

# Patient and Provider Use of Electronic Care Plans Generated From Patient-Reported Outcomes

Jeannine M. Brant, PhD, APRN, AOCN®, FAAN, Karen B. Hirschman, PhD, MSW, Sarahlena L. Keckler, BS, William N. Dudley, PhD, and Carrie Stricker, PhD, RN, AOCN®

**OBJECTIVES:** To determine if patients and providers perceived improved care processes through the delivery of personalized, electronic care plans (CPs) generated from the Carevive Care Planning System™.

**SAMPLE & SETTING:** 121 women (51 with gynecologic cancer from Billings Clinic and 70 with breast cancer from Moffit Cancer Center) completed electronic patient-reported outcome assessments and were given electronically generated, personalized supportive CPs tailored to individual symptoms and local healthcare resources.

**METHODS & VARIABLES:** Quantitative instruments evaluated feasibility, usability, acceptability, and satisfaction of the CPs from patient and provider perspectives. Qualitative interviews described patient perceptions of the CPs.

**RESULTS:** Patients with cancer reported the CPs to be useful. Most perceived that CPs improved team communication, helped find needed resources, and helped manage symptoms. Provider satisfaction was highest with the platform's ability to customize patient recommendations. Interviews indicated that patients with cancer used their CP as a resource, preferred delivery at treatment initiation, and valued information to manage symptoms.

**IMPLICATIONS FOR NURSING:** Nurses play an integral role in patient education and in discussing individual care. Tailored CPs can be used as a teaching tool that patients with cancer can refer to for self-care.

**KEYWORDS** breast cancer; gynecologic cancer; symptoms; supportive care; care plan; technology  
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Symptoms are common across the cancer trajectory, from diagnosis and treatment through to survivorship and/or end of life. Symptom assessment has historically been completed by clinicians whose findings may not coincide with patient reports. Findings from an integrative review of 36 studies on patient-reported outcome (PRO) measures revealed that clinicians tend to underestimate the prevalence, severity, and distress of patients' symptoms (Xiao, Polomano, & Bruner, 2013). Lowest congruence was found in symptoms not easily observed, such as depression and anxiety. Data also suggest that incorporating PRO symptom measurement during treatment can improve patient-provider communication (Berry et al., 2011) and patient outcomes, such as reducing symptom burden (Mooney et al., 2017) and improving quality of life and survival (Basch, Deal, et al., 2017; Denis et al., 2019; Loh et al., 2018). Overall, a need exists for PROs to be incorporated into daily clinical practice using real-time, self-reported descriptions of the patient experience. In turn, clinicians need support to incorporate PROs into patient care. The inclusion of oncology nurses in this workflow appears to be crucial to achievement of outcomes (Mooney et al., 2017).

Implementation of symptom PROs into cancer care remains challenging. A scoping review by Howell et al. (2015) found that PROs were acceptable to patients with cancer, their providers, and nurses, and that PROs enabled earlier detection of symptoms and problems; however, significant implementation barriers were identified, including time constraints, increased visit times, and perceptions that PROs were intrusive and had questionable use. Other barriers included lack of knowledge about how to address information gathered and liability issues for PROs reported between visits (Howell et al., 2015). Mooney et al. (2017) found that assignment of a dedicated oncology nursing resource helped overcome these barriers.