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Interprofessional Team Management: Partnering to Optimize Outcomes in Diabetes

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ABSTRACT

In striving to provide patient-centered, clinically efficacious, cost-effective care to medically complex adults with diabetes, a health care organization enlisted the diverse expertise of an interprofessional team that included a nurse practitioner who collaboratively guided weekly team huddles, directed ongoing coordination of comprehensive care plans, and orchestrated timely access to appropriate care settings and in-home and community resources. Using a pre/posttest design, participants (N = 52) whose complex care was managed by an interprofessional team reported an increase in self-care behaviors, better health-related quality of life, improved physiologic outcomes, and a reduction in use of emergency and acute care services.

Keywords: care coordination, diabetes, interprofessional, outcomes, team management

INTRODUCTION

Chronic conditions, such as diabetes, account for more than 66% of total health expenditures, and individuals with multiple comorbidities utilize 7 times more resources compared to those with only 1 chronic condition.[1] As persons with diabetes are at increased risk of developing concurrent comorbidities with multifaceted needs, interventions beyond what traditional primary care can provide are required.

Endorsed by the Institute of Medicine (IOM), interprofessional team-based care offers a feasible, cost-effective alternative to the delivery of traditional primary care, especially for complex patients with multiple chronic conditions.[2] Primary care, as defined by the IOM, is the provision of accessible, integrated health services by accountable clinicians, among them nurse practitioners (NPs).[3] Consequently, an NP-led, quality improvement collaborative can optimize diabetes care, improve quality of life (QOL), and render positive, quantifiable clinical outcomes.

With their innate abilities to collaborate and coordinate, NPs are well positioned to influence and compel the delivery of cost-effective, clinically efficacious, value-driven primary care. With increasing emphasis on effectiveness of interprofessional teams, over 50% of family physicians now include NPs as valued team members.[4] With 83.4% of NPs board certified in primary care and averaging 12 years of experience, they can provide leadership, promote interdisciplinary collaboration, and direct primary and long-term care coordination and management.[5]

The aim of this study was to examine the impact of an interprofessional, patient-centered approach that includes NP-directed care coordination and management for medically complex adults with type 2 diabetes. Through self-report, study participants (N = 52) evaluated health-related quality of life (HR-QOL) and self-care behaviors (SCBs) before and after interprofessional management. Pre and post costs of care and attainment of physiologic indicators according to industry benchmarks were also compared to evaluate team care model efficacy.

Motivated by health care reform, rising care costs, an aging population, and the burden of chronic disease, a managed care organization scrutinized its care structure, processes, and outcomes. In early 2010, this managed care organization enlisted the diverse expertise of an interprofessional team to care for its medically complex senior population in an outpatient venue known as the

Comprehensive Care Center (CCC). Of the CCC's 420 initial patients, 65% had a primary diagnosis of type 2 diabetes with multiple, concurrent disease states (GEMCare Health Maintenance Organization, unpublished raw data, 2012).

THE INTERPROFESSIONAL TEAM

The interdisciplinary team included 1 internist/geriatrician, 1 family/geriatric NP, 2 registered nurse case managers (RN-CMs), 1 clinical pharmacist (PharmD), 4 licensed clinical and medical social workers (LCSWs and MSWs), 1 palliative nurse, 1 health educator, and 4 medical assistants (MAs). With each having separate clinic schedules, the physician and NP managed dedicated patient panels. Of the 52 study participants, 38 (73%) were patients whose interprofessional care was managed solely by the NP.

METHODS

Setting and Sample

An outpatient, ambulatory clinic provided the setting for the study. Of the 420 CCC patients, 126 were eligible according to the inclusion criteria: adult male or female diagnosed with type 2 diabetes; cognitively capable of directing or completing self-care and questionnaires; not in hospice; and able to travel to the clinic. Of 60 eligible participants, 52 complete data sets were analyzed, which comprised the convenience sample.

A pre/posttest design evaluated the impact of team management on outcomes from the time of a participant's clinic admission to late June 2012. It was hypothesized that interprofessional management would positively affect HR-QOL; SCB; the physiologic variables of body mass index (BMI), blood pressure (BP), glycated hemoglobin (HbA_{1c}), and lipids; and care costs.

Interprofessional Care Coordination Intervention

Team huddles are an effective strategy to support team communication and care coordination.[6] Whether scheduled weekly or interspersed throughout the clinical day, these essential collaborations support efficient, productive clinic visits; timely problem solving; and appropriate resource utilization promoting patient satisfaction and optimal outcomes.

Weekly team huddles, held every Monday morning before start of the clinic day, provided a structured opportunity to discuss and formulate strategies for patients scheduled for follow-up that week. Patients with ongoing challenges were also discussed and added to a provider's clinic schedule, when needed. Such care management supported patients' continued independence, safety, and adherence to averting acute care services.

Team communication and collaboration extended beyond weekly huddles. Before seeing a patient in the clinic, the NP and involved team members would discuss events or interventions (hospitalizations, emergency department visits, and procedures) experienced since the previous clinic visit. Although informal and frequent, these critical discussions extended into the exam room for patient and family inclusion. Such "shared visits" promoted understanding, engagement, and collective decision-making.

Outside of huddles, each team member had a specific focus and role. Whether facilitating a cardiology referral or in-home hospice consult, the *RN-CM* constantly communicated to provide the right care, at the right time, in the right place. When assuming a new patient for case management (CM), a face-to-face meeting with the patient and family communicated available CM support and provided information on who to call for any need or concern, day or night. This "24/7 lifeline" permitted timely phone assessment and symptom management instructions, which frequently nullified the need for acute care. When required, the RN-CM would consult the patient's provider, also readily accessible by phone 24/7.

Before and during a visit, the *PharmD* would reconcile medications, review drug-to-drug interactions, and collaborate with providers to optimize pharmacotherapy. As 50% of patients are nonadherent, interventions that enable adherence could reduce care costs.[7] Patients frequently returned for a visit solely with the PharmD to clarify or reinforce information.

Patients with complex, long-term medical needs have congruent psychosocial challenges that interfere with QOL and adherence. The *LCSWs* and *MSWs* assessed patients upon admission and suggested