

Improving Chemotherapy Administration on an Inpatient Pediatric Oncology Unit Through Implementation of EMR Chemotherapy Communication Order



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ABSTRACT

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Problem Statement: Many pediatric oncology patients receive treatment on an inpatient unit following a new diagnosis or after being acutely ill. Due to the complex nature of treatment, patients often experience delays in receiving chemotherapy while hospitalized.

Purpose: This project aims to evaluate the impact of implementing a chemotherapy notification order in the electronic medical record (EMR), seeking primarily to reduce time to chemotherapy administration.

Approach: We collaborated with an interdisciplinary team, including information technology, pharmacy, the pediatric medical team, and nursing to identify causes for chemotherapy delays and methods for improvement. We identified communication as a main contributor and sought to transition treatment plan communication from a verbal order to a time-stamped EMR order to provide the registered nurse a concrete plan of care. Guided by existing chemotherapy notification orders used in adult oncology at our institution, we introduced the EMR chemotherapy notification order to the administration process to communicate treatment initiation to the interdisciplinary team and signal the nurse to release chemotherapy from the treatment plan while following Association of Pediatric Hematology/Oncology Nurses guidelines.

Findings: We identified three interval times to evaluate various steps in the chemotherapy administration process. Prior to the implementation of the notification order between February and May 2022, for inpatient admissions, the interval time from “second provider’s signature” to “order released” averaged one and a half hours. The interval time between “order released” and “medication dispensed” by pharmacy averaged one hour. The final interval time between “medication dispensed” by pharmacy and “medication administration” averaged almost four hours. During the initial 3 months post-implementation, we have seen a decrease of 30% in the time interval from “order release” to “medication dispensed” and an 8% time reduction from “order release” to “medication administration.”

Conclusion and Implications for Future Clinical Practice: This project allowed our specialty interdisciplinary team to evaluate current practice and improve our chemotherapy administration process for the end user, the nurse, by adding a layer of support. This will in turn reduce off-

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hour chemotherapy administration, where more novice nurses are scheduled with less availability of resources. This new process may help standardize chemotherapy administration across the institution and ultimately contribute to reduced chemotherapy delays and healthcare costs hospital wide.

COMPETING INTERESTS

The authors have no competing interests to declare.

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