Symptom Prevalence and Physiologic Biomarkers Among Adolescents Using a Mobile Phone Intervention Following Hematopoietic Stem Cell Transplantation

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**Purpose/Objectives:** To examine symptom reports and physiologic parameters in adolescents using the Eating After Transplant (EAT!) intervention during recovery after hematopoietic stem cell transplantation (HSCT).

**Design:** Repeated measures design.

**Setting:** HSCT service at a pediatric teaching institution in the southern United States.

**Sample:** 16 adolescents recovering from a first-time allogeneic HSCT.

**Methods:** Use of EAT! was monitored electronically, symptom reports were obtained from a questionnaire, and physiologic parameters were obtained from the medical record at HSCT hospital discharge and 20, 40, and 60 days postdischarge.

**Main Research Variables:** EAT! use, symptom prevalence, symptom-related distress, and physiologic parameters including weight, body mass index (BMI), pre-albumin, and albumin.

**Findings:** Symptom prevalence was highest at hospital discharge and steadily declined; however, mean symptom distress scores remained stable. Mean weight and BMI significantly declined during the first 60 days postdischarge; pre-albumin and albumin markers were unchanged. No correlation was noted among use of EAT! and any research variables.

**Conclusions:** The most frequent symptoms were not always the most distressing symptoms. Weight and BMI significantly declined during HSCT recovery.

**Implications for Nursing:** Nurses should assess symptom frequency and distress to fully understand patients’ symptom experiences. Nurses should monitor weight and BMI throughout HSCT recovery.

**Key Words:** pediatric oncology; stem cell/marrow transplantation; quantitative nursing research

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**Background**

HSCT is a common treatment modality for pediatric illnesses, including a variety of malignancies, hematologic diseases, immunodeficiency disorders, and genetic disorders. About 1,200 allogeneic HSCTs are performed annually in the United States in children younger than age 18 years (National Marrow Donor...