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# Implementation of National Comprehensive Cancer Network Evidence-Based Guidelines to Prevent and Treat Cancer-Related Infections

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Clinical practice guidelines are an important result of evidence-based research. However, current clinical practice remains out of step with the rapid pace of research advancements. Often, decades pass before research is translated into clinical practice. The National Comprehensive Cancer Network (NCCN) has created evidence-based clinical guidelines to promote effective clinical practice. Formerly, the NCCN established guidelines to reduce cancer-related infections only for neutropenic patients; however, they have expanded their guidelines beyond neutropenia to prevent and treat cancer-related infections. Implementing scientific evidence into clinical practice is challenging and complex, and healthcare professionals should understand barriers to implementing clinical practice guidelines to ensure successful translation into practice. This article provides a brief review of

NCCN guidelines and describes common barriers encountered during implementation. In addition, a conceptual framework is offered to help identify and address potential concerns before and after adoption of guidelines.

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**T**ranslating scientific evidence into clinical practice remains challenging and complex. According to Bach (2005), evidence-based practice (EBP) in the care of the general population is provided only 50% of the time. In cancer care, best practice is provided only 66% of the time (Browman, Makarski, Robinson, & Brouwers, 2005). Current clinical practice remains out of sync with the rapid pace of research advancements. An estimated 17 years are needed before research is implemented into clinical practice; the translation of research into sustainable improvements in clinical practice remains a major obstacle toward improving patient outcomes (Chesla, 2008). Major health organizations and research agencies have focused their efforts on dissemination and translational research (Kerner, 2006; Minasian et al., 2010; Rabin, Brownson, Haire-Joshu, Kreuter, & Weaver, 2008).

David Sackett, MD, a pioneer of evidence-based medicine, characterized EBP as integrating individual clinical expertise and the best evidence to guide mutual decision making and patient preference (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996). Clinical practice guidelines are an important result of evidence-based health care that create a scientifically researched

foundation to achieve consistency, efficiency, effectiveness, quality, and safety in providing care (Moore, 2009). However, the guidelines are a knowledge tool to assist in clinical decision making and are not intended to take its place.

In addition to improved patient care, concerns for the high cost of quality cancer care and variations in practice are significant factors driving development of clinical practice guidelines (Bach, 2007; Foster, Abdolrasulnia, Doroodchi, McClure, & Casebeer, 2009; Romanus et al., 2009; Soper, 2009). Escalating costs of care have caused payers to pursue ways for standardizing care, increasing predictability, and decreasing costs by support and use of clinical guidelines in an effort to improve outcomes for all stakeholders (Shaffer, 2009). Some payers are linking reimbursement for oncology therapies coverage to provider compliance of established clinical practice guidelines (Soper, 2009). Despite compelling advances in guideline development, one should be mindful of the reality that the full impact of guideline implementation in a community-based oncology practice has not been measured. Unfortunately, efforts to translate rigorous high-quality research into clinical practice too often are met with only partial adoption or failed adoption into practice (Bradley et