Background Information

Minnesota Department of Health September 2008

Time-Out Process in Minnesota

Over the last few years, the Minnesota Department of Health (MDH) and the Minnesota Hospital Association (MHA), along with a number of other stakeholder organizations, have worked together to educate facilities about factors that contribute to wrong site surgery, and to assist them in developing strategies to prevent surgical adverse events. Efforts have included the development of a Minnesota-specific safe-site protocol, a statewide campaign to prevent wrong-site surgery, and supporting materials for facilities that are implementing stronger time-out or site-marking processes. These efforts have led to significant changes in how the site marking and time-out processes are carried out in Minnesota hospitals and ambulatory surgical centers, and have vastly improved our knowledge about why wrong-site surgery happens.

In 2007, MDH began working with the Center for Human Factors Systems Research and Design at the University of Minnesota on a project to evaluate the time-out process as it currently exists across Minnesota hospitals, and to determine whether there were points in that process that could be strengthened to reduce the risk of additional wrong-site procedures. This project marked the first time that Minnesota has been able to examine verification processes across facilities in a consistent way.

During the spring and summer of 2008, human factors researchers from the University of Minnesota, led by Dr. Kathleen Harder, observed roughly 50 surgical procedures in eight hospitals around the state, reviewed each hospital's pre-operative verification policies, and followed up their observations with focus group interviews with surgical teams. A summary of their findings and recommendations is below.

Key findings: site marking

- Several cases lacked any site mark.
- The site markings were not placed appropriately in a few cases (e.g., in breast-related procedure, the site marking was placed on the patient's upper left arm
- Bilateral site marking issue—In one case, both ears were marked with the surgeon's initials—but the two different procedures were not distinguished.
- Some of the site markings dissolved during patient preparation.

Key findings: Time-out

- Several procedures had no time-out at all, or the time-out was done without the surgeon present.
- In some cases, the time-out was done before the surgeon had scrubbed for the procedure.
- In many cases, the team continued to work during the time-out, and there was no participation by other team members as the circulator read patient information.
- In several cases, the circulating nurse attempted to call the time-out but failed because others continued to talk or did not stop their activities.
- Often, the team did not acknowledge the accuracy of the information provided during the time-out.
- In many cases, the circulating nurse performed the Time Out from memory without referring to any patient documentation.

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	Minnesota Recommendation	Rationale
1.	Prior to the procedure, cover the Mayo stand with a towel with "Time Out" in black lettering.	The time-out towel will serve as a memory trigger to remind the surgeon to initiate the time-out, and provides support to team members who may need to reinforce the need to complete the time-out for every procedure.
2.	The surgeon will initiate the time-out after scrubbing and immediately prior to incision. The surgeon should initiate the time-out by saying, for example, "Let's do the time-out."	The surgeon needs to be engaged in the process, and having him/her call for the time-out reinforces its importance. Doing the time-out immediately prior to incision makes it less likely that other conversations or activities will happen between the time-out and the surgery that could distract the surgeon.
3.	All team members will cease their activity. (The anesthesia care provider will continue to manage ventilation.)	No distractions should be present during the time-out, so that all team members can listen for the information and play their part in the process.
4.	The circulating nurse will then conduct the time-out by audibly reading the following information from the patient's affirmation of informed consent: a. Patient Name and medical record number b. Procedure c. Site of procedure (and level, if appropriate) d. Position of patient	The circulating nurse has access to previously verified source documents, which he/she uses for the time-out. Having the circulator begin the process decreases the odds that other team members will simply agree with the most senior person in the room, which can happen if the surgeon is the first person to speak.
5.	The team verification will be conducted audibly in the following standard role sequence (not concurrently): 1. The ACP will read the patient's name, medical record number, and procedure. 2. The scrub tech will state the procedure he/she has set up for, look for and find the site mark, and announce that he/she sees the site marking. 3. The surgeon will state the patient's name, complete procedure, and site.	Visualizing the site marking during the time-out is crucial, as drapes, other materials or repositioning can obscure the mark. Having the scrub tech announce that they have seen the mark gives them an active role to play in the process, and dramatically lessens the odds of making an error due to an obscured mark. Having the surgeon go last minimizes the confirmation bias that sometimes happens in the OR, when team members defer to the surgeon and are reluctant to correct misinformation.

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	Additional Time-out Recommendations	Rationale
	If the patient will be undergoing multiple procedures, a time-out should be conducted prior to each individual procedure. If the patient is repositioned, an additional time-out should be done, including visualization of the site mark.	During multiple procedures, changes in the OR team may mean that new team members weren't part of the original time-out, and lack key information about the procedure. Repositioning can obscure the site mark, so it needs to be re-visualized.
	Information related to allergies, antibiotics, images, and implants should be moved from the time-out to a pre-procedure briefing in the OR just prior to final case set-up. The time-out should be dedicated to the purpose of ensuring the correct patient, correct site, and correct procedure, only.	Moving the other pieces to a pre-procedure briefing will help to facilitate more effective and efficient case flow.

For more information:

The full report will be available soon on the internet at:
www.health.state.mn.us/patientsafety

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