SmartPhrase

Development of an electronic health record system to promote chemotherapy and immunotherapy safety

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A collaborative interprofessional team of healthcare providers from a regional comprehensive community cancer program established standardized chemotherapy and immunotherapy preadministration documentation in the electronic health record. This quality improvement project facilitated adherence to administration considerations defined within Oncology Nursing Society chemotherapy and immunotherapy guidelines and established organizational accreditation goals. The goal was to foster safe and seamless patient-centered care.

AT A GLANCE

- Interprofessional healthcare providers can utilize teamwork and collaboration to create standardized, evidence-based processes to optimize chemotherapy and immunotherapy documentation.
- A centralized location in the electronic health record to document tolerance, dose adjustments, and ongoing maintenance across all stages of cancer treatment increases quality of care.
- Chemotherapy and immunotherapy preadministration SmartPhrases, or notes, support patient-centered care and rapid access for review of deviations and patient tolerance of treatment regimens.

KEYWORDS
chemotherapy; immunotherapy; patient-centered care; electronic health record

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Chemotherapy and immunotherapy treatment regimens include high-risk medications related to their narrow therapeutic index and high risk for toxicities. Complex multidrug and multiday regimens create a susceptibility for errors if adherence to protocols is inconsistent or if pertinent patient-specific information is omitted (LeFebvre & Smith, 2019). Prior to administration, verification of accurate patient information by two practitioners who are chemotherapy certified is required at Providence Regional Medical Center Everett (PRMCE), a 571-bed medical center and dedicated comprehensive cancer center in Washington state, to meet guidelines and recommendations for safe practice. According to Neuss et al. (2017), dual verification prior to administration needs to include the following components:

- Diagnosis
- Drugs, including accurate dosing
- Protocol, with or without deviation
- Correct route
- Treatment plan and schedule
- Signed consent
- Accurate height and weight or body surface area (BSA)
- Laboratory work within administration parameters
- Completed patient education
- IV access device and site assessment for patency and condition

Adherence to the dual verification process minimizes professional liability and maximizes patient safety.

Opportunity for Improvement

The interprofessional improvement team at PRMCE observed variation in medication preadministration practices on their 34-bed inpatient medical oncology unit. Lack of comprehensive documentation and adherence to the Oncology Nursing Society (ONS) recommendations and guidelines for chemotherapy and immunotherapy administration generated safety and liability concerns (LeFebvre & Smith, 2019). Informal prechecks were completed on paper and not integrated as part of the electronic health record (EHR). Patient-specific information related to treatment tolerance, protocol deviations, and dose adjustments were not consistently communicated verbally or documented electronically across all stages of care and clinical settings. Without a centralized location in the EHR, this lack of documentation provided a significant opportunity for improvement (Bakshi & Trivedi, 2018).

The quality improvement project goals included (a) standardization of preadministration documentation with dual provider verification and (b) centralization of relevant information in the EHR. This project was implemented during a 13-month period with a primary aim of developing a reliable mechanism for tracking individual patient tolerance, side effects, and complications.

Project Interventions

An interprofessional team was formed to implement a standardized process using evidence-based interventions for chemotherapy and immunotherapy documentation (Cantril et al., 2019). The EHR