



## **Roane County Family Health Care: Improving Diabetes Care**

### **Public Health Problem**

- Diabetes is more prevalent in West Virginia (WV), the second most rural state in the nation, than any other state or territory
- In 2006, the prevalence of diabetes in WV was 12.1% compared to 7.5% nationally
- Diabetes is precursor to many comorbid conditions, including heart disease and stroke, and is the 6th leading cause of death in the state and country

### **Program**

For nearly three years, the West Virginia University Office of Health Services Research (OHSR) has had the opportunity to work with Roane County Family Health Care (RCFHC) in improving the quality of care provided to patients with diabetes. RCFHC is a federally qualified health center which provides care to patients that are generally underserved, of low socioeconomic status, and at high risk for development of chronic disease such as diabetes and its complications. Thanks to a strong partnership with the WV Diabetes Prevention and Control Program, OHSR is able to support RCFHC in two main ways:

- 1) Provider and staff education in chronic disease management
- 2) Establishment and ongoing support of an electronic patient registry (the Chronic Disease Electronic Management System, or CDEMS) used to track the care provided to patients with diabetes

### **Impact**

In early 2006, when RCFHC implemented CDEMS, only a subset of patients with diabetes was included in their registry. At the time, CDEMS was primarily used for this health center's participation in the National Health Disparities Collaborative (HDC). Over time, their registry has grown by 57 percent to include all patients with diabetes, and is used not only for collaborative reporting but for in-house quality assurance. Furthermore, the health outcomes of these patients continue to show improvements over time.

- The average HbA1c for all patients with diabetes has improved over time from 7.5 (baseline 05/12/2006) to 7.3 (09/30/2008). Using the Diabetes Impact Tool released by the HDC, this 0.2% decrease accounts for:
  - 2.8% decrease in total mortality
  - 4.2% decrease in diabetes related mortality
  - 2.8% decrease in myocardial infarction
  - 2.4% decrease in stroke
  - 8.6% decrease in amputation
  - 4.8% decrease in renal failure
  - 7.4% decrease in micro-vascular disease
- The percent of patients with diabetes with documented blood pressure readings has improved over time from 76.7% (baseline) to 99.5% (09/30/2008)
- Average cholesterol for all patients with diabetes has improved from 199.6 (baseline) to 189.3 (09/30/2008)

In April of 2007, RCFHC implemented an electronic medical record (EMR). Since that time, this health center has not only continued to use CDEMS for quality improvement but has stated that their registry use has helped set high expectations of what their EMR should offer. The health center incorporated a reminder system within their EMR to notify them when a patient with diabetes has been seen. This notice is used to transfer information from their EMR to CDEMS due to the reporting capabilities of CDEMS and their use of the various tools it offers. RCFHC routinely uses the population level reports, patient-specific intervention lists, and reminder letters to target patients in need of care and invite these patients to visit to receive the care they need. Not only does RCFHC use the available tools within their registry, but they also notify OHSR when additional tools should be added, such as an HbA1c order form recently added to the reminder letter tool to be used in combination with their LabCorp /CDEMS interface.

RCFHC has a firm grasp on how registries and EMRs can be used to save time and more efficiently deliver care to patients with diabetes and other chronic health conditions. OHSR has worked to build the capacity for this health center and others across the state to incorporate quality improvement efforts such as these into their daily operations. If you have any questions, please feel free to contact Emma White, RN at RCFHC or Cecil Pollard with WVU OHSR at the contact information below.

### **Contact**

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### **Office of Health Services Research**