Applying Evidence to Develop a Medical Oncology Fall-Prevention Program

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Evidence-based practice (EBP) is a problem-solving approach to clinical practice that integrates the conscientious use of best evidence in combination with a clinician's expertise and patient preferences and values regarding decisions about patient care (Melnyk & Fineout-Overholt, 2005). As depicted in Figure 1, developing an EBP program requires six integral steps. Once a problem is identified and the literature reviewed, clinical judgment and the consideration of patient concerns and values are essential to ensure that the evidence applied is relevant and appropriate. The evidence must be suited to the work setting and patient population; otherwise, the adoption of evidence into practice likely will achieve limited success. Thus, to be successful, an EBP program must become a philosophy of care.

Identifying the Problem

Fall prevention continues to be a priority throughout health care. The Joint Commission (2007) continues to list reduction of the risk of patient harm from falls as one of its national patient safety goals. A fall-prevention program in oncology presents special challenges based on disease process, side effects of chemotherapy, and the sedating effect of opioids and antihistamines.

Critiquing the Evidence

The literature contains limited evidence related to successful fall-prevention interventions. Studies were identified by searching the PubMed®, Ovid MEDLINE®, and Ovid CINAHL® databases. Searches were performed using various combinations of subject headings and key words: *patient falls, fall-prevention intervention(s),* and *fall risk assessment.* All results were restricted to being published since 2001, and the reference lists of all articles were consulted to identify additional studies. Three articles applicable to developing a fall-prevention program for patients with cancer were identified.

In a systematic review conducted by Evans, Hodgkinson, Lambert, and Wood (2001), six risk factors predicted patient falls: altered mental status, altered mobility, history of falls, toileting needs, medications, and age. Although the research was not specific to patients with cancer, five of the six factors are applicable to medical oncology. Altered mental status is common among patients with cancer as a result of high fever or disease that affects the central nervous system. Generalized weakness is a common problem, especially in those with anemia following chemotherapy. Furthermore, nausea, vomiting, and diarrhea often leave patients in a weakened state. Toileting needs are a risk factor because chemotherapy frequently induces diarrhea and because aggressive hydration causes urgent and frequent urination. Medications such as sedatives, analgesics, and antihistamines alter central nervous system function, increasing the risk for falling. Additionally, a history of falling is well documented as a predictor of the potential to fall in the future (Evans et al.; Krauss et al., 2005). Finally, although age certainly is a risk factor for falling, historical fall data on oncology units indicate that patients who fall often are younger than 65 years and frequently underestimate their risk for falling.

In a case-control study by Krauss et al. (2005), care-related risk factors that predicted falls in hospitalized patients included altered gait or balance deficit, confusion, use of sedatives, and use of diabetic medications. Some patients with cancer experience peripheral neuropathy, which may result in a reduced sense of foot placement while walking, thus increasing the potential for falling. The impact of diabetes added an additional dimension to the risk-analysis profile. Many patients with cancer experience steroid-induced hyperglycemia, and patients without a history of diabetes may be unaware of the effects of glycemic management, such as hypoglycemia or glycemic symptoms such as frequent urination and peripheral neuropathy (Krauss et al.).

Meade, Bursell, and Ketelsen (2006) reported results from a quasi-experimental study on hourly rounds to reduce use of call lights, improve patient satisfaction, and reduce falls. Their study compared hourly rounds from 6 am–10 pm and every-two-hour rounds from 10 pm–6 am; a second group practiced every-two-hour rounds around the clock; a third control group used no formal

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