

linguistic needs in providing health care for this population. At just one of our clinics, 62% of the patients identify themselves as Hispanic/Latino. Meeting the needs of a non-English speaking population is necessary to provide health care services in our community. Use of interpreters helps to accomplish that, but can be extremely expensive and requires longer visits since conversations must be repeated. Recruitment of bilingual staff who can perform their job duties while communicating with the patient in their native language is more cost-effective and also provides cultural relevance for patients. CMC provides a Bilingual Incentive Pay Program for staff who pass a language competency assessment. Due to this program 50% of the staff at our largest clinic are bilingual. Other specific initiatives to provide culturally and linguistically appropriate services include patient education materials and signage in both English and Spanish, use of verbal and pictorial education to address both culture and lower literacy, and use of culturally appropriate items such as dietary guidance by nutritionists using ingredients more familiar to the patients in teaching Hispanic/Latino patients about diabetic diets.

Improved access to appointments, better show rates, onsite support staff, and a focus on culturally and linguistically appropriate care has led to better patient outcomes. A demonstration of this is the performance of patients receiving care at our CMC community clinics when compared to general North Carolina performance as reported by the Behavioral Risk Factor Surveillance Survey (NC-BRFSS).³ One of the measures on the BRFSS is "Number of times in the past 12 months you have seen a doctor, nurse, or other health professional for your diabetes." Hispanic/Latino patients at our clinics are 23% more likely to have 1-5 visits and 64% more likely to have 6-11 visits than Hispanic/Latinos across North Carolina. African American patients are 4% more likely to have 1-5 visits and twice as likely to have 6-11 visits. Even more telling are statistics about patients with more than 12 visits in one year for diabetes. Hispanics were 11 times less likely to have 12 or more visits versus Hispanics across North Carolina, with less than 1% of the patients seeing the doctor more than 12 times. African American patients were 21% less likely to have had greater than 12 visits for diabetes in a year versus African American patients across North Carolina. This high number of visits could indicate that diabetes is poorly controlled, and that the medical homes at CMC are delivering better care for these minority populations (see Figure 2, page 344).

In addition to promoting a healthier lifestyle and decreasing morbidity complications for patients, improved diabetes care is financially beneficial to hospitals. Internal analysis found that uninsured patients admitted to CMC with a diagnosis of diabetes and who were not receiving services at one of our CMC medical homes, cost the hospital 31% more per day and 67% more per admission than for uninsured, diabetic patients with an established primary care home in a CMC clinic.

CMC community clinics have received national recognition for the care that we are delivering. Two of our community clinics received recognition in June 2008 from the National

Medical Homes Reduce Excessive Utilization: A Patient Success Story

Scott L. Furney, MD, FACP

In 2003, physicians in the Department of Medicine at Carolinas Medical Center identified a small subset of patients who were frequently hospitalized due to poor management of their medical conditions. Their medical problems were often complicated by other factors, such as substance abuse, psychiatric disorders, or poor social support systems. We implemented a multidisciplinary medical home model for these high-risk patients in hopes of reducing their utilization of hospital resources. Interventions included easy access to physicians and clinic staff, frequent phone calls from case managers, free access to medications, and other interventions tailored to suit the needs of the individual patients.

Results of these interventions included reduced hospitalizations and emergency department utilization by more than 80%. While this medical home intervention was not a controlled study, the results for this high risk group were clearly beneficial. One of the patients, a 21-year-old Type-1 diabetic, had been hospitalized with diabetic ketoacidosis 22 times during the year prior to the pilot program. Her disease was further complicated by poor social support systems and depression. With frequent clinic visits, psychiatric treatment, daily phone calls from a disease management nurse, and case management services provided by Medicaid, she was only hospitalized twice in the subsequent year. Objective measures of her diabetes control, such as Hemoglobin A1C, blood pressure, and lipid levels also demonstrated dramatic improvements with adherence to her medications. Six years later, her diabetes remains well-controlled and she has required less intensive intervention as her self-care skills have improved with education. In her case, provision of a medical home with comprehensive medical care and support was not only cost-effective, but potentially life-saving.

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Association of Public Hospitals for addressing health disparities in their communities. All of the CMC primary care clinics have been recognized at the highest level by the National Commission on Quality Care (NCQA) for Physician Practice Connections (PPC). Three-quarters of our eligible primary care physicians are recognized by NCQA for meeting evidence-based standards in caring for patients with diabetes.

The CMC community clinics are very effective at providing care for significant numbers of our local uninsured community; however, it is very important to note that this does not fully