



# Evidence-Based Oncology Oral Care Clinical Practice Guidelines: Development, Implementation, and Evaluation

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## Introduction

As the evidence for oncology nursing practice expands exponentially, nurse clinicians, including oncology nurses, are faced with a growing demand to integrate evolving contemporary evidence into practice. Models such as the Evidence-Based Practice (EBP) Framework (University of Pennsylvania Health System [UPHS] Nursing Research Committee, 1999) (see Figure 1), as well as the Oncology Nursing Society's (ONS's) EBP Online Resource Center, can provide critical guidance for clinicians pursuing EBP initiatives. At UPHS, a comprehensive, evidence-based, oncology oral care clinical practice guideline (CPG) was developed and revised by a multidisciplinary work group and is being implemented and evaluated for its impact on nursing and patient care outcomes at the Hospital of the University of Pennsylvania under the leadership of the primary author. The formulation of this practice guideline represents a significant research-based innovation in nursing and multidisciplinary clinical practice at UPHS and provides an excellent example of how practicing oncology nurses can use an EBP framework to effect change in an institution.

## Step I: Identifying a Clinical Problem and Determining Its Priority for Practice Change

The UPHS EBP framework's first step involves identifying a clinical problem and determining its level of priority for practice change. At UPHS, the product committee's reexamination of oral care products prompted the review of nurses' oral care practices. Con-

sultation with the practice committee revealed that no institutional guidelines existed, with the exception of basic standards for oral care in head and neck surgery and prophylactic antibiotic and dental care standards in allogeneic bone marrow transplantation; however, documentation of supporting evidence was not available. A subsequent survey of inpatient oncology nursing staff found that tradition, patient preference, and physician orders predominantly guided nurses' oral care practices. Therefore, the creation of a health-system-wide oral care CPG was identified as a priority. Oncology-specific recommendations were prioritized because of the high incidence of oral alterations and product usage in the hematology and oncology and radiation oncology divisions.

## Step II: Gathering and Evaluating Evidence

The next phase in the EBP framework involves gathering and evaluating evidence. The development of new evidence-based CPGs can be costly in terms of time and resources. Searching for available clinical guidelines, which may preclude the need to perform this extensive work, is advisable. Using the UPHS model's suggested resources (see Figure 2), existing guidelines related to oncology oral care were compiled and evaluated for methodologic rigor and clinical relevance using model criteria (see Figure 3). A 1989 National Institutes of Health (NIH) consensus statement, "Oral Complications of Cancer Therapies" (NIH, 1989), provided a core of general recommendations but was too broad to be the foundation for the CPG and required updating with literature that was published after 1989. Next, a

search was performed for published oral care standards using the terms "dental care/st [standards]" and "oral hygiene/st [standards]." An article highlighting an oral care standard implemented at Emory University Hospital for the care of patients with leukemia and bone marrow transplant recipients was identified, and it contributed to the basic structure and some content items of the UPHS oncology oral care CPG (Yeager, Webster, Crain, Kaskow, & McGuire, 2000). However, significant limitations were present related to the strength of patient outcome data collected, and the evidence base for the standard was not fully delineated.

Therefore, a comprehensive search of biomedical databases was performed in MEDLINE®, CINAHL®, and the Cochrane Database of Systematic Reviews. The search terms "oral hygiene," "stomatitis," and "mucositis" were combined with "oncology," "neoplasm," "radiation," "surgery," and "chemotherapy." Fifty-four articles were selected for full review and divided into topics of (a) assessment, (b) prevention, and (c) treatment of oral complications in patients undergoing chemotherapy.

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