

Chemotherapy-Induced Peripheral Neuropathy

Use of an electronic care planning system to improve adherence to recommended assessment and management practices

Robert Knoerl, PhD, RN, Celia Bridges, BA, BSN, RN, Gloria L. Smith, DNP, RN, ACNP, James J. Yang, PhD, Grace Kanzawa-Lee, BSN, RN, and Ellen M.L. Smith, PhD, APRN, AOCN®, FAAN

BACKGROUND: Chemotherapy-induced peripheral neuropathy (CIPN) is often inadequately assessed and managed by advanced practice providers.

OBJECTIVES: The aim is to explore the impact of CIPN assessment training and electronic care planning system (CPS) use on CIPN assessment documentation and guidelines adherence.

METHODS: The authors used a pre-/post-test, prospective design with two retrospective chart reviews. Six providers received CIPN assessment training and used the CPS to manage CIPN for 75 women receiving neurotoxic chemotherapy.

FINDINGS: CPS use significantly improved documentation of numbness and nonpainful CIPN management strategies but had no effect on documentation of additional assessment variables or painful CIPN management.

KEYWORDS

clinical guidelines; chemotherapy-induced peripheral neuropathy; symptom assessment

DIGITAL OBJECT IDENTIFIER

10.1188/18.CJON.E134-E140

CHEMOTHERAPY-INDUCED PERIPHERAL NEUROPATHY (CIPN) is a common side effect of neurotoxic treatment (e.g., taxanes) that can persist for months to years after treatment completion (Cavaletti et al., 2013; Kautio, Haanpää, Kautiainen, Kalso, & Saarto, 2011; Mols, Beijers, Vreugdenhil, & van de Poll-Franse, 2014). The main symptoms of CIPN—numbness, tingling, and pain in the hands and feet—may negatively affect quality of life (QOL) (Mols et al., 2014; Park et al., 2013) and cause chemotherapy dose delays or reductions and cessation of effective neurotoxic chemotherapy (Shah et al., 2018). Prompt assessment and subsequent management of CIPN may improve physical functioning and QOL in individuals with cancer, but CIPN routinely is inadequately assessed and managed by providers in clinical settings (Smith et al., 2014).

Although CIPN assessment and care are integral components of quality care (Joint Commission International, 2017), documentation of CIPN assessment is suboptimal and varies among nurses, nurse practitioners, and institutions (Lavoie Smith et al., 2009; Smith, 2013; Smith et al., 2014). Despite having adequate knowledge about the importance of CIPN monitoring, nurses and nurse practitioners report the following barriers to CIPN assessment:

- Comprehensive assessment is time-consuming.
- Nurses and nurse practitioners may lack knowledge and confidence in conducting thorough assessments (Binner, Ross, & Browner, 2011; Smith, 2013; Smith et al., 2014; Visovsky et al., 2012).
- Evidence-based standards of care defining optimal assessment approaches for CIPN are lacking (Hershman et al., 2014).
- Standardized neuropathy measures are not easily accessible to clinicians (Smith et al., 2014).

In addition, management of CIPN also is difficult because of a dearth of safe, effective CIPN treatment or prevention strategies. Duloxetine 60 mg per day is the only treatment recommended for painful CIPN (Hershman et al., 2014; Smith et al., 2013).