Duplicate Testing

Enhancing transitions in care communication in the infusion center and emergency department settings

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Two objectives of the American Board of Internal Medicine's Choosing Wisely® initiative include avoiding duplicate testing and choosing care that is free from harm. Oncology nurses in an academic comprehensive cancer center observed a pattern of testing duplication and related dissatisfaction among providers and patients. A quality improvement project was initiated to quantify the problem and reduce duplication by implementing collaborative solutions to improve interdepartmental communication during handoffs. Postimplementation data revealed a 35% decrease of testing duplication in the patient population.

AT A GLANCE

- Communication and collaboration between clinical settings can affect safe handoff in support of patients at risk of systemic inflammatory response syndrome or sepsis.
- Duplication of laboratory tests can result in adverse outcomes for both patients and healthcare systems.
- Innovation to create electronic solutions with practical applications may affect the quality of sepsis care and operational efficiency.

KEYWORDS
oncology; duplicate testing; quality; sepsis; electronic health record; smart phrase

DIGITAL OBJECT IDENTIFIER
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The Joint Commission (2013) has identified miscommunication between sending and receiving facilities as one major cause of fragmented transitions of care. Oncology nurses in an ambulatory infusion center noticed a gap in communication, and developed and implemented a manual handoff tool to improve communication between the infusion center (IC) and the emergency department (ED). This quality improvement project addressed a gap in the clinical care of patients with cancer by reducing unnecessary duplicate laboratory sample collections. In addition, this quality improvement initiative provided an opportunity to improve interprofessional collaboration and teamwork, which is consistent with the core competencies of the Interprofessional Education Collaborative (IPEC, 2016). Collaboration on the design and components of the handoff tool was shared, and integration of the tool was accomplished with ease.

Project Foundation

Two objectives of the American Board of Internal Medicine (ABIM, 2019) Choosing Wisely® initiative include avoiding duplicate testing and choosing care that is free from harm. This quality improvement project is in alignment with ABIM's campaign because it reinforces that when appropriate tasks are completed, communicated, and documented between providers and departments, no additional venipuncture or large quantity of blood withdrawal is required. For example, communicating that a set of peripheral blood cultures, a lactate, and two sets of central line blood cultures from a double lumen catheter have been collected in the IC could save a patient from having 79.5 ml of whole blood withdrawn unnecessarily in the ED. This is significant and highlights what Jalbert et al. (2019) stated:

> Phlebotomy is both invasive and painful to the patient and it is estimated that for every 80 ml [of] blood drawn . . . the expected decline in hemoglobin is approximately 10 g/L or 1 g/dl. (p. 151)

This chronically ill patient population tends to be anemic from disease and/or cancer-directed therapy. Therefore, a decrease in hemoglobin by 1 g/dl can necessitate a packed red blood cell transfusion, which can add to cost and length of treatment. In addition, it is estimated to take between 15 and 30 minutes of nursing time to obtain blood cultures. In this institution, the cost of nursing time and supplies is estimated to be between $33.49 and $56.98 per patient, plus laboratory processing costs. In busy cancer centers, an interprofessional approach is warranted to improve not only communication and clinical care outcomes, but also efficiency and productivity.

Background

After observing a pattern of duplicate laboratory interventions on several patients transferred from the IC to the ED for infectious workup, a quality improvement process was initiated. In June 2019, a collaboration with the ED nurse educator