The risk for significant patient harm from inadvertent or incorrect administration of chemotherapy in the Bone Marrow Transplant Unit at the University of North Carolina (UNC)–Chapel Hill was identified as a preventable problem. According to the Institute for Safe Medication Practices (ISMP) (2008), high-alert medications, such as chemotherapeutic agents, can lead to significant patient harm, possibly death, if used in error. In a medication analysis published in 2004 by the United States Pharmacopeia, 3,871 errors involving chemotherapy were reported; 5% (n = 194) of those involved patients who received the incorrect chemotherapy (United States Pharmacopeia, 2004). Schulmeister (2006) found that 14% of 140 errors reported involved improper patient identification. Schulmeister (2008) wrote that the actual incidence of patient misidentification is unknown because it is under-reported.

After peer discussion of anecdotal actual and potential medication errors related to chemotherapy administration, and after the clinical nurse III group attended the Agency for Healthcare Research and Quality (AHRQ) TeamSTEPPS training in October 2008, the clinical nurse III staff designed and implemented a nursing practice change. TeamSTEPPS is an evidence-based teamwork system developed by the Department of Defense’s Patient Safety Program in collaboration with the Agency for Healthcare Research and Quality that focuses on communication and teamwork skills of a group to improve patient safety.

The change in practice was intended to prevent possible medication errors related to patient misidentification. Currently, institutional policy requires that all chemotherapy doses be independently double-checked by two chemotherapy-competent nurses prior to administration. The policy does not require it to be completed at the bedside (UNC Health Care, 2008). Institutional policy also requires that two unique patient identifiers (e.g., patient name, medical record number) be confirmed at the bedside and compared with the patient’s identification armband prior to medication administration (UNC Health Care, 2009). Additionally, improvement in the accuracy of patient identification with two patient identifiers is one of the National Patient Safety Goals of the Joint Commission (2008). Therefore, we initiated a bedside check with two chemotherapy-competent registered nurses of all chemotherapy doses (see Figure 1).

For this project, the team at UNC–Chapel Hill defined a bedside check as two chemotherapy-competent nurses comparing and verifying a patient’s name and medical record number printed on the patient’s identification armband against the same identifiers on the chemotherapy product label when compared to the medication administration record. A chemotherapy-competent nurse was defined as a nurse who has attended and successfully completed the Oncology Nursing Society Chemotherapy and Biotherapy Provider Course and hands-on precepting on the unit.

The patient-safety project was designed to address two questions: “Does the implementation of a bedside check of patient identification by two chemotherapy-competent nurses prior to administering chemotherapy decrease the incidence of wrong patient-related chemotherapy medication errors in the Bone Marrow Transplant Unit?” and “How consistently are these bedside checks performed?”

An evaluation tool was designed with a “brief/debrief” model and was used to collect data from November 1, 2008, to February 1, 2009. The tool captured...
compliance with the bedside check. Briefing between the charge nurse and the patient’s assigned nurse was completed at the beginning of the shift. The briefing included the room numbers of all patients receiving chemotherapy that shift. Debriefing between the charge nurse and the patient’s assigned nurse was completed just prior to the end of the shift and consisted of recording the nurse’s “yes” or “no” response to the question, “Did you have two RNs check chemotherapy in the patient’s room?” Medication variance data from August 1, 2008, to November 1, 2008, were compared to medication variance data from November 2, 2008, to February 1, 2009 (after implementation of the bedside check) to identify changes in the number of patient misidentification chemotherapy errors. Lastly, a bone marrow transplantation nursing survey was conducted, including the question, “What is the most significant improvement that you have seen in the bone marrow transplant unit in the last 12 months?” Survey responses related to the implementation of the bedside chemotherapy check were included in the data collection.

As with many changes in practice, a few road blocks were encountered. With the implementation of a bedside check, the barriers were resistance to change, lack of a readily accessible additional nurse to perform the bedside check, and nearly missed opportunities for data collection (e.g., charge nurse did not debrief). Others included miscommunication to staff that the bedside check must be performed with every dose and miscommunication of the elements that should be checked in addition to the patient’s identification (i.e., drug dose, rate, and volume).

Recognition of the barriers encouraged the team to identify nurses who would be more adaptable to change to gain their support and encourage enthusiasm for implementing the change in practice. The educational portion of the rollout of the initiative started with a word-of-mouth campaign to foreshadow the change in institutional policy. Eventually, all of the unit nurses were notified and taught at monthly staff meetings and via e-mail.

Of the 90 instances of chemotherapy administration during the data-collection period, all chemotherapy doses were double-checked by two chemotherapy-competent nurses at the bedside. Medication variance data revealed no patient misidentification chemotherapy errors on the bone marrow transplantation unit for the three months prior to and the three months after implementation of the bedside check. One hundred percent of staff cited the implementation of the bedside check as an improvement in practice. To date, the team continues to observe compliance with the bedside check and ensures adequate staffing for all bedside chemotherapy checks.

The bone marrow transplantation nursing staff changed practice by implementing a bedside check before chemotherapy administration. Nurses readily adapted to the practice change and the opportunity to improve patient safety. Medication variance data were inconclusive because no errors related to patient misidentification were reported during the time prior to or after the practice change.

As UNC-Chapel Hill continues to promote a culture of safety, the goal is to maintain a zero incidence of patient misidentification errors related to chemotherapy administration to avoid potentially catastrophic patient outcomes. Additionally, bedside checks may offer more opportunities for patients to ask questions about their chemotherapy regimens and to be proactively involved in the identification process. The team also believes that the bedside check may improve patient satisfaction; patients notice that nurses take extra care to ensure that they receive the intended, correct therapies.

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