long term the high cost of hospitalization and disability.¹²

Current status

Increasing access to healthcare only will not solve health care gaps and disparities in our minorities, it requires a system change, which is observed in the Medical Home model, of which Borinquen is currently participating. Engaging the patients and the healthcare professionals in an educational intervention in cultural sensitivity, to increase understanding of the patient and physician relationship is another step in which Borinquen has shown great strides. Constant needs assessment of the community are important and it serves the purpose of what is needed to provide care for them at risk individuals, but not much can be done, if the infrastructure is not ready to receive and manage the outcomes of such assessments. Currently Borinquen has prepared the organization to manage the current and future needs by initiating in a structured manner implementation of programs to address disparities in the community that serves. Implementation of Shared Medical Appointments, Self Management Educational Sessions with nutritionists, nurse educators and health educators are the beginning of an organization using technology and best practices to engage patients and bringing them back into care, initially focusing on diabetic individuals.

Cultural barriers usually are the most difficult gap to overcome, many studies have revealed that to overcome them, it is needed to understand their culture and how peers can help impact their health behavior and literacy, which is another gain for Borinquen, as many of their providers belong to the race and ethnicity they serve, decreasing language and cultural barriers, an important part of the Medical Home model. Different approaches have been studied to decrease the cultural variations and economic barriers that change the perceptions of patients, all focused to educate the patient and engage the physician in a better relationship with the patient, which seems to be achievable with the Medical Home model. As part of the desire to improve outcomes, Borinquen has initiated Diabetes self-management education (DSME) and Shared Medical Appointments (SMA). Research outcomes suggest that minority patients with a high risk for poor diabetes outcomes may be recruited and retained in different settings, such as multi-sessions, DSME programs, SMA, focus groups, etc. and benefit from increasing their knowledge of diabetes content.^{2,6,8} The costs of achieving these outcomes may be less than the costs from managing diabetes complications in the ambulatory and hospital settings, reason behind BHCC’s desire to implement them by engaging the minorities attending BHCC.^{7,12} As a result of this since 2012 to this current year the increase on patients being tested and managed for diabetes with HbA1C less than 9% has increased, patients brought back into care.

Conclusion & recommendation

In Miami-Dade county as well as in the U.S., racial and ethnic minorities have lower quality of health care than non-minorities, which translates in greater care gaps secondary to low quality of care or even care that can cause harm, costing more money to keep these individuals alive. This problem is not unique to Miami-Dade County or the U.S., other countries have difficulty providing proper healthcare to their minorities, as the language and cultural barriers among others are observed, being inherent factors of minorities that populate a country. The disparities between different segments of the population and the difficulty to address those care gaps are growing. Barriers to healthcare can range from low quality, difficulty to access due to financial constraints, insurance, language and/or cultural barriers. It has also been noted that disparities are affected at different levels, from socio-economical status, policy-making and healthcare professionals.

Studies have shown that standardization of care can decrease healthcare disparities, but in very diverse populations, where not only financial barriers are found, but cultural and linguistic issues are dealt with, among others, it becomes necessary to come with a different solution, which BHCC intends to accomplish with their Medical Home program. It seems that the Patient Centered Medical Home model, is a great approach to it and has advanced to the extent that clinical outcomes in this type of setting are surprising, the model allows for the Care Team to schedule patient meetings, office visits, tracking referrals and diagnostic tests as well as communicating with patients and providers to improve performance if needed point of care testing such as HbA1C, cholesterol, glucose, EKG, spirometries and chest x rays. These will allow BHCC the maximization of the office visit of the patient as well as improving compliance and the proper management of disease. With the development and refinement of the existing methods for bringing patients, caregivers, clinicians and other key community stakeholders, the health literacy of our community can increase, improve knowledge on best practices and increase health outcomes of our community in general.

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None.

Conflict of interest

The author declares no conflict of interest.

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