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Patterns of Fatigue in Adolescents Receiving Chemotherapy

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Adolescents diagnosed with cancer represent a group of patients with a unique cancer epidemiology, development profile, and research needs. The population's most common cancers include lymphoma, leukemia, central nervous system cancers, endocrine and germ cell tumors, and sarcomas—a spectrum of cancers different than that seen in adults or in younger children (Bleyer, Viny, & Barr, 2006). Adolescents face cancer and receive treatment at a time in life that is full of physical, social, and psychological growth that determines future careers, lifestyles, and relationships. These circumstances result in cancer treatment and symptom experiences for adolescents that are not likely to reflect those of younger children or adult patients. Age-specific research, therefore, is required to determine tailored disease and symptom-management strategies for these vulnerable adolescents with cancer.

Cancer-related fatigue is one of the most frequent symptoms reported by adolescents and rated as one of the most distressing (Gibson et al., 2005; Hedstrom, Ljungman, & von Essen, 2005; Hockenberry-Eaton et al., 1998; Ream et al., 2006). Compared to children, adolescents are more aware of the combined physical and mental aspects of fatigue as well as more contributing and alleviating factors (Hinds et al., 1999). Fatigue adds a burden to adolescents' abilities to participate in usual activities and affects their mood and quality of life (Davies, Whitsett, Bruce, & McCarthy, 2002; Gibson et al., 2005; Meeske, Katz, Palmer, Burwinkle, & Varni, 2004; Woodgate, 2005). Although fatigue may be most disruptive to adolescents during cancer treatment, studies show that fatigue can persist as adolescents complete their treatment and mature into young adults, affecting social and career outcomes (Edwards, Gibson, Richardson, Sepion, & Ream, 2003; Langeveld, Ubbink, & Smetz, 2000; Ng et al., 2005; Ream et al., 2006).

Purpose/Objectives: To describe patterns of fatigue in adolescents and the impact of fatigue during one month of chemotherapy, to explore variables that affect fatigue, and to explore the feasibility of collecting daily self-report data in this population.

Design: Longitudinal, descriptive.

Setting: Two pediatric oncology centers in central Virginia.

Sample: 20 adolescents with a variety of cancer diagnoses receiving chemotherapy.

Methods: Adolescents described daily fatigue for one month using rating scales and qualitative diaries.

Main Research Variables: Fatigue severity.

Findings: Adolescents commonly reported a peak in fatigue in the days immediately following chemotherapy administration. The most common pattern for adolescents who received chemotherapy on a schedule every three to four weeks was a "declining rollercoaster" pattern, with fatigue severity alternating on a daily basis but gradually declining until chemotherapy was scheduled again. Adolescents who received chemotherapy weekly showed more frequent peaks and troughs (the "yo-yo" pattern) that did not diminish in severity over the weeks of the study. Adolescents associated fatigue with other symptoms, particularly sleep-wake disturbances, pain, and nausea, and frequently reported that fatigue interfered with daily activities.

Conclusions: Fatigue commonly bothers adolescents receiving chemotherapy, particularly in the days following chemotherapy administration and when other symptoms are present. Although fatigue interfered with the adolescents' abilities to maintain their usual lifestyles, many still participated in the typical activities of adolescence.

Implications for Nursing: Fatigue is a complex and dynamic symptom. Oncology clinicians and researchers should frequently assess fatigue in adolescents receiving chemotherapy and apply timely and tailored interventions to match the factors that contribute to fatigue and influence fatigue severity. Management of fatigue during treatment will help adolescents stay involved in age-related activities and meet developmental milestones.