

# Effect of a Nurse-Led Psychoeducational Intervention on Healthcare Service Utilization Among Adults With Advanced Cancer

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**H**ealthcare costs in the United States that are attributed to cancer, particularly in the final year of life, are substantial and projected to climb (Mariotto, Yabroff, Shao, Feuer, & Brown, 2011). Expenditures directly associated with cancer treatments (e.g., surgery, chemotherapy, radiation therapy) constitute a large part of these increasing costs, estimated to exceed \$100 billion annually (Roehrig, Miller, Lake, & Bryant, 2009). Greater healthcare service utilization, including emergency department (ED) visits and inpatient hospitalizations, are also significant contributors to the growing costs of cancer care (Alemayehu, Buysman, Parry, Becker, & Nathan, 2010; Kutikova et al., 2005; Lang et al., 2009; Vera-Llonch, Weycker, Glass, Gao, Borker, Barber, & Oster, 2011; Vera-Llonch, Weycker, Glass, Gao, Borker, Qin, & Oster, 2011). ED visitation is particularly common among patients with advanced cancer (Barbera, Taylor, & Dudgeon, 2010). ED visits and inpatient hospitalizations can place substantial financial and emotional burdens on patients and families.

Healthcare service utilization among patients is often attributable to the diverse challenges patients face with regard to health-related quality of life (HRQOL) (Barbera et al., 2010). Functional status deficits and symptoms (e.g., pain, dyspnea) are common triggers for patients to seek care through the ED or urgent care (Barbera et al., 2013). Depression and emotional distress are also common in this population (Carlson et al., 2004; Zabora, BrintzenhofeSzoc, Curbow, Hooker, & Piantadosi, 2001) and have been independently associated with excessive healthcare service utilization in prior studies (Himelhoch, Weller, Wu, Anderson, & Cooper, 2004; Unützer et al., 1997).

The report *Delivering High-Quality Cancer Care: Charting a New Course for a System in Crisis* (National Research Council, 2013) emphasized the need for improved management of physical and psychological

**Purpose/Objectives:** To examine differences in healthcare service utilization among patients with advanced cancer participating in a nurse-led psychoeducational intervention.

**Design:** Secondary analysis of trial data.

**Setting:** Four Michigan cancer centers.

**Sample:** 484 patients with advanced cancer.

**Methods:** Patients were randomized to three groups: brief intervention, extensive intervention, or control. Medical chart review took place at baseline, three months, and six months to measure patients' healthcare service utilization, defined as emergency department (ED) visits or inpatient hospitalizations. Multivariable logistic regression was used to examine the odds, by study arm, of visiting the ED and being hospitalized, controlling for patient sociodemographic and health status factors, as well as baseline health-related quality of life (QOL).

**Main Research Variables:** Study arm (brief, extensive, or control), ED visitation (one or more times versus none), inpatient hospitalizations (one or more times versus none), and covariates.

**Findings:** No significant differences in ED visits or inpatient hospitalizations were observed among study arms. ED visits were more frequent for patients with lung or colorectal cancer, more comorbidities, and lower baseline QOL. Baseline QOL was associated with inpatient hospitalizations in the adjusted analysis.

**Conclusions:** The psychoeducational intervention, either in brief or extensive format, is unlikely to increase healthcare service utilization.

**Implications for Nursing:** Efficacious nurse-led psychoeducational interventions to improve QOL do not place undue burdens on the healthcare system and may improve care.

**Key Words:** psychoeducational intervention; psychosocial intervention; healthcare service utilization; advanced cancer

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symptoms for patients with cancer, as well as optimization of care-associated costs. Psychoeducational and psychosocial interventions intended to improve HRQOL have demonstrated favorable efficacy among