Hematopoietic stem cell transplantation (HSCT) is now the second most frequent major organ transplant in the US and is used as the treatment of a variety of malignancies and bone marrow failure disorders. An estimated 45,000 transplants are performed each year, 2000 in patients under 20 years of age. There are more than 90,000 survivors of this procedure in the US. HSCT recipients and their families are extremely vulnerable as a result of the physical and psychological demands of the treatment, the geographic dislocation, and physical and social isolation. During the transplant recovery process, care shifts back from the transplant center to the child's home and local treatment center with the parents assuming the primary responsibility for the child's care. Traditional hospital-based interventions have focused on the peri-transplant period, but given the prolonged and demanding period of recovery (6-12 months), alternative interventions are needed. To address these issues, we are collaborating to develop a highly transportable transplant-specific module, adapted from the well-established Comprehensive Health Enhancement Support System (CHESS), HSCT-CHESS. This module will be an interactive, web-based, health information and support system for pediatric HSCT parents and families. Through a randomized controlled trial of 190 parents at four pediatric HSCT centers across the US, we will evaluate the impact on health-related quality of life (HRQL) of HSCT-CHESS, comparing it to standard care over a six-month intervention period beginning June 2007. Information about the impact of pediatric HSCT on the family will also be collected over the same time period. This proposal sheds new light on the application of interactive health communication systems to a new population, by formally exploring the mechanism of action and identifying who may benefit most by this approach. The study also directly investigates the link between interactive health communications and HRQL. The results of the proposed family-centered evaluation will have important implications for family adaptation in other intensive cancer treatments. This intervention has the potential to serve as a model in other clinical situations in which complex care is shared by health care providers with different expertise in geographically distant sites, particularly those in which