Photography in Telemedicine

Improving diagnosis of chronic graft-versus-host disease

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BACKGROUND: The long-term follow-up (LTFU) team at the Seattle Cancer Care Alliance uses telemedicine to diagnose and treat post-transplantation complications in hematopoietic cell transplantation (HCT) survivors. Photos are often requested via the telemedicine service to aid in diagnosis, but they are typically of poor quality, making them unusable.

OBJECTIVES: This project offered bachelor of science in nursing students, partnered with a comprehensive cancer center, the opportunity to participate in an evidence-based practice project to improve detection and management of chronic graft-versus-host disease (cGVHD) in patients after HCT.

METHODS: Students partnered with RNs to develop instructional tools using multiple evidence sources. A brochure and video were developed.

FINDINGS: Providing these instructional tools to those in the LTFU program improved patient outcomes for managing cGVHD through telemedicine. This partnership provided an opportunity for mutual learning and improved clinical practice.

KEYWORDS
evidence-based practice project; chronic graft-versus-host disease; telemedicine

DIGITAL OBJECT IDENTIFIER
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THE SEATTLE CANCER CARE ALLIANCE (SCCA) is a leading cancer treatment center in Seattle, Washington, that cares for patients with all cancer diagnoses. The long-term follow-up (LTFU) program at SCCA provides lifelong support to patients after they receive hematopoietic cell transplantations (HCTs). In addition to onsite clinical HCT survivorship care, the LTFU program uses telemedicine to continue working with patients after they relocate to their homes in various places around the world (SCCA, n.d.-b). Multiple authors have reported the myriad challenges of caring for HCT survivors as they leave the transplantation center and return to their home communities, as well as the importance of a continued partnership between the transplantation center and local providers to reduce morbidity and mortality in this population (Bhatia, 2014; Majhail & Rizzo, 2013; Tichelli & Rovó, 2015). A study of 441 Australian patients undergoing HCT evaluated, for the first time, HCT survivor preferences in long-term post-transplantation care delivery (Dyer et al., 2016). In this study, many HCT survivors preferred to receive LTFU care from their transplantation physicians (45%), and 74% of survivors preferred follow-up care administered at the transplantation center or through a satellite clinic or telemedicine service offered through the transplantation center (Dyer et al., 2016). Some outcomes of telemedicine in oncology care (teleoncology) are patient and local healthcare provider satisfaction, particularly as it relates to reduction in travel time and less disruption to family or work routines for patients, and the ability to network and receive support from tertiary centers for local providers (Sabesan, 2015). Providers in the LFTU program often rely on patients' at-home photos of problems to improve diagnosis and propose treatments. One study from Brazil evaluating the effectiveness of teledentistry reported that, in 88% of cases, a correct diagnosis was made for oral cavity diseases using photos sent via email (Torres-Pereira et al., 2008). In a similar study done in Switzerland evaluating teledermatology, skin conditions were diagnosed correctly in 67% of cases, with a narrowing of the differential diagnoses in an additional 17% of cases; therapeutic recommendations could be made 70% of the time from digital images sent by patients (Rimner, Blozik, Fischer-Casagrande, & Von Overbeck, 2010).

With expanding indications for HCT and improvements in supportive care, the use of HCT is increasing. About 600,000 HCTs are performed annually