Patient Misidentification in Oncology Care

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Patients with cancer are at risk for patient misidentification, or "wrong patient" incidents. Patient misidentification can result in medication and transfusion errors, unnecessary testing or procedures, and, in some cases, death. Patients may be misidentified when nurses mispronounce their names, refer to them by their first or last names only, are complacent and fail to check armbands, or encounter language or communication barriers. Errors caused by patient misidentification can be prevented when healthcare providers consistently use two unique patient identifiers (other than the patient's room, examination, or chair number) to verify identities.

Incidents involving patient misidentification (e.g., "wrong patient" errors) are not uncommon in oncology practice. Many of these incidents are near-miss or close-call situations that are averted at some point prior to reaching the patient. Patient misidentification is under-reported and its incidence is unknown (Rosenthal, 2003). A complicating factor in identifying wrong patient incidents is that they may be classified as other types of errors. For instance, when a medication order is inadvertently entered in the wrong patient's medical record, it may be classified as a wrong drug error for that patient rather than a wrong patient error (Joint Commission, 2006). Additionally, patient misidentification may be underestimated by healthcare providers if they are unaware that misidentification has occurred.

At a Glance

- Patient misidentification can occur at virtually any point in a patient encounter.
- Safety systems have the potential to reduce, but not eliminate, "wrong patient" errors because patient care is vulnerable to human error.
- Proper patient identification begins with patient registration.

Misidentification Factors

Patient misidentification can occur at virtually any point in the patient encounter. Patient misidentification can result in administration of the wrong drug, an unneeded procedure, inappropriate treatment, and even the wrong diagnosis. Some of the errors can be fatal, particularly those involving transfusion of blood products to the wrong patient.

- A patient switched hospital beds to be near the window and later died after being transfused with a blood transfusion of her roommate's blood type (Allen, 2005).
- A Florida woman died after receiving blood intended for another patient (Associated Press, 2004).
- A man in St. Louis was mistaken for someone else and received the wrong blood (Allen, 2005).

About 850 patients in the United States receive blood transfusions intended for someone else each year and at least 20 people die after receiving the wrong blood (Associated Press, 2004). Errors associated with blood and blood product transfusions are estimated to occur in 1 of every 1,000 blood transfusions, and two-thirds of the errors are associated with incorrect blood recipient identification (Pagliaro & Rebulla, 2006). Fortunately, most transfusion errors are averted before they reach the patient. A national reporting database found that 90% of reported blood product–related events are near-miss situations (Kaplan, 2005).

Lau and Cheng (2001) noted that safety systems have the potential to reduce, but not eliminate, transfusion errors because much of the transfusion process is vulnerable to human error. Blood drawn for blood typing and labeled as another patient's, for example, is an error that cannot be detected by automated safety systems unless previous patient information is stored in the blood bank.

Patient misidentification errors can occur when nurses mispronounce patients' names or refer to patients by their first or last names only. When nurses passively receive name verification instead of asking for the patient's name (e.g., "Mary Doe,

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please follow me"), they create a risk that the wrong patient will respond. In addition, patient armbands taped to the side rails of hospital beds leave patients without identification when they depart the unit for testing or procedures. Armbands kept in patients' pockets, purses, or wallets make them less accessible as well. Patients are vulnerable for error when busy healthcare providers decide to rely on other types of patient identification (e.g., verbal name verification or face recognition) rather than wait until patients locate the armbands.

Complacency can cause nurses to take shortcuts in patient identification, such as checking a patient's armband during the initial medication administration but not checking it again at subsequent medication administrations. Similarly, nurses may believe that they know their patients, particularly those who receive frequent outpatient treatments or have been hospitalized for a long period of time. In addition, joking around and not taking the patient identification process seriously can lead to errors. Figure 1 lists examples of patient misidentification incidents that were anecdotally reported to the author.

Patient Registration

In most facilities, the patient identification process begins with patient registration. Errors can occur if the wrong patient is selected from the master patient list and the wrong armband is placed on the patient or if new patient information is incorrectly entered, which then appears on the armband. Researchers at the Johns Hopkins Hospital examined the extent to which the registration process contributed to patient misidentification and found that misidentification errors occurred 7–15 times per month, with the root causes being deficiencies in the information systems, inadequate personnel training, and lack of a master patient index. The researchers noted that patient registration tended to focus on the technical aspects of the process (e.g., entering data) and that little attention was given to actually verifying patient identity (Bittle, Charache, & Wassilchalk, 2007).

The question of whether or not a nurse can verify patient identity is a valid one. Is the patient really who he says he is? Has the

- A nurse opened the door of a pediatric oncology waiting room and called out the name "Jennifer." A teenager listening to music via earphones followed the nurse to an examination room. A few minutes later, a woman opened the examination room door and said, "That's not my daughter." Two patients with the first name Jennifer were scheduled to be seen that morning.
- A nurse asked Mrs. Jackson to come back to the treatment room of an oncologist's office for chemotherapy. The nurse checked the chemotherapy orders against the medical record the receptionist had handed to her and prepared and administered the chemotherapy. Four hours later, when another Mrs. Jackson arrived for chemotherapy, the nurse realized that she had administered chemotherapy to the wrong patient.
- John Jones Jr. was being registered to donate stem cells for his father, John Jones, and was asked whether he had ever received care at that facility. He had, so the registration clerk looked for his name in the master patient list, found it, and placed an armband on his wrist. A clerk discovered that the chart corresponding to the medical record number on the man's armband was already on the transplantation unit. Both father and son were wearing identical armbands.
- An oncologist asked a nurse to "talk to the new patient in examination room 2 about an implanted port." The nurse began by asking the woman in the examination room whether the oncologist had mentioned port insertion, and the woman said "yes." The nurse proceeded to describe the insertion procedure and had been talking for about five minutes when the woman said, "You better talk to my sister about this; she's the patient and she's at the front desk scheduling the procedure."
- In a busy outpatient clinic, Juan Ramirez was called to the treatment room. When the nurse checked the patient's armband prior to chemotherapy administration, she was surprised to find that it said Juan Hernandez.
- A patient grew tired of waiting for his name to be called, so when a nursing assistant called for the next patient, he jumped up and followed the nursing assistant to the treatment area. His vital signs were taken and he was settled into his recliner when an RN checked his armband and found that she had the wrong patient. The patient said he had been waiting a long time and "figured that if he got to the back, then the nurses would have to take him."
- On St. Patrick's Day, nurses at an outpatient oncology center decided to call patients back to the treatment room by saying their "Irish names." When "Mr. O'Brezinski" was called to the back, Mr. Kruzinski followed the nurse and had unnecessary lab work drawn.
- A nursing student was asked to prepare "703B" for a lumbar puncture and place the needed supplies at the bedside. When the neurologist entered the room, he pointed to the patient in the other bed and said, "that's 703B." The nursing student said she "got mixed up" because at this hospital the B bed was by the window; at the previous hospital where she did a clinical rotation, the B bed was by the bathroom.
- An infectious disease physician was consulted to see a patient on the oncology unit. The patient and his chart were in the imaging department. The physician wrote several laboratory orders for "the patient in 302" and handed them to the unit secretary so she could imprint them with the patient's information. It is unknown whether the physician gave an incorrect room number or whether the secretary stamped the orders with another patient's information; however, a patient underwent unnecessary laboratory studies and the patient who needed the studies performed did not have them done.
- To prepare to draw blood from the central venous catheters of four patients, a nurse printed out several stickers containing the patients' information. She stuck the stickers to her uniform, went room to room to draw the blood, and inadvertently mislabeled some of the vials. The error was detected by an oncologist who questioned the laboratory values for one of his patients (his patient's white blood cell count was inexplicably low). The complete blood count was repeated for this patient and was within normal limits. The staff concluded that blood vials had been mislabeled, and laboratory studies for all four patients were redrawn.

Figure 1. Examples of Patient Misidentification

Note. Names have been changed to protect patients' privacy.

correct armband been placed on the patient? Is the information on the armband correct? The Institute for Safe Medication Practices ([ISMP], 2007) noted that nurses can only verify patient identifiers that have been assigned to the patient.

Systems should be in place to adequately train personnel involved in patient registration. Verifying patient identity, and not just entering data, should be the focus of the process. A system also is needed that ensures that correct information appears on the armband and that the armband is placed on the correct patient.

Using a consolidated patient index or master list may help reduce the risk of error, rather than having unique master lists for inpatient areas, outpatient areas, radiation therapy, etc. Reviewing and updating information also are vitally important, as changes need to be made when patients move to a new address or change their names. Patient names also should be consistent in the database. Forgetting to mention junior or senior designation, or providing a nickname or given name rather than full legal name, may result in duplicate database entries.

Patient Identification

The Joint Commission (2008) National Patient Safety Goal 1 is to improve the accuracy of patient identification by reliably identifying the individual as the person for whom the service or treatment is intended and to match the service or treatment to the individual. Clinicians are advised to use two unique patient identifiers when providing care (Joint Commission, 2008), such as the information contained on the patient's armband, driver's license, or other type of photo identification. The patient's room number, chair number, and examination room number are *not* acceptable patient identifiers. Patients also can be asked to state their full names, addresses, telephone numbers, date of birth, medical record numbers, or assigned identification numbers. Bar codes that include two or more person-specific identifiers (not room numbers) comply with Joint Commission (2007) requirements.

Many simple strategies can be implemented to reduce the risk of patient misidentification. One of the easiest is to instruct patients to *show* their armbands to healthcare providers rather than passively wait to be asked to see their armbands. Another is to consistently check armbands before administering medications, performing procedures, or sending patients for testing. It is vital that patients' identities are verified in settings in which armbands are not verified. Getting into the habit of consistently asking for two unique patient identifiers may reduce the risk of error. Nurses should never rely solely on memory or familiarity with patients (see Figure 2).

The Joint Commission mandate to verify patient identify even extends to the delivery of patients' meals and snacks. At a minimum, it applies whenever patients have particular diets or snacks that are being delivered as part of a diet plan (Joint Commission, 2007).

Batch processing or, for example, prelabeling a batch of specimen containers, can lead to patient, treatment, or specimen misidentification. Continuous flow processing, such as placing specimen labels on containers at the time of collection, not only is safer, but also has been found to be more time efficient than batch processing. The Joint Commission allows prelabeling on a patient-specific basis, but it is acceptable only when performed in the presence of the patient (Joint Commission, 2007).

The role of bar codes in reducing medical errors has received considerable attention; however, technology alone cannot ensure safety. Process changes that accompany the technology may introduce new sources of error. Wrong patient errors may still occur despite the use of bar codes. From January 1, 2000, to December 31, 2005, MEDMARX® (U.S. Pharmaceuticals) received reports of 2,783 medication errors associated with bar

With Armbands

- Verify patient identify at the time of initial patient registration (e.g., cross check with driver's license or other photo identification, ask for an additional unique identifier).
- Instruct patients to show their armbands to healthcare providers prior to receiving medication, undergoing procedures, or being tested.
- At first contact with a patient wearing an armband, verify with the patient that the information contained on the armband is correct.
- Insist that patients wear their armbands on their wrists.
- Coat the skin-side of plastic armbands with clear nail polish or place the armband over a strip of gauze for patients who say they are sensitive to plastic and will develop skin irritation if they wear an armband.
- When removing an armband for any reason (e.g., starting an IV), promptly replace the armband.
- Regularly check the legibility of armbands and replace armbands that are worn or illegible.

Without Armbands

- In settings in which armbands are not used, verify the patient's identity using two unique identifiers (e.g., ask for full name, complete address, date of birth, phone number, medical record number, driver's license, other type of photo identification).
- In settings in which armbands are not used, select two identifiers to use consistently rather than having individual staff members choose what they wish to use as patient identifiers.
- Avoid verifying patient identity by passive agreement (e.g., "you live at 12 Main Street, correct?").

General

- Verify the patient's identity every time medications are administered, testing is performed, laboratory studies are drawn, etc.
- When printing out or imprinting orders, labels, requisition slips, etc., with patient information, double check to ensure that the correct patient information appears on the items.
- Do not fill out, print, or imprint request forms for several patients at the same time.
- Do not print out or imprint more labels than are required for the task at hand. In addition to privacy concerns that arise when labels with patient information are left on countertops, the risk that the preprinted labels will inadvertently be used for another patient also is a possibility.
- Do not accept handwritten orders that contain inadequate information, such as orders that have only the patient's room number, first initial and last name, first and last initial, etc., written on them.
- Label blood vials and other laboratory testing containers immediately after samples have been obtained and before leaving the patient's chair or bedside.

Figure 2. Strategies to Reduce the Risk of Patient Misidentification Errors

code technology from 65 hospitals. Two percent of the reports were for medications administered to the wrong patient. Causes of the errors included "stat" medications that were administered without being entered into the system, medications scanned after administration instead of prior to administration, and scanning a patient's ID from the wrong medical record instead of the patient's armband (Cochran, Jones, Brockman, Skinner, & Hicks, 2007).

Biometric authentication, or use of a biometric that is permanently associated with a patient (e.g., fingerprint, retinal, 3D facial characteristics), currently is being examined as another way to confirm patient identity. Although biometric authentication has the potential to eliminate wrong patient errors, privacy and security concerns, negative patient feedback, high cost, and unreliable technology have limited its use (Li, Barreto, Chin, & Zhai, 2006; Mordini & Ottolini, 2007; Pothen & Parmanto, 2001).

The Prevention of Bedside Errors in Transfusion Medicine (PROBE-TM) study, a randomized matched-pair clinical trial conducted at 12 hospitals, found that a barrier warning on blood transfusions bags reminding staff to check the patient's armband *failed* to improve bedside transfusion practice. Despite the barrier warning tag being affixed in such as way that the transfusionist had to remove the tag to spike the blood, bedside checks of patients' armbands were performed only 37% of the time (Murphy et al., 2007).

As the PROBE-TM study findings suggest, safety initiatives are not always successful. Human behavior and habit are hard to change. Time pressures, distractions, and complacency may prompt nurses to omit verifying patient identity before administering medications, transfusing blood, or performing procedures. Nurses caring for patients who are well-known to them may rely on facial recognition rather than other forms of identification. It is easy to understand how patient misidentification can occur.

Conclusion

Patient misidentification and wrong patient errors can be prevented when healthcare providers consistently verify patient identity using two unique patient identifiers. Patients play an important role in the process and can be engaged as partners in safety. Correctly identifying patients in today's complex healthcare system is a fundamental step in helping to ensure safe patient care.

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