

Dyadic Intervention to Improve Patient-Family Caregiver Team-Based Management of the Medical Regimen after Allogeneic Hematopoietic Cell Transplantation

Donna M. Posluszny, PhD^{1,2}; Mounzer Agha, MD^{1,2}; Dana H. Bovbjerg, PhD^{1,2}; Annette DeVito Dabbs, PhD, RN³; Lindsay M. Sabik, PhD⁴; Susan M. Sereika, PhD³; Arthur Nezu, PhD⁵; Karen L. Syrjala, PhD⁶; Mary Amanda Dew, PhD^{1,2}

¹University of Pittsburgh, Pittsburgh, PA, USA; ²UPMC Hillman Cancer Center, Pittsburgh, PA, USA; ³School of Nursing, University of Pittsburgh, Pittsburgh, PA, USA; ⁴Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA, USA; ⁵Drexel University, Philadelphia, PA, USA; ⁶Fred Hutchinson Cancer Research Center, Seattle, WA, USA.

Allogeneic hematopoietic cell transplantation (HCT) can be a lifesaving, yet risky, treatment for patients with hematologic disease. Following a protracted inpatient stay, patients must follow a complex medical regimen that requires the help of a family caregiver. Adherence to the regimen, however, is a significant clinical problem. Evidence-based interventions to help patients and their family caregivers manage the challenging post-HCT regimen together are urgently needed but have received little research attention. We are in the process of further developing a dyadic problem-solving therapy (DPST-HCT) intervention to help patients and their family caregivers manage the post-HCT medical regimen as a team. The planned research will make use of a combination of qualitative and quantitative methods iteratively within a user-centered design approach to refine the intervention and provide evidence of acceptability, feasibility, and efficacy.

In Stage 1, we conducted 9 focus groups with patients, family caregivers, and health care professionals (HCPs) to obtain feedback on medical management challenges and potential usefulness of DPST-HCT. Patient groups (3 groups, n=12) and family caregiver groups (3 groups, n=12) provided feedback on the intervention's timing and frequency, use of a problem-solving approach, value of including both patient and family caregiver, and video conference format. HCPs (3 groups, n=12) provided feedback on their medical challenges with patients, the needs of patients and family caregivers as they manage the medical regimen, and the potential value of DPST-HCT. The intervention is undergoing refinement based on this feedback.

In Stage 2, we will further refine the intervention with a small number of patient-family caregiver dyads who will complete the entire intervention and provide ongoing feedback during it. In Stage 3, we will evaluate the final version of DPST-HCT in a single-site randomized controlled trial (RCT), in which 104 newly transplanted allogeneic HCT patient-family caregiver dyads (N=208) will receive either DPST-HCT or Enhanced Usual Care. We will (a) determine process considerations (acceptability, feasibility); and (b) provide an initial test of intervention efficacy on primary outcomes (dyadic team-based management: adherence and self-efficacy), and secondary outcomes (patient and family caregiver well-being, perceived health, health-related quality of life, patient clinical events, and patient health care utilization). Outcomes will be assessed at 1-, 5-, 12- and 24-weeks post-intervention completion. Anticipated results will provide further support for a dyadic team-based approach to post HCT medical regimen management and serve as the basis for a multi-site RCT to test DPST-HCT.