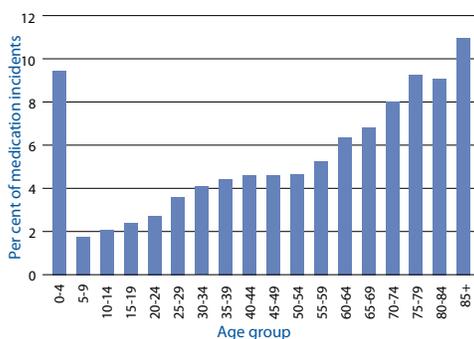


About This Newsletter

CHPSO Patient Safety News provides lessons learned from reviews of patient-safety events and news of patient-safety activities in this state. We hope you will find it useful in your efforts to improve patient outcomes. This newsletter may be freely distributed in its original form. Copies of each newsletter will be archived on the CHPSO website (www.chpso.org). Send subscription requests (additions, deletions) to ltate@calhospital.org. Submit articles to rjaffe@calhospital.org.

Review of Patient Safety in Children Issued

UK National Health Service (NHS) recently issued a report on patient safety in children (<http://www.npsa.nhs.uk/EasySiteWeb/GatewayLink.aspx?allId=45187>). Included in the report are lessons learned from incidents and near misses in pediatric patients. Medication errors were the most common incidents and the wrong dose was the most common category identified.



Of note, nearly 10 percent of all medication incidents occurred in patients 4 years old or younger (see chart). This is disproportionately high when compared to the number of inpatients in that age

Call for Best Practices: WHO Surgical Checklist and the Joint Commission Universal Protocol

Both the WHO Surgical Checklist and the Joint Commission Universal Protocol aim to improve the reliability of perioperative care. The principles behind the Joint Commission's Universal Protocol and the WHO Surgical Checklist are the same: assigning specific responsibility, following a checklist, and implementing this at critical points in the surgical process.

The focus of each is slightly different: the Universal Protocol details the steps to verify the patient's identity, procedure, site, positioning, documentation and equipment. The WHO checklist extends that, by including checks for difficult airway, anticipated blood loss, antibiotics and end-of-surgery considerations (e.g., special recovery needs). The two can be joined into one process.

Using checklists in a time-pressured, complex and potentially dangerous activity, such as surgery, can enhance

teamwork, increase efficiency and reduce error. However, time pressure and complexity present implementation challenges. Checklists, particularly during initial testing, could adversely change the workflow. Testing and retesting may be needed in order to produce the best practice.

Have you identified some best practices? They may include some small components of the process, such as how you designate the responsible person or signal the timeout. Or they may include the complete practice, including integration of the two checklists.

Please send information about your best practices to CHPSO, at rjaffe@calhospital.org, or via mail to CHPSO, 1215 K Street Suite 800, Sacramento, CA 95814. We will be putting together a compendium, to share knowledge and help us all in our ongoing efforts to provide the safest care to our patients.

group. High NICU medication use and dose calculation complexity may be contributing factors.

Many medications used for neonates are packaged in liquid concentrations or pill sizes that are best suited for adult use. A single vial, representing a safe dose in an adult, may pose a serious overdose risk to a small infant. In addition, preparation of an appropriate dose for the neonate requires careful calculations. In particular, the NHS has noted that decimal point errors (e.g., 10x or 100x dose administered) are factors in some cases. The following scenario illustrates the problem.

"Pt was due a dose of oral morphine 220 micrograms. When the dose was checked by S/N 'A'. S/N 'B' noticed that the dose on the bottle was 100mg/ml instead of the normal stock bottle of 100 micrograms/ml. This bottle had been in use since x and pt had been given his prescribed dose of 220 micrograms, 6 hrly since then. If this dose was calculated from the bottle labeled 100mg/ml it would mean that 0.0022ml would need to have been drawn up, which would have been impossible to do."

— Rory Jaffe rjaffe@calhospital.org.

Essential Practices for Checklist Success

Last month I related the first of three essential practices for improving compliance with checklist expectations. You will recall that the first of these is generating your checklist (or protocol) locally by incorporating consensus best practices of frontline clinicians in the checklist.

The second essential practice is closely related to the first, because it again engages the same clinicians who will be using the checklist, to create it. While human factors expertise is vital to avoid design and implementation mistakes, it is also very important to be sure that the actual use of the checklist makes sense at the bedside. Having well-respected physicians, nurses, and other staff members think through how they would use the checklist is essential to prevent the unintentional introduction of additional risk to the patient. For example, if a particular item calls for caregivers to turn their back to the patient for an extended period in order to access the checklist electronically, it is the clinician who is likely to immediately respond to this red flag and assert that there must be a better solution.

The third essential practice is to assign explicit authority (empowerment), responsibility and accountability for checklist completion to one person (role) within the healthcare team. For a relevant reference, look at the role of the surgical technician in maintaining vigilance to ensure that the OR team complies with sterile protocols. It is a known best practice for the patient, so everyone acknowledges that compliance is necessary. Yes, everyone is responsible for sterile protocols, but surgical technicians have taken professional ownership of compliance and those I have seen over the past six years are very strict in maintaining the standard. Similarly, assigning someone on the healthcare team to be the final “owner”

of the checklist is an organizational best practice to ensure universal compliance.

Reducing variability, minimizing reliance upon memory, and hard-wiring best practices can all be achieved by successful implementation of a checklist or protocol. Engaging frontline caregivers in the identification of best practices, as well as the design of the checklist will minimize resistance to implementation. Even so, clearly identifying one person on each healthcare team who is empowered to “Stop the Line” until the checklist is complete is necessary to attain the desired compliance.

— Steven Montague (lifewings@verizon.net), Vice President, LifeWings.

Potential Negative Effects of a Surgical Checklist

Surgical checklists, successfully implemented, improve patient safety through standardization, redundancy, cross-checking, improved teamwork and reduced reliance on memory. However, during initial testing, adverse effects on team performance may occur. Being prepared for these potential problems will aid in successful adoption.

A recent study of 302 operating room team briefings conducted by checklist at one institution showed, while the great majority were successful and beneficial for patient care, 15 percent were dysfunctional (Cogn Tech Work (2008) 10:287-294). The study found in those cases that “team briefings could mask knowledge gaps, disrupt positive communication, reinforce professional divisions, create tension and perpetuate a problematic culture.”

Masking Knowledge Gaps

The call and response interaction between team members running through a checklist (“Any allergies?”—“None known”) rapidly identifies important information and communicates it to the whole team. But a response may be incorrect, particularly if the respondent answers from memory or casually runs through the list. In most circumstances, other team members will know the correct answer, and this error represents an opportunity to correct one team member’s mistake. However, wrong answers can go unidentified, especially if an answer is known only by one member (e.g., “No anesthesia concerns”) or when others do not listen carefully, providing a false sense of security.

Disrupting Positive Communication

Checklists should be integrated into the normal discussion that occurs within the operating room. If running through a checklist is perceived as a bothersome task, communication could falter as people speed through the steps, only listening for “their question” so they can continue their work.

Reinforcing Professional Divisions

Checklists should involve the whole OR team. If a single individual runs the checklist as a monologue or ignores some of the OR personnel, others may feel shut out.

Creating Tensions

Unsupportive team members create stress for the person responsible for leading the team through a checklist. This is particularly acute when the unsupportive team member has more authority. Another source of stress arises when a team mem-

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ber has knowledge gaps or incorrect information. Through the checklist process, everyone else in the room becomes aware of that error.

Perpetuating a Problematic Culture

A properly structured checklist encourages a beneficial culture through its focus on communication, collaboration and patient safety. However, culture is strongly dependent upon the actions of leaders. If a leader endorses the checklist but then rushes through it or ignores it when she is working in the operating room, the checklist's value will be minimized.

What to Do?

Education prior to checklist introduction is important. Many well-intentioned team members will develop “work-arounds” when faced with yet another task to do. Information should be provided regarding the goals of a checklist and how best to integrate it into the normal workflow.

A checklist's question order and role assignments also affect success. The flow should engage all team members and make sense to the participants. For example, some issues should be resolved before others—and the question order should reflect that. Pilot testing prior to full implementation will help identify checklist structure problems.

For many, checklists represent a change in culture. Traditional health care training emphasizes self-reliance and artisanship. Crosschecking and standardization, fundamental goals of checklists, directly conflict. As with most cultural issues, there is no quick fix. Leadership involvement will help bring about this change.

As the authors of the study state, “There is great instructive value in negative experience.” The challenges of the checklist adoption process present opportunities

to make meaningful lasting improvements in surgical team function. We can all learn from each other's experiences in this endeavor. Elsewhere in this issue is a call for “best practices” in checklist adoption. Please submit yours. CHPSO will produce a compendium of best practices to help all progress along this challenging, but ultimately fruitful, road.

— Rory Jaffe rjaffe@calhospital.org.

Just Culture: Another Algorithm for Identifying Unsafe Acts

In last month's CHPSO Patient Safety News, I outlined the algorithm used in the UK National Health Service (NHS), which helps identify individual culpability by asking whether bad intent, impairment, recklessness or poor judgment led to an error. Another algorithm, developed by the Outcome Engineering company, takes a slightly different approach, focusing on duty and mechanism of error.

According to this algorithm, there are three basic duties:

- **Duty to produce an outcome.** If an individual knows the desired outcome and should be able to produce it (e.g., safe removal of an inflamed appendix), failure to do so represents breach of this duty.
- **Duty to follow a procedural rule.** If the individual knows the proper procedure and it is possible to follow the rule (e.g., the procedure for inserting a central venous catheter), failure to do so represents a breach of this duty.
- **Duty to avoid causing unjustifiable risk or harm.** Breach of this duty occurs when an individual intentionally harms the patient or acts recklessly.

If a duty has been breached, then the mechanism of the breach is identified. There are three identified causes:

- **Human error.** This is an inadvertent act (“slip,” “lapse” or “mistake”).
- **At-risk behavior.** Typically, this is a conscious drift from safe behavior, occurring when an individual believes that drift doesn't cause any harm. An everyday example is the willingness of some drivers to roll through stop signs. Those drivers do not see that as risk-taking behavior, as, in their experience, nothing bad happened consequently.
- **Reckless behavior.** In this case, the individual has chosen conduct that he knows poses a substantial and unjustifiable risk.

The response to an event (or near miss) is tied to the mechanism of error. An isolated human error is an opportunity to correct system weaknesses (e.g., confusing drug labels). The individual making the error should be consoled, rather than disciplined. At-risk behavior may also indicate a system vulnerability that should be fixed. However, the individual should be coached so that he understands the risks he has taken. Reckless behavior may be grounds for disciplinary action. The intent is to reduce the risk of future reckless conduct, and may include removing the individual from an organization.

Repetitive problems are often caused by system weaknesses, but sometimes are individual performance issues, particularly when coaching or additional training has not improved the problem. For example, repetitive human errors may be an indication that the individual is not capable of performing safely in his current job. Repetitive at-risk behaviors may be due to impairment (e.g., drug abuse) or unwillingness to follow proper protocols.

— Rory Jaffe rjaffe@calhospital.org.

Just Culture Event Investigation Training Now Available

In response to requests from hospitals and other health care organizations, the California Patient Safety Action Coalition (CAPSAC) will offer Just Culture Event Investigation training in locations across California in October and November. The principles of a fair and just culture are based on research by human behavior and management experts such as James Reason, Ph.D., and David Marx, J.D. Their work has shown that how an organization responds to errors can make a critical difference in preventing future errors from occurring. The most effective way of preventing errors, according to Reason and Marx, is to accept that humans will act in unpredictable ways that may lead to mistakes. By understanding how each error occurred, the system can make changes in the workplace to prevent errors or mitigate their effects.

Event investigation is the practical aspect to implementing a just culture. The training will give managers and supervisors the tools to ask the right questions, write a thorough report and take appropriate action after the investigation. Additionally, the event investigation supports the requirements in California Statute 1279.6, creating a culture of safety and ensuring patient-safety events are reported and investigated.

During the Just Culture Event Investigation Regional Training, attendees will learn about event investigation and how to determine what causes a medical error or “near miss,” including human error, and at-risk and reckless behavior, using the Five Rules of Causation. They also will learn ways to develop strategies to reduce the likelihood of these mistakes and reduce patients’ risk of harm. Additionally, on October 22, 2009, CAPSAC is of-

fering a full day of the Just Culture model with event investigation in Redding. For more information and to register, visit the CAPSAC web site at www.capsac.org or contact Teresa Manley at manleyt1@pamf.org.

— Teresa Manley manleyt1@pamf.org.

Calendar

Following is a list of upcoming events that are still open for enrollment. For more information or to enroll, use the contacts listed at the bottom of this article.

July

5: CAPSAC (California Patient Safety Action Coalition): California Patient Safety Action Coalition Meeting. Los Angeles.

21: HASD&IC (Hospital Association of San Diego and Imperial Counties): ICU Sedation Task Force Meeting. San Diego.

August

4: HASC (Hospital Association of Southern California): Central Line Blood Stream Infection, MRSA, Sepsis Mortality, and Surgical Care Improvement Project. Industry Hills.

September

2: HASC: Clostridium difficile-Associated Diseases, High Alert Medications, Hospital Acquired Pressure Ulcers and Medication Safety. Industry Hills.

18 (Date change—was originally set for September 11): CAPSAC: California Patient Safety Action Coalition Meeting Napa.

29: HASD&IC: ICU Sedation Task Force Meeting. San Diego.

October

12: CAPSAC: Just Culture Event Investigation Training. La Jolla.

13: CAPSAC: Just Culture Event Investigation Training. Newport Beach.

22: CAPSAC: Just Culture Event Investigation Training. Redding.

23: CAPSAC: Just Culture Event Investigation Training. Sacramento.

29: CAPSAC: Just Culture Event Investigation Training. Fresno.

30: CAPSAC: Just Culture Event Investigation Training. Glendale.

November

3: HASC: Central Line Blood Stream Infection, MRSA, Sepsis Mortality, and Surgical Care Improvement Project. Industry Hills.

4: CAPSAC: Just Culture Event Investigation Training. Fremont.

5: CAPSAC: Just Culture Event Investigation Training. Los Angeles.

12: CAPSAC: Just Culture Event Investigation Training. Orange.

13: CAPSAC: Just Culture Event Investigation Training. Palo Alto.

17: HASD&IC: ICU Sedation Task Force Meeting. San Diego.

December

3: HASC: Clostridium difficile-Associated Diseases, High Alert Medications, Hospital Acquired Pressure Ulcers and Medication Safety. Industry Hills.

4: CAPSAC: California Patient Safety Action Coalition Meeting. Los Angeles.

For further information on these events:

CAPSAC: Theresa Manley, manleyt1@pamf.org or www.capsac.org

HASC: Catherine Carson, ccarson@hasc.org

HASD&IC: Erin Curtis erin.curtis@cardinalhealth.com