Associations Between Multiple Chronic Conditions and Cancer-Related Fatigue: An Integrative Review

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Problem Identification: To summarize the current state of nursing knowledge related to the association of multiple chronic conditions (MCCs) and cancer-related fatigue (CRF) in patients with solid tumors during chemotherapy.

Literature Search: A systematic literature search of PubMed, CINAHL®, EMBASE, Cochrane, and ProQuest Dissertations and Theses for primary nursing research from January 2000 to June 2012 that examined the prevalence and/or severity of CRF with MCCs or a single comorbidity.

Data Evaluation: The studies were appraised for the clarity and focus of the research question and the appropriateness of the method and research design. A 13-item quality criteria checklist evaluated the data from each article on a 0–2 scale (0 = poor, 1 = fair, 2 = good).

Data Analysis: Of 329 abstracts, 21 studies were included in the analysis. The association of MCC and CRF was mostly reported in aggregate, with a mean of three MCCs per patient.

Presentation of Findings: Having one or more other comorbidities was significantly associated with the prevalence and severity of CRF. Specifically, arthritis, hypertension, and cardiac disease, although not consistently or clinically defined across studies, are associated with an increased prevalence and severity of CRF. The association of MCC and CRF prevalence and severity was inconsistent because of the variability in the measures used and the time span identified to measure changes.

Implications for Nursing Practice: Awareness of the prevalence of MCCs is essential to support patients experiencing CRF. Holistic nursing assessment of the patient's symptoms—with an awareness of MCCs—would help improve symptom management to limit the effect of CRF.

Key Words: fatigue; symptoms; integrative review

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Cancer-related fatigue (CRF) is a persistent symptom present at diagnosis, during treatment, and for months or years post-treatment (Berger et al., 2013). Although CRF may occur in combination with other cancer-related symptoms, patients identify it as the most disturbing (Curt et al., 2000; Hoffman, Given, von Eye, Gift, & Given, 2007; Ryan et al., 2007). During chemotherapy treatments, more than 30% of patients experience CRF so severe that it affects treatment decisions (Barsevick, Frost, Zwinderman, Hall, & Halyard, 2010; Cleeland, 2007; Curt et al., 2000; Donovan, McGinty, & Jacobsen, 2013; Portenoy & Itri, 1999). Patients consistently report feelings of uselessness and frustration caused by CRF that affect quality of life (QOL) and limit their perceptions of their ability to participate in symptom management strategies (Curt et al., 2000; Goldstein et al., 2012; Gupta, Lis, & Grutsch, 2007; Minton et al., 2013). The pathogenesis of CRF is not fully understood (Mustian et al., 2007; Ryan et al., 2007). One of the many factors could be the interaction between the mechanisms of CRF and the pathogenesis of other chronic comorbidities.

Eighty-one percent of patients with cancer report at least one comorbidity (Rothrock et al., 2010), and 32% have more than two comorbidities (Ogle, Swanson, Woods, & Azzouz, 2000). Multiple chronic conditions (MCCs) are defined as "the existence of two or more concurrent chronic conditions in one person"(U.S. Department of Health and Human Services [USDHHS], 2010, p. 2). Chronic conditions are defined as those that "last a year or more and require ongoing medical attention and/or limit activities of daily living" (USDHHS, 2010, p. 2). The wide range of chronic conditions (e.g., arthritis, diabetes, heart disease, hypertension, lung disease) may have a synergistic effect that increases fatigue severity and decreases QOL (Institute of Medicine [IOM], 2012).

Effective management of a coexisting cancer diagnosis with other chronic illnesses is a challenge (Tinetti et al., 2011). Symptoms associated with MCCs can overlap and confound the healthcare provider's evaluation of a patient's health status, QOL, and symptom management abilities (IOM, 2012). MCCs present a potential for increased symptom severity, increased symptom burden, and decreased QOL (IOM, 2012). The current