

Goal #1: Improve the accuracy of patient identification

Patient Safety Goal	Specific Recommendation	Suggestions for Implementation	Sentinel Event Alert Issue #
Improve the accuracy of patient identification	1.a. Use at least two patient identifiers (neither identifier should be the patient's room number) when taking blood samples or administering medications or blood products.	None listed.	"Blood transfusion errors: Preventing future occurrences," Alert #10; August 1999 <i>Perspectives on Patient Safety</i>
	1.b. Prior to the start of any surgical or other invasive procedure, conduct a final verification process, such as a "time out," to confirm that it is the correct patient, procedure, and site; use active (not passive) communication techniques.	Have each member of the surgical team verify the patient, surgical site, and procedure in the operating room.	"A follow-up review of wrong-site surgery," Alert #24 December 2001 <i>Perspective on Patient Safety</i>

Interpretation of their intent: The intent is two-fold; first, to reliably identify the person for whom the service or treatment is intended, and second, to match the appropriate service or treatment to that patient. The same two patient-specific identifiers must be used for both confirming the patient and also for verifying the appropriate medication, blood product, or specimen tube. The two identifiers may be in the same location, such as an armband used for confirmation of the patient, or bar coding for verifying the medication or blood products. Acceptable identifiers include: name, date of birth, SSN, address, and phone number.

Related information: A report by Newsday (April 7, 2002) stated that there were 440 deaths in the U.S. between 1995 and 2001 related to blood transfusion. This figure may be significantly understated as there are ambiguous reporting requirements and until recently many hospitals did not realize they must report such events. The VA National Center for Patient Safety has seen RCA cases specifically addressing blood transfusion. In the JCAHO Sentinel Event Alert #10, JCAHO reported 12 cases related to transfusion. (See this alert for discussion of their analysis and advice at www.jcaho.org/about+us/news+letters/sentinel+event/alert/sea_10.htm.)

Facility resources: Facilities are currently using BCMA for most medication administration; because this contains two distinct patient identifiers, this meets the medication part of this goal. Some facilities are using bar coding of blood samples, which meets the requirement regarding blood products so long as two identifiers are embedded. The Ensuring Correct Surgery Directive addresses patient identification for operating room surgical procedures. Most inpatient encounters involve using wristbands for identification, which meet the patient verification requirement when two identifiers are imbedded in the barcode.

What you need to do:

Goal 1.a. Facilities should use BCMA to the fullest extent possible. You need to confirm the "wristband print routine" is using name and Social Security number or date of birth, in order to ensure your BCMA implementation meets this goal. For those areas where BCMA is not used and for blood products that are not bar coded, you must have a process with documentation that the medication or blood uses two distinct patient identifiers and that the same two identifiers are used to confirm the patient's identity. Patient armbands provide two forms of identification and should be used.

Goal 1.b. Implement VHA Directive, 2002-070, Ensuring Correct Surgery, found at www.patientsafety.gov/CorrectSurg.html or vawww.ncps.med.va.gov/CorrectSurg.html. This directive describes what facilities must do to accurately identify patients who will receive surgery. To meet the JCAHO requirements for invasive procedures

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For references please see vawww.ncps.med.va.gov/TIPS_Goals02_ref.html OR www.patientsafety.gov/TIPS_Goals02_ref.html

Goal #2: Improve the effectiveness of communication among caregivers

Patient Safety Goal	Specific Recommendation	Suggestions for Implementation	Sentinel Event Alert Issue #
Improve the effectiveness of communication among caregivers	2.a. Implement a process for taking verbal or telephone orders that requires a verification "read-back" of the complete order by the person receiving the order	None listed	"Look-alike, sound-alike drug names," Alert # 19; May 2001. <i>Perspectives on Patient Safety</i>
	2.b. Standardize the abbreviations, acronyms, and symbols used throughout the organization, including a list of abbreviations, acronyms, and symbols not to use	Place posters on units to identify the most common abbreviation mistakes and how to avoid them	"Medication errors related to potentially dangerous abbreviations," Alert #23; Sept 2001. <i>Perspectives on Patient Safety</i>

Intent:

Goal 2.a. All verbal or telephone orders, not just medication orders, must incorporate "read-back." The receiver of the order should write down the complete order or enter it into a computer, then read it back, and receive confirmation from the individual who gave the order that it is correct. It may not be feasible to do a formal "read-back" in certain situations such as during a code or in the OR and in these cases JCAHO considers repeating back the order to be acceptable.

Goal 2.b. Each facility must develop a list of acceptable acronyms, abbreviations, and symbols that may be used and a separate list of unacceptable acronyms, abbreviations, and symbols that may not be used.

Facility resources:

Goal 2.a. Consider the National Coordinating Council for Medication Error Reporting and Prevention recommendations aimed at reducing medication errors associated with verbal prescription orders. You can view them on their web site at www.nccmerp.org under [Council Recommendations](#), in the article entitled *Recommendations to Reduce Medication Errors Associated with Verbal Medication Orders and Prescriptions* (February 20, 2001).

Goal 2.b. Review the Institute for Safe Medication Practices (ISMP) list of dangerous abbreviations at www.ismp.org/msaarticles/eliminatingprint.htm.

What you need to do:

Goal 2.a. For verbal communication orders, implement "read-back" (write down the complete order including drug and dosage then read it back, and receive confirmation that the information is correct). Consider documenting that this has occurred through a modified form such as a box that can be checked off on the order. You must be able to provide confirmation of compliance with these goals, i.e., how do you know that the process is being performed consistently? Go online to www.ncps.med.va.gov/TIPSreadback.html or www.patientsafety.gov/TIPSreadback.html for an audio sample of a phone order using "read-back."

Goal 2.b. Facilities must update and approve a list of acronyms, abbreviations and symbols that are allowed. Facilities must also identify acronyms, abbreviations and symbols that are NOT allowed. These apply to all clinical documentation including orders, progress notes, and any updates to patient records. Consider as a starting point the above-referenced list from ISMP, as well as the book by Neil Davis *15,000 Conveniences at the Expense of Communications and Safety*, especially his section on dangerous abbreviations that should never be used.

Note: To demonstrate compliance and full implementation you need to not only show policies that address these stated goals, but more importantly, develop outcome measures that show you are consistently meeting the new policies. When feasible, document compliance through meeting minutes from an appropriate committee. JCAHO surveyors will be interviewing staff and, where appropriate, making direct observations of actual performance to assess compliance with goals/recommendations.

To aid in successful implementation, consider developing cognitive aids, posters, protocols, and software interfaces. We also suggest creating incentives to help modify behaviors and norms so that they are consonant with these goals.

For references please see www.ncps.med.va.gov/TIPS_Goals02_ref.html OR www.patientsafety.gov/TIPS_Goals02_ref.html

Goal #3: Improve the safety of high-alert medications

Patient Safety Goal	Specific Recommendation	Suggestions for Implementation	Sentinel Event Alert Issue #
Improve the safety of high-alert medications	3.a. Remove concentrated electrolytes (including, but not limited to, potassium chloride, potassium phosphate, sodium chloride >0.9%) from patient care units	None listed	"High-Alert Medications and Patient Safety," Alert #11; Nov 1999 <i>Perspectives on Patient Safety</i>
	3.b. Standardize and limit the number of drug concentrations available in the organization	None listed	"High-Alert Medications and Patient Safety," Alert #11; Nov 1999 <i>Perspectives on Patient Safety</i>

Interpretation of their intent: Goal 3.a. High-alert (also known as high risk or high hazard) medications present a substantial risk of causing injury; we therefore need to have barriers established, such as removing them from floor stock.

Goal 3.b. Drug concentrations should be limited to reduce the potential for error associated with stocking various concentrations of the same drug.

Related information: VHA Directive 99-099 issued March 23, 1999, entitled "Need for enhanced accountability of selected point-of-care medications," required safety policies and procedures for at least the following drugs: insulin, potassium, epinephrine, digoxin, lidocaine, pancuronium, succinyl choline, atropine, verapamil, and diazepam. The directive can be found at: vaww.va.gov/publ/direc/health/direct/199009.pdf.

VHA Directive 99-031 issued July 14, 1999, entitled "The availability of potassium chloride for injection concentrate USP," stipulated that the pharmacy is the only permissible storage location for concentrated potassium chloride for injection. Additional guidance can be found in Paragraph 4, Action, subsections A, B, C. The directive can be found at: vaww.va.gov/publ/direc/health/direct/199031.pdf.

The NCPS website has some general information and an Excel spreadsheet excerpted from "Medication Errors," which can be helpful. Go to vaww.ncps.med.va.gov/ISMP_High_Alert.xls

In ongoing analysis of RCAs, NCPS is aware that the handling of high alert medications is a contributing factor in adverse drug events involving medications such as opiates and heparin.

Facility resources: All facilities should have completed aggregate RCA reviews on adverse drug events, which may provide pertinent information on high-alert medications. The ISMP book (which all Patient Safety Managers received in 2002) entitled *Medication Errors* has a chapter devoted to high-alert medications and various suggested safeguards. Medication safety posters are available through ISMP for verbal orders, abbreviations and high alert drugs at www.ismp.org/pages/p-order.asp.

What you need to do:

Goal 3.a. National VA guidance already required removal of concentrated potassium chloride from patient care units including automated dispensing machines. At a minimum, potassium phosphate and concentrated sodium chloride must be handled in a similar manner to meet the JCAHO goal. Any concentrated electrolytes that your facility determines to pose a threat to patient safety should be removed. Go to vaww.ncps.med.va.gov/TIPS_Goals02_ref.html#Alert or www.patientsafety.gov/TIPS_Goals02_ref.html#Alert to review a partial list of other high alert medications.

Goal 3.b. Actions should include reducing the number of vial sizes and concentrations to those specifically needed for patient care and reducing the number of concentrations available in stock in the pharmacy where possible. In general, emergency medications should be in ready-to-use form to reduce the vulnerabilities associated with dilution activities. Some emergency medications must still be stored in their concentrated forms, such as thrombolytics. For these drugs, consider safety checks such as storing behind break-away locks or developing a kit with explicit cognitive aids and instructions on strength and admixture protocols.

For example, consider reducing the various strengths of dopamine available in the institution. This may be accomplished by carrying only 400 mg/5ml vials and only premixed infusion bags of 400 mg in 250 ml containers, rather than multiple vial

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For references please see vaww.ncps.med.va.gov/TIPS_Goals02_ref.html OR www.patientsafety.gov/TIPS_Goals02_ref.html

Goal #4: Eliminate wrong site, wrong patient, wrong procedure surgeries

Patient Safety Goal	Specific Recommendation	Suggestions for Implementation	Sentinel Event Alert Issue #
Eliminate wrong-site, wrong-patient, wrong-procedure surgeries	4.a. Create and use a preoperative verification process, such as a checklist, to confirm that appropriate documents (e.g., medical records, imaging studies) are available.	Involve the medical and nursing staff members in the design of a verification checklist.	"A follow-up review of wrong site surgery," Alert #24; December 2001. <i>Perspectives on Patient Safety</i>
	4.b. Implement a process to mark the surgical site and involve the patient in the marking process. Helpful hint: require each member of the surgical team to verbally verify the correct site in the operating room.	Require each member of the surgical team to verbally verify the correct site in the operating room.	"A follow-up review of wrong site surgery," Alert #24; December 2001. <i>Perspectives on Patient Safety</i>

Interpretation of their intent: Goals 4.a and 4.b apply to surgery and other invasive procedures that expose patients to more than minimal risk. This includes procedures performed both within and outside of the OR. Marking the site (4.b) also applies to dental procedures when tooth extraction is to be performed. Minor procedures such as peripheral IV line placement or Foley catheter insertion are not within the scope of this goal.

Related information: JCAHO has informed NCPS "compliance with this Directive [2002-070, Ensuring Correct Surgery] will satisfy the JCAHO requirements for eliminating wrong site, wrong procedure, wrong patient surgery within the OR."

Facility Resources: NCPS has developed a training video, poster, patient brochure, set of referenced articles, and FAQs to facilitate implementation of the Directive. These will be disseminated to facilities during the week of December 16, 2002. These materials and the Directive are also available at vaww.ncps.med.va.gov/CorrectSurg.html.

What you need to do: Implement VHA Directive 2002-070 (summarized below) for surgical procedures that will be performed in an OR.

Step 1: The Consent Form

The consent form must state:

- √ Procedure site
- √ Patient name
- √ Name of procedure
- √ Reason for procedure

Step 2: Mark site

Before the patient enters the OR, the operative site must be marked by a physician or other privileged provider who is a member of the surgical team with the involvement of the patient.

- √ Non-operative sites shall not be marked.

Step 3: Patient Identification

Before the patient enters the OR, a member of the staff shall ask the patient to state (not confirm):

- √ their name
- √ full SSN or birth date
- √ the site for the procedure

Step 4: "Time Out"

OR Personnel must take a moment ("time-out") in the OR to verify the correct patient, site, and implant when the patient is present.

Step 5: Imaging Data

- √ Two members of the OR team must check imaging data used to confirm a site

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GOAL 5: Improve the safety of infusion pumps

Patient Safety Goal	Specific Recommendation	Suggestions for Implementation	Sentinel Event Alert Issue #
Improve the safety of infusion pumps	5.a. Ensure free-flow protection on all general-use and PCA intravenous infusion pumps used in the organization.	Identify and phase out pumps that have the potential for free-flow errors; encourage the use of pumps that have set-based free-flow protection.	"Infusion Pumps: Preventing Future Adverse Events," Alert #15; November 2000. <i>Perspectives on Patient Safety</i>

Interpretation of their intent: Eliminate the use of IV pumps and administration sets that are unnecessarily hazardous when alternatives exist and verify that it has been done in all of your inpatient, outpatient, and home care areas. More specificity about the scope is found in the Joint Commission FAQs (www.jcaho.org/accredited+organizations/patient+safety/npsg/faqs+about+national+patient+safety+goals.htm).

Related information: NCPS is not aware of any adverse events related to free-flow within VHA. We do know that it has happened in non-VA facilities when free-flow mechanisms were defeated or when free-flow protection was not provided. However, in the VA we have had a close call where the free-flow mechanism intrinsic to the pump was damaged such that free-flow protection was not in effect. This was discovered by alert biomedical engineers during routine maintenance. This close call indicates that there is a need for biomedical engineers to routinely check the equipments' free-flow protection devices as part of the routine preventative maintenance of the pump. Please consult with your biomedical engineers to verify that this is being done.

Facility resources: Many facilities removed or upgraded their IV pumps and administration sets in the past several years to address the free-flow issue. Therefore it is not likely to be an issue for your facility – but IT MUST BE VERIFIED.

What you need to do: Identify and remove from service pumps that have the potential for free-flow errors in favor of pumps that have free-flow protection. Contact your biomedical engineer to help make this determination. *Conversations with JCAHO leadership have confirmed that the intent of this goal is that all IV pumps have intrinsic, set-based free-flow protection by January 1, 2003.* Therefore, to be compliant with JCAHO's intent all pumps without free-flow protections must be out of service by January 1, 2003. If necessary as an interim measure, facilities should consider renting equipment that provides free-flow protection. As always, the patients' clinical safety is paramount during any such transition. The facility Environment of Care (Safety) Committee needs to be involved in tracking completion of these issues until all of the pumps have been replaced. Additionally, all pumps capable of using set-based free-flow protection should use that type of tubing set. Work with Logistics and your IV tubing vendor to ensure set-based free-flow prevention tubing is used.

Note: To demonstrate compliance and full implementation you need to not only show policies that address these stated goals, but more importantly, develop outcome measures that show you are consistently meeting the new policies. When feasible, document compliance through meeting minutes from an appropriate committee. JCAHO surveyors will be interviewing staff and, where appropriate, making direct observations of actual performance to assess compliance with goals/recommendations.

To aid in successful implementation, consider developing cognitive aids, posters, protocols, and software interfaces. We also suggest creating incentives to help modify behaviors and norms so that they are consonant with these goals.

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Conference Calendar			
CONFERENCE	DATE	LOCATION	CONTACT
NCPS Patient Safety Improvement Training	1/14-16/03	Las Vegas, NV	(734) 930-5890
NCPS Patient Safety 202	2/24-27/03	Las Vegas, NV	(734) 930-5890

GOAL 6: Improve the effectiveness of clinical alarm systems

Patient Safety Goal	Specific Recommendation	Suggestions for Implementation	Sentinel Event Alert Issue #
Improve the effectiveness of clinical alarm systems	6.a. Implement regular preventive maintenance and testing of alarm systems.	None listed.	"Preventing ventilator-related deaths and injuries," Alert #25; February 2002. <i>Perspectives on Patient Safety</i>
	6.b. Assure that alarms are activated with appropriate settings and sufficiently audible with respect to distances and competing noise within the unit.	None listed.	"Preventing ventilator-related deaths and injuries," Alert #25; February 2002. <i>Perspectives on Patient Safety</i>

Interpretation of their intent: Assure that alarms will achieve the intended purpose of alerting staff to an urgent patient need. Alarms need to be audible to staff taking into account where they may be in the unit, ambient noise levels, and predictable extremes in environmental conditions. Caregivers need to be properly trained to understand how alarms are activated, how alarm limits are set, and why alarms should not be routinely disabled. Lastly, alarm inspection must be included in the facility preventative maintenance program.

Facility resources: Nursing training programs assess competency and provide training to clinical caregivers in operating clinical alarm systems. Biomedical engineering personnel develop and implement procedures related to this goal.

What you need to do: Existing plans or policies that might address items like preventative maintenance must be verified. Working with other pertinent personnel in your facility verify that clinical alarms are audible through observation during routine operations of the patient care unit considering predictable extremes in environmental conditions. Biomedical engineering can assist with technical guidance, but elaborate testing (using a decibel meter) is not necessary. Ensure that alarm limits (e.g., high and low pulse rate on the cardiac monitor) are set properly according to the patient care unit procedures. Caregiver competency assessments should include knowing how alarms are activated, and modifying the settings to be appropriate for the type and condition of the patient. Staff should feel confident about changing the "alarm window" if the default settings are not appropriate for the patient. Caregivers must understand that inappropriate disabling of patient care alarms, even temporarily, can be catastrophic.

Assure that the alarms are audible from a reasonable distance and loud enough to be heard above the ambient background noise in the unit when staff may be distracted by other pressing clinical issues. It is very important that the alarm thresholds be appropriately set for the type of patient being monitored. It is also important that preventative maintenance inspections of medical equipment includes verification of alarm operation for equipment with clinical alarms.

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