

## NCPS Patient Misidentification Study: A Summary of Root Cause Analyses

By Dea Mannos, M.P.H., NCPS program analyst

PATIENT MISIDENTIFICATION has been highlighted as a serious issue in medical literature. Indeed, within the VA NCPS RCA database, more than 100 individual RCA reports involving patient misidentification were noted.

This analysis indicated that patient misidentification close calls and adverse events occur in many different areas of the hospital, involving a variety of processes and with alarming regularity.

The consequences of patient misidentification events can go beyond direct harm to the immediate patient, as illustrated by the following example: Two prostate biopsies were mislabeled, which resulted in more than 10 patient specimens being unusable. More than half of the patients involved refused to return to the hospital for a second biopsy, resulting in potential misdiagnosis, delays in treatment, or complete lack of treatment.

In response to this problem and in an effort to reduce adverse events from misidentification, JCAHO recommends using at least two patient identifiers when taking blood samples or administering medications or blood products (JCAHO 2003 Patient Safety Goals, Goal #1A).

### Definition

For this internal VA study, we defined a patient as being misidentified when confusion occurred regarding vital details of care, such as blood and pathology specimens, including confusion between the identities of patients themselves. This may result in inappropriate diagnosis, treatment or surgery.

### Incident Summary

More than 100 patient misidentification RCAs were submitted to NCPS during a three-year period, from Jan. 2000 - Mar. 2003. These RCAs investigated adverse events and close calls.

Misidentification event types were classified into the following categories as a percentage of total RCAs:

- 25% — Lab activity (blood transfusions)
- 22% — Medication administration
- 19% — Invasive procedures and surgery
- 17% — Imaging and x-rays
- 11% — Admitting and record documentation
- 6% — Laboratory activity (pathology)

The most common locations where the events occurred were: cystoscopy room, blood bank, emergency department, admitting area, waiting room, ICU and OR.

### Example Case Studies From NCPS SPOT

♦ A patient was admitted for an acute cholecystectomy with his brother's admission materials. Both were treated at the same VA hospital and have similar first names. The misidentification was recognized and addressed when admission orders could not be located for the patient. He subsequently received the correct medications and the correct surgical procedure.

♦ Many patients, including add-ons, were scheduled for cataract surgery. The surgeon entered the first operating room and said, "Good morning Mr. XYZ, how are you?" The patient responded, "Fine," but was not Mr. XYZ. After the surgeon had completed the surgery, it was discovered that the patient had received the wrong lens. The surgeon removed the patient's wrong lens and put in the correct one that same day.

♦ A patient required a packed red blood cell transfusion. A resident who was not trained in blood transfusion policy drew blood from the wrong patient. The resident had not confirmed the patient's identity by verifying the first and last name, date of birth, or social security number of the patient. Based on previous samples for that patient, the blood bank noticed a discrepancy between the known blood type and the current sample, and requested a redraw. Blood was then drawn from the correct patient.

♦ Four prostate biopsies were performed on four patients. The specimens were labeled and transported to the pathology lab with requisition slips. Four slides were made from specimens and placed into an already-filled pathology tray. All cases were analyzed concurrently by a pathologist and a cancer diagnosis confirmed by a second pathologist. However, the patient information and accession number were not verified. The patient identification was switched for two of the slides, resulting in one patient having a radical retropubic prostatectomy when he did not need one and another patient having a delay in treatment for prostate cancer.

♦ Two cognitively impaired patients were in neighboring beds in the ICU, beds three and five. Blood work was ordered for the patient in bed *three*. The paperwork was stamped with the correct information; however, the nurse drew blood from the patient in bed *five*. The blood type of the new sample didn't match the historical type in the blood bank database and a blood technician contacted ICU to request a redraw. Further review of laboratory data indicated six similar close calls during the previous year, all based on historical blood type data that indicated a discrepancy between a blood sample and its paperwork or label.

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# Ensuring Correct Surgery Outside the Operating Room

*A checklist developed “to help support clear, systematic and verifiable communications for surgeries held outside the OR.”*

*By Myrtle Tate, R.N., B.S.N., M.P.P.A., risk manager, VISN 16; Debra Lewis, R.N., B.S.N., patient safety improvement coordinator, and Beverly Green-Rashad, R.N., M.S.N., operative care line nurse executive, VAMC Houston*

(The following is presented to spark discussion and does not represent NCPS policy. Depending upon specific circumstances, various alternate systems-level solutions might be more appropriate for particular clinical situations.)

THE RISK of performing an incorrect site procedure may be even higher for procedures and surgeries performed outside the operating room. Work systems in non-traditional OR settings have been customarily less standardized and less likely to be subject to checklists and other cognitive aids.

In non-traditional surgical settings, a number of conditions can lead to a communications breakdown. Care teams outside the OR often include a broader range of professionals who can become involved in a surgical procedure, such as technicians and those in multi-medical specialties. A physician can have access to surgical supplies and therefore be less dependent on the nursing staff for assistance. Nurses may also not be available to provide assistance, particularly for unplanned procedures.

We developed the "Pre-Operative/Pre-Procedure Checklist" to help support clear, systematic and verifiable communications for surgeries held outside the OR. Using the Ensuring Correct Surgery directive as a guide, the checklist helps reinforce communications and enhance patient safety.

It can be completed by any clinical staff member directly involved in the surgery or procedure, to include physicians, nurses or technicians.


Completing the check list each time an informed consent is obtained for a surgical or invasive procedure outside the OR is recommended.

The checklist has been implemented for invasive procedures in the perioperative arena at VAMC Houston. The process is well established and monitoring reveals compliance.

Here's some suggestions for gaining acceptance for the checklist:

- ◆ Offer a series of training sessions for clinical staff with emphasis on operative and invasive procedures performed outside of the OR (i.e., at bedside).
- ◆ Incorporate it into service and medical center-level resident orientations
- ◆ Identify a medical center oversight committee to monitor compliance
- ◆ Display patient safety posters in both in- and out-patient clinical areas

We developed our checklist so that it can be used to address surgical interventions as well as other invasive procedures, which is why it has a dual title. If a singular purpose is desired, the checklist could be given a name such as "Surgical Procedures Conducted Outside the OR."

The checklist was developed by VAMC Houston's Beverly Green-Rashad and James Scheurich, M.D., deputy chief of staff. 

## Pre-Operative/Pre-Procedure Safety Checklist

<b>Patient Preparation</b>	Yes	No	N/A
History & Physical completed and signed within previous thirty (30) days			
Pre-operative/pre-procedure consultations and lab testing reviewed			
Education and instructions regarding pre/post-operative or pre/post-procedure care provided and documented			
Patient ordered to be NPO and did not eat or drink except for medications			
Oral hygiene, bath, and/or shave performed			
Patient voided			
Pre-operative/pre-procedure medication given			
Patient's medication and food allergies are updated (Covered in H&P – a double check is beneficial and a significant safety measure)			
Appropriate precautions taken for patient's biohazards			
SIGNATURE/TITLE-PRACTITIONER	DATE		
<b>Patient Belongings</b>	Yes	No	N/A
Clothing removed (including underwear if applicable) and patient gowned			
Money and valuables removed with disposition:			
Jewelry removed with disposition:			
Prosthesis removed with disposition:			
Dentures removed with disposition:			
SIGNATURE/TITLE-PRACTITIONER	DATE		
<b>Patient and Operation/Procedure Verification</b>	Yes	No	N/A
Patient identity verified by ID band and by stating full name and full social security number or birthdate			
Informed consent is complete, current, and matches the intended operation/procedure			
Blood informed consent is complete and current			
Operative/procedure site(s) verified by patient (or surrogate when appropriate)			
Appropriate VAMC privileged provider has marked the intended operative/procedure site(s)			
X-ray films or other images properly labeled, presented, and oriented by two OR/procedure team members			
Prior to the procedure, during a "time-out," the operative/procedure team members verbally concurred with stated patient's name, operation/procedure, operative/procedure site(s) including laterality, and specifications of implant to be used if applicable			

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## High Reliability Team Training

### *New focus for study and action*

By Rodney Williams, Esq., NCPS program manager

NCPS has recruited several facilities to participate in a three-month pilot program to evaluate the effectiveness of team training in the VHA.

The team training concept is grounded in two decades of aviation safety and human factors engineering studies. As the complexities of tasks and environments have broadened, likewise the need for effective synchronicity and coordination of activities among members of crews, groups, teams, and collectives has increased. Severe time stress, high stakes, uncertainty, vague goals, and many organizational constraints often influence decision making in these complex environments.

Regardless of circumstance, every team can benefit from better communications. The difference between the best and a merely good team is not just how often they communicate, but whether or not they candidly and effectively discuss issues and concerns in a high stress environment.

Medical team training is becoming a rapidly more important issue. Effective communications in high stress environments are now integral to all aspects of health care delivery. Every physician, nurse and specialist who practices in the 21st century must have an in-depth knowledge of the principles of effective communications and their application to a wide vari-

ety of clinical problems. The focus of team training will be on areas such as read-back, what to do when you "feel the pinch," how to conduct briefings, and other related matters.

While we will gather information on the interaction of staff in the areas where the training is provided, this is not a major focus of the initiative. The literature has confirmed the efficacy of team training in changing the work climate and attitude of staff. Rather, the goal of this training is to gain insights into effective implementation of team training VHA-wide, as well as to learn about the specific dynamics of high reliability teams, as in our ORs and ICUs. For instance, does performance improve as a result of training? Do adverse medical events decrease? Does patient and provider satisfaction increase?

Our team is currently working with the VHA Nurse/Physician Collaboration Committee on this initiative. All concerned are very excited about the potential outcome of this training.

NCPS will share the information that we gather through this initiative with the rest of the VHA to use as what we believe will be an important resource. 🏥

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## New Patient Safety Curriculum Pilot Reviewed

*"We're seeking guidance from the group on the strategy and tactics for developing the initiative over the next year"*

By Joe Murphy, APR, NCPS public affairs officer

PHYSICIANS and patient safety professionals from VA medical centers and affiliated universities gathered in Ann Arbor, Mich., Apr. 14-16, to discuss the outcome of a patient safety curriculum pilot for residents and medical students and to offer insight on how best to proceed.

Additional perspective on the initiative was provided by a medical resident who attended one of the training modules, two medical school administrators and representatives from the Accreditation Council on Graduate Medical Education and the Agency for Healthcare Research and Quality.

"We're seeking guidance from the group on the strategy and tactics for developing the initiative over the next year," said Dr. John Gosbee, M.D., M.S., NCPS project officer overseeing the initiative.

To facilitate recommendations and comments, Dr. Gosbee led a detailed discussion that concerned how each training module was presented and received.

Providing residents and medical students with a broader understanding of patient safety can make a substantial contribution to the entire American medical community because of the size and scope of the VA health care system, which offers the largest medical education and health professions training program in the United States.

VA facilities are affiliated with 107 medical schools, 55 dental schools and more than 1,200 other schools across the country. Each year, about 81,000 health professionals are

trained in VA medical centers. More than half of the physicians practicing in the United States have had part of their professional education in the VA health care system.

The curriculum is being developed to expose those launching their medical careers to a new way of thinking about patient safety. It's another example of NCPS' multi-pronged approach to fostering a culture of safety throughout the medical community. The effort is focused on targeting and eliminating systems vulnerabilities, and developing systems-based solutions centered on prevention, not punishment.

The goal of the curriculum initiative is to embed this systems approach to problem solving into the fabric of young medical professionals' understanding of patient safety.

"The key objectives of the curriculum are to provide residents and medical students with a deeper understanding of the scope of patient safety, the basics of human factors engineering, and their professional responsibility to do something about it," said Dr. Gosbee.

The young professionals who are exposed to this new, systems-based approach to health care delivery will one day step forward to shape the future of health care, he said. "Offering them a new perspective on patient safety will benefit them and all those they treat."

A summary of this effort can be found at [http://www.acgme.org/Bulletin/11\\_02.pdf](http://www.acgme.org/Bulletin/11_02.pdf). 🏥

## Take Home Points

### Admitting Process

**Vulnerability:** Accurate patient identification at time of admission is critical. If admitting clerks are unfamiliar with computer software used during the admission process or entry screens are set up such that it makes it difficult for clerks to enter patient information, then the likelihood for misidentification is increased.

**Response:** One RCA team redesigned their admission form so that the patient's full name and social security number are printed above all other demographic information to help ensure accurate identification. Another team provided admitting clerks with training on new software used during the admission process.

### Architectural/Environmental

**Vulnerability:** RCA teams mentioned that multiple beds in one room increase the probability of patient misidentification, especially if patient identification processes rely on the informal practice of "knowing and caring" for a patient. Duplicate unit designators may also impede patient identification, especially if patients have similar names. In some cases, one waiting room for multiple clinical destinations increased the likelihood that the wrong patient would be called for a procedure.

**Response:** RCA teams sought to eliminate these root causes by establishing better patient identification processes in rooms, such as photo identification, and by eliminating duplicate unit designators. Some have added waiting rooms to clinic areas when possible to avoid patients with multiple clinical destinations being situated in the same area.

### Armbands and Scanners

**Vulnerability:** Scanning of patient armbands is a consistent method of patient identification and treatment. However, if the wrong armband is applied or scanners are unavailable, then a problem can develop. Removing armbands every time a patient is transferred to another unit may also increase the likelihood an incorrect armband is applied.

**Response:** RCA teams tried to ensure accurate patient identification by training staff in the proper usage and application of patient armbands and by developing a standardized maintenance program for scanning equipment. Other facilities purchased armbands in small and large sizes to accommodate varying wrist sizes.

### Informal Norms

**Vulnerability:** Commonly referred to as the normalization of deviance, informal norms are processes set up around systems that don't always function as expected or systems that are

difficult or unrealistic for caregivers to manage. Because of this, processes are often applied differently, depending on the patient and caregiver involved, elevating the risk of patient misidentification.

**Response:** RCA teams have avoided risking informal norms by eliminating patient "yes" responses as a method of positive identification and by enforcing policies and procedures that often involve redundant patient identification systems, such as re-identification at points of transfer. (Such actions are spelled out in the Ensuring Correct Surgery Directive found at: <http://www.patientsafety.gov/CorrectSurg.html>)

### Laboratory Labeling

**Vulnerability:** Accurate labeling of blood products, pathology slides, and other laboratory work can be compromised if patients have similar names or if multiple labels appear on one sheet. These factors can result in a wrong patient being drawn.

**Response:** Actions to ensure accurate labeling include first processing addressograph machine labels that are legible, pre-stamped but *not* affixed to the container prior to patient identification and procedure. Labels should be affixed to containers only after caregivers have verified the label against the patient armband or record, or have asked the patient to state his or her name, social security number or date of birth. Additionally, the possibility of confusing patients with common or similar sounding names can be reduced or avoided by using colorful labels.


### Staffing Roles

**Vulnerability:** In the absence of clear staffing roles, one caregiver may assume another caregiver has positively identified a patient by confirming that patient's name and social security number or date of birth.

**Response:** One RCA team added a step to their patient identification process that standardized when re-identification must take place.

### Conclusion

Our study suggests that adverse events involving patient misidentification can occur no matter how personally vigilant caregivers are when identifying patients. Similar patient names can cause caregivers to misidentify patients or mislabel specimens. Armbands with damaged barcodes may force caregivers to work around the barcode scanning process and rely on informal identification processes to administer medications.

Patient identification procedures that incorporate fault-tolerance should be built into the care delivery process. Redundancy requires independent and often different tools or systems to ensure a medical action is accomplished correctly. 

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