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Enhancing Care Coordination Through Patient- and Family-Initiated Telephone Encounters: A Quality Improvement Project

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Telehealth activities are often conducted by ambulatory nurses to assist with care coordination; these activities are especially important for children with complex, chronic conditions. This quality-improvement project examines specific components of nursing care delivered to children on the neurology and gastroenterology services through patient-initiated telephone encounters. Metrics and nurse-sensitive indicators explored include the type of services requested, the nurses' ability to resolve patients' concerns while eliminating otherwise unnecessary care, and associated costs with providing this care. The usefulness of a standardized instrument, the care coordination management tool, used in this project is discussed.

WITH THE IMPLEMENTATION of the U.S. *Patient Protection and Affordable Care Act* (P.L. 111-148) and the emphasis on Accountable Care Organizations, increasing attention is focused on reducing fragmented care delivery systems, quality care issues, and unnecessary costs. Better care coordination is necessary to address these concerns. Care coordination (CC) refers to those patient- and family-centered activities conducted by a team that are designed to meet a family's needs and enhance their caregiving capabilities (Antonelli, McAllister, & Popp, 2009). Telehealth provides one avenue to help operationalize this objective and is consistent with the role of RNs working in ambulatory care (American Academy of Ambulatory Care Nursing, 2012). Selected telehealth strategies are especially important for families of children with chronic, complex conditions where care must be highly individualized and address age-related medical and developmental needs. Validated metrics of nurse-sensitive indicators are needed to ensure that the appropriate nursing activities needed for quality, seamless patient care are in place for these populations.

Background Knowledge

The term 'telehealth' lacks a standardized definition but is broadly defined as the use of technology to deliver health care, health information, or health education at a distance. Telehealth covers a variety of audio and video modalities where content is delivered in real-time communications or 'store-and-forward', where information is captured electronically and shared at a later date (Sanmartin et al., 2008). Telehealth is a way of increasing the contact between the healthcare system and patients and their families and shows great potential in the management of complex chronic conditions (U.S. Department of Health and Human Services and Health Information Technology & Quality Improvement).

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Telephone triage advice services (TTAS), the forerunner to the broader application of telehealth, and is widely used for patient interactions in ambulatory care (Bunn, Byrne, & Kendall, 2004, 2005; Peck, 2005). TTAS may be initiated by providers or patients and families. Provider-initiated calls are most common. They are used to assess patients' conditions following hospital discharge, monitor physiological indicators of worsening chronic conditions (i.e., weight gain and congestive heart disease), and assess patient satisfaction. Patient and family-initiated calls fall into two categories. The first are 'hot lines' where patients and families seek advice and clinical guidance on common health concerns. The second is patient or family-initiated telephone encounters (PiTEs) where they are seeking advice for the management of complex chronic conditions. Individuals answering the calls may be either professional nurses or adjunct personnel with specific training in call management. Computer decision support systems (CDSS) have been developed to help nursing and non-nurse personnel provide clinical guidance. These systems are designed to help standardize the processes employed when providing advice for common problems. CDSS have been met with mixed success but have not been used to provide clinical guidance in the management of complex, chronic conditions (Garg et al., 2005; Randell, Mitchell, Dowding, Cullum, & Thompson, 2007; Turnbull, Prichard, Halford, Pope, & Salisbury, 2012).

Despite a robust literature on TTAS, its impact on consistently enhancing access, improving long-term clinical outcomes, or reducing costs has not been clearly demonstrated in published research studies or systematic reviews (Carrasquero, Olivereira, & Encarnacao, 2011; Jennette et al., 2003). In part, this is due to the diverse approaches used, lacking either a common definition or a core metric. Moreover, the majority of the current evidence focuses on provider-initiated calls or patient 'hot lines' for advice on acute problems. Information specifically examining the role PiTES play in managing ongoing care of complex chronic conditions by nurses in terms of quality and cost is not available. Evidence suggests, however, that patient calls handled by nurses may result in cost-shifting. While managing PiTES reduce overall condition-management expenditures they do consume greater nursing personnel resources (Bunn et al., 2005; Marklund et al., 2007; Richards et al., 2002).

Local Problem and Intended Improvement

PiTEs, though heavily used in patient care management at our children's hospital, had not been comprehensively assessed. It was determined that an organized process of cataloging and analyzing calls was needed in order to assess PiTEs' effectiveness, contributions to care coordination, patient satisfaction, and utilization of resources. As an international tertiary care facility and referral center for children with complex pediatric conditions, many patients live outside of the hospital's immediate geographic area. These patients and their families still require extensive support between visits and ambulatory care nurses in specialty clinics use PiTEs to provide assistance to these families. The impressions of nurses who provided clinical guidance for specific issues from parents or patients with complex conditions are that these interactions were more likely to promote therapeutic adherence. When therapeutic adherence is improved, unnecessary costly care such as unwarranted clinic visits is prevented. Simultaneously patient and family satisfaction is improved.

All of these are markers of better coordinated care (Antonelli et al., 2009; McAllister, Presler, & Cooley, 2007). No data were available, however, to support these assertions. Moreover, without initial data, benchmarking future care delivery or determining necessary nursing and other personnel resources was not possible.

Thus, the aim of this evidence-based, quality improvement project is to examine PiTEs and how its implementation processes and outcomes improve coordinated care for complex pediatric patients. Information obtained could then shape improvements in the coordination of care for complex pediatric patients.

Project Questions

Two primary project questions guided this quality improvement project: 1) what did nursing care delivered through PiTEs look like in terms of coordinated care as measured by the delivery of timely information/services, resolution of the patient/family concerns, and decreases in the number of unnecessary patient visits?; 2) what are the costs and cost-effectiveness of care delivered by RNs via PiTEs?

Methods

Setting

Two diverse ambulatory hospital-based clinics, neurology and gastroenterology, participated. These sites were chosen as they had distinctly different but equally complex patient populations, a high call volume, and an experienced nursing staff. In consultation with the hospital institutional review board, it was determined that this project was designed as a quality improvement project and thus exempt from IRB review.

Planning the Intervention and its Evaluation

A team of five clinic nurses and two nurse scientists was formulated. The five clinic nurses were extremely experienced. All five clinic nurses held a BSN degree; one also held a doctor of nursing practice degree. All were nationally certified in pediatric nursing. They have worked in their respective subspecialty areas for between 6–26 years (M = 20 years), and all have worked as RNs for over 20 years. The two nurse scientists both hold PhD degrees and have conducted numerous clinical research projects. The collective experience of the team was instrumental in developing and implementing this project.

For the purpose of this project, PiTEs were defined as the process where calls initiated from an established patient or family member are received, assessed, and managed by ambulatory care RNs through: 1) direct intervention; 2) in