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# Nausea, Pain, Fatigue, and Multiple Symptoms in Hospitalized Children With Cancer

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Understanding the symptoms children with cancer experience is a valuable asset for medical professionals. Prevalence, severity, and distress of symptoms can vary throughout the course of the illness—during diagnosis, treatment, and hospitalization (Yeh et al., 2008). Although mortality rates for childhood cancer have declined by more than 50% since 1975, cancer is one of the leading causes of death in children, second only to accidents (American Cancer Society, 2011). Higher survival rates have been achieved through the use of improved treatments, aggressive chemotherapy, medication, and increased patient participation in clinical trials (American Cancer Society, 2011; Linder, 2005). However, the severity and distress of symptoms experienced by children as they undergo life-sustaining treatments continue to persist.

Since the early 2000s, an increase has occurred in the number of studies documenting symptom prevalence in children. Pediatric symptom research provides clinicians with the understanding of how growth, development, metabolism, and other physiologic factors affect a child's experience with cancer and treatment (Baggott, Dodd, Kennedy, Marina, & Miaskowski, 2009). Although several adult-focused studies on symptoms have been conducted, their findings cannot be generalized to the pediatric population because of physiologic differences between children and adults (Baggott et al., 2009). Adult-focused research provided direction for pediatric research in the areas of data collection and organization of symptoms, specifically through the use of multidimensional scales and the concept of symptom clusters (Collins et al., 2000; Hockenberry et al., 2010).

Current research has shown that symptom severity can potentially delay treatment, its effectiveness, and recovery. However, the very symptoms that potentially had a negative effect on long-term outcomes often were overlooked

**Purpose/Objectives:** To describe the prevalence, frequency, severity, and distress of multiple symptoms in hospitalized children with cancer and to examine the overall symptom scores and global distress in patients reporting nausea, pain, and fatigue.

**Design:** Descriptive design with repeated measures.

**Setting:** Inpatient pediatric hematology-oncology unit.

**Sample:** 39 inpatients (ages 10–17) diagnosed with cancer.

**Methods:** Five-day data collection using the Memorial Symptom Assessment Scale (MSAS) Pediatric 10–18.

**Main Research Variables:** Thirty-one symptoms included in the MSAS Pediatric 10–18.

**Findings:** The most common symptoms (prevalence greater than 34%) were nausea, fatigue, decreased appetite, pain, and feeling drowsy. Differences in symptom experiences occurred in the presence of nausea, pain, and fatigue compared to days when they were not reported ( $p < 0.001$ ). Prevalence of pain and fatigue symptoms decreased over the five days ( $p < 0.05$ ), but not nausea ( $p > 0.05$ ).

**Conclusions:** Nausea, pain, and fatigue were among the most prevalent symptoms in hospitalized children with cancer; however, the most prevalent symptoms were not always the most severe or distressing. The presence of these symptoms significantly impacted symptom experience, including total burden of symptoms experienced by the child (i.e., global distress).

**Implications for Nursing:** Additional examination of symptom management is needed. Nausea and its related symptoms have received little attention and more effective interventions are warranted. Multidimensional scales and the use of handheld electronic devices to track symptoms may be used to provide a more comprehensive assessment and treatment of symptoms.

for the sake of disease-curing treatment interventions (Hockenberry & Hooke, 2007; Yeh et al., 2008). Acute and delayed side effects were present throughout the course of cancer diagnosis and treatment or during end-of-life