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Financial Impact of Leveraging Nurse Practitioner and Case Management Models in Diabetes Care for a Clinically Integrated Health Ministry in Middle Tennessee

Facts About the Ministry's Diabetes Program:

- Increases cost savings and produces revenue by deploying nurse practitioner and case management models
- Delivers additional outpatient revenue through billable diabetes self-management training and education
- Lowers readmission rates and reduces glycemic-related hospital-acquired conditions—both critical in value-based financial models
- Supports patient navigation through medical management of their individual financial needs

This large health ministry, located in Middle Tennessee, provides diabetes treatment and education for type 1, type 2 and prediabetes patients, including uniquely designed programs for pregnant women with gestational or pre-existing diabetes. Their outpatient diabetes self-management education and support program has been recognized by the American Diabetes Association (ADA), with education sessions held in group classes and/or individual one-on-one sessions. In addition, their inpatient and glycemic management program achieved The Joint Commission's Certificate of Distinction for Inpatient Diabetes Care.

Healthways, a Sharecare company, and this large health ministry began a partnership in 1997, which has grown to include three regional locations that provide both comprehensive inpatient and outpatient diabetes services. Future expansion efforts include the decentralization of outpatient operations to integrate within affiliated physician practices as part of the patient-centered medical home model.

In fiscal year 2016, the large health ministry's diabetes team billed over $1M inpatient revenue and $700K outpatient revenue, and patients saw an average A1C reduction of 26.2%. Achieving these impressive financial and clinical results requires a dynamic team structure, with both a nurse practitioner and a case management model of care.

Team Structure within a Clinically Integrated Network

Their inpatient team includes five nurse practitioners (NPs), most board certified in advanced diabetes management, and three registered nurses who are certified diabetes educators. The outpatient team includes three registered dietitians and two registered nurses—all certified diabetes educators. A program director, responsible for coordinating services and cross-training all colleagues across the health system, and two program assistants who provide overall administrative support, complete the team.

The use of nurse practitioners allows the diabetes program to incorporate provider billing for patient encounters. The inpatient team directs patients to the outpatient program—which continues patient care and education with group classes, individualized goal setting, and insulin dosing modifications.

In conjunction with health ministry's clinical advisors and Healthways, the diabetes team ensures patients receive consistent treatment and education. Our collective goal is to deliver the highest quality at the most cost effective manner.

Promoting Partnerships in Care with a Nurse Practitioner Model

Evidence demonstrates that NPs have consistently proven to be cost-effective providers of high-quality care for almost 50 years.[1] The diabetes program's NPs provide initial consultation and follow-up visits for patients. NPs also collaborate with hospitalists, cardiologists, surgeons, and other providers to complete the continuum of care for patients with diabetes. This partnership ensures appropriate, cost-effective diabetes interventions are delivered in a timely manner. With the approval from a supervising endocrinologist and a monthly patient chart review, NPs are able to generate inpatient billing revenue as individual providers.

Diabetes Statistics in Tennessee[3]:

- Approximately 14.9% of Tennesseans have diabetes; the national average is 9.3%
- Diabetes costs an estimated $6.6 billion annually in Tennessee, with total direct medical expenses at $4.7 billion and indirect medical costs at $1.7 billion
- Prediabetes affects 35.8% of Tennesseans; 1.73 million people and 36,000 newly diagnosed diabetes cases each year

Enhancing Consistent Care with the Case Management Model

The greatest impact is the diabetes program's ability to reduce operations costs to the overall health ministry's bottom line. Case management is effective in improving both glycemic control and provider monitoring of glycemic control.[2] By leveraging the case management model, the diabetes team is able to review and intervene with the hospital's diabetes population, creating reduced length of stay of individual patients by optimizing glycemic control and assisting with social hurdles. The inpatient staff assesses the current level of diabetes care, education and required support; then collaborates with the patient to develop an individual plan of care. When appropriate, the patient transitions from acute to the post-acute setting—for continuation of treatment, as well as ongoing education and support. Additionally, the diabetes team monitors hypoglycemia across the health ministry through electronic triggers in order to prevent recurrences and optimize glycemic management.

Navigating the Financial Aspects of Diabetes Care for Patients

Patients benefit from the knowledge and expertise of the large health ministry's diabetes team by using these two care models. The team can help patients navigate the expense of self-care tools and remove barriers to necessary resources. Patients become empowered through understanding diabetes self-management skills and problem-solving techniques.

The diabetes team spends a portion of time with every patient to understand their financial and social status to better align them with proper resources, equipment for monitoring, and the most affordable regimen effective for their disease management. Charitable resources are readily available for uninsured patients. Patients that are underinsured receive guidance in shopping for their diabetes resources, tools, and medications.

Diabetes is a complicated disease with a progression that could lead to multiple complications, a loss of work and increased overall healthcare expenses. The more effective the diabetes team is at helping patients retrieve proper resources, the more compliant and empowered patients will be—ultimately reducing expenses by maintaining wellness of a chronic disease.

[1] *https://www.aanp.org/images/documents/publications/costeffectiveness.pdf*
[2] *http://www.ncbi.nlm.nih.gov/pubmed/11985933*
[3] *http://main.diabetes.org/dorg/PDFs/Advocacy/burden-of-diabetes/tennessee.pdf*