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Strategic Patient Education Program to Prevent Catheter-Related Bloodstream Infection

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Central venous catheters (CVCs) are used commonly for venous access during treatment, and catheter-related bloodstream infection (CRBSI) is a frequent, yet highly preventable, hospital-acquired infection. One of the performance elements of the Joint Commission's 2012 National Patient Safety Goals addresses the education of patients and family members on CVC care and management, as well as CRBSI prevention before a central catheter is inserted. This article presents the history and roles of the Infusion Therapy Team at the University of Texas MD Anderson Cancer Center in CVC care and describes an organized patient education program that plays a key part in the institution's strategy to reduce and prevent CRBSI. Institutional standard policies and procedures for patient care should be in compliance with guidelines of the Centers for

Disease Control and Prevention and the Joint Commission before any patient educational initiative is implemented. Such standards will serve as a guide to set up, organize, and implement an effective program.

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Central venous catheters (CVCs) often are used to access veins during the treatment of patients with cancer and other chronic or critical conditions. More than five million central line placements occur annually in the United States (Macklin, 2007). The use and manipulation of CVCs and associated devices create a risk for catheter-related bloodstream infection (CRBSI) and its subsequent burdens for patients (Shorr, Humphreys, & Helman, 2003). Meticulous care of CVC use is imperative for reducing the incidence of CRBSI, as is collaboration among stakeholders to develop high-quality standards of patient care. A performance element of the Joint Commission's (2012) National Patient Safety Goals, which require the use of evidence-based practices that prevent this type of infection, is to educate patients and family members on CRBSI prevention before a central catheter is inserted; best practices and patient education should continue even after insertion.

In this article, the authors present an overview of the history of the Infusion Therapy Team (ITT) at the University of Texas MD Anderson Cancer Center, a comprehensive cancer center in Houston. The authors also briefly describe the causes of CRBSI, review the published literature on patient education in CVC

care, and describe an organized education program that is key to the institutional strategy to reduce the incidence of CRBSI.

Background

The ITT of the University of Texas MD Anderson Cancer Center is believed to be the first and longest continuously operating IV access team in the United States (Richardson & Caillouet, 2004). The clinic began in 1975, with the world's first peripherally inserted central catheter (PICC) being placed by a nurse, Millie Lawson, RN. The team currently operates with 58 RNs, 2 licensed vocational nurses, 2 certified nursing assistants, 7 clerical support staff, 1 mid-level provider, and a surgical fellow rotating in the department on a daily basis. The unit is responsible for the management and care of percutaneous CVC and PICC insertions, over-wire catheter exchanges, and removal of implanted ports. Most of the catheters have dwell times ranging from months to years. For the MD Anderson Cancer Center, the longest continuous use is seven years for a silicone PICC and 10 years for a silicone subclavian CVC. The ITT clinic includes the implanted port clinic, which comprises a dedicated surgeon, physician assistants, an