San Diego hospitals saw IV medications as “low hanging fruit” for standardization, as 61% of the most serious and life-threatening potential adverse drug events are IV drug-related. And lack of standardization has been at least a partial cause of many individual cases of overly high doses, including a number of fatal overdoses.

The potential benefits of standardization include:

- Improved patient safety due to reduced complexity, variability and opportunities for high-risk IV medication errors.
- Improved compliance with best practices.
- Achievement of medication safety goals area-wide, across all hospitals and related medical services (home health, long-term care and paramedic services).
- Increased clinician satisfaction due to a less complex, safer environment.
- Cost reduction.
- Improved dose error reduction software (DERS) dataset for medication administration systems.

From the work of the San Diego Center for Patient Safety IV Task Force, 15 San Diego area hospitals agreed to a common standard for IV medication concentrations and dosage units. The group reduced variation in dosage unit and concentration for 9 high-risk medications and 25 other medications. Initially, there were over 85 concentration variations and 57 dosage variations for the 34 medications. At the conclusion of the process, only one medication had more than one concentration variant (magnesium sulfate) and none had dosage unit variants.

High-risk medications addressed were: abciximab, eptifibatide, fentanyl, heparin, hydromophone, insulin, magnesium sulfate, morphine and vecuronium.

Other medications addressed were: amiodarone, bumetanide, dobutamine, dopamine, epi/cal, epinephrine, esmolol, furosemide, isoproterenol, labetalol, lidocaine, lorazepam, midazolam, milrinone, nesiritide, nicardipine, nitroglycerin, nitropressin, norepinephrine, pentobarbital, procarbazine, propofol, theophylline and vasopressin.

IV standardization represented a significant system change for each hospital, and a plan for careful rollout is included in the IV standardization toolkit, available at tinyurl.com/d2cme.

The toolkit also includes the standardized dosage unit and concentration for each of the drugs. In addition to the toolkit, the taskforce produced other documents to aid the process, including presentations and talking points.

— Rory Jaffe, abstracted from the taskforce documents, located at cardinal-health.com/clinicalcenter/taskforce/index.asp.
WHO Clean Your Hands, continued from page 1

Revised hand hygiene implementation toolkit

To help all health-care facilities that register their interest, WHO is reviewing the existing hand hygiene implementation toolkit. All elements of the toolkit are being reviewed and some are being revised and updated. The completed toolkit will be available on the Clean Care is Safer Care website from 5 May 2009.

A new self assessment framework is also being developed. This is designed to help hospitals and health-care facilities to assess their capability to deliver hand hygiene at the point of care based on a five-step model. Before it is widely available, it will be trialled in selected facilities. This will be announced on 5 May.

Celebrate 5 May

- Take 5 minutes to talk with a colleague about hand hygiene.
- Forward the WHO 5 Moments for Hand Hygiene to 5 colleagues (or more).
- Plan an infection control forum and invite 5 people to talk for 5 minutes on hand hygiene.
- Invite five hospitals, health-care facilities or other health-care related services close to you to register.
- Challenge five wards (if you are in a hospital) or collegial facilities (ie ambulance services) to improve their compliance rates and measure your success.


Are High Scores on Safe Practices Survey by Leapfrog Related to Improved Outcomes?

A recent JAMA article found no relation between risk-adjusted mortality and scores on the Leapfrog Safe Practices Survey. Furthermore, hospitals that did not participate in the survey did not differ in mortality from those that did. The article is available at tinyurl.com/dyseha, as well as commentary in a recent issue of U.S. News and World Report at www.usnews.com/articles/health/health-day/2009/03/31/study-casts-doubt-on-influential-hospital-safety.html.

A Message from the California Department of Public Health (CDPH)

To enhance communication, CHPSO invited CDPH to publish notices or articles in this newsletter. This article directly represents the viewpoint of CDPH.

Medication Error Reduction Plan (MERP) Surveys

The California Department of Public Health (CDPH), Center for Health Care Quality, is dedicated to partnering with health organizations and health facilities to improve patient care in the State. CDPH recognizes the importance and significance of working together toward this common goal. It, therefore, is the purpose of this communication to attempt to provide helpful information concerning the Medication Error Reduction Plan (MERP) surveys initiated by the Licensing and Certification Program in January, 2009.

California Health and Safety Code, Section 1339.63 provides a description of the requirements for medication error reduction plans for affected health care facilities. It requires each plan to do the following (paraphrased):

- Include a method to address each of the procedures and systems listed under subdivision (d) to identify weaknesses or deficiencies that could contribute to medication errors. (see text box)
- Include an annual review to assess the effectiveness of each of the procedures and systems listed under subdivision (d). (see text box)

1339.63 (d) A “medication-related error” means any preventable medication-related event that adversely affects a patient … and that is related to professional practice, or health care products, procedures, and systems, including, but not limited to,

prescribing,
- prescription order communications,
- product labeling,
- packaging and nomenclature,
- compounding,
- dispensing,
- distribution,
- administration,
- education,
- monitoring, and use.
- Be modified as warranted when weaknesses or deficiencies are noted.

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- Describe the technology to be implemented and how it is expected to reduce medication errors.
- Include a system to actively identify actual or potential medication errors.
- Analyze all medication errors using a multidisciplinary process. Describe how the analysis is utilized to change current procedures and systems to reduce medication errors.
- Incorporate external medication-related error alerts.

Listed below are some questions which may be asked when pharmaceutical consultants survey your facility. Please note, this is not an exhaustive list of potential questions but they are provided as an aid to help you have a successful survey.

- Can you describe how your plan has progressed since January, 2005? Why did you make changes in your plan and what were they? Can you provide documentation for this information?
- Do you have a current written copy and previous copies of your plans?
- Can you describe how your plan regarding each of the 11 items in subdivision (d) has impacted the occurrence of medication errors?
- What type of metrics (data) do you have? This could involve overall metrics and/or metrics for specific areas of success or lack of success (e.g., errors associated with individual drugs).
- Can you describe how implementation of technology has impacted medication errors? Can you describe your initial reasons for implementing technology, i.e., what was it intended to do relative to medication errors?
- Do you have a robust medication error reporting system (e.g., is it non-punitive; is there anonymous reporting; is it computerized or paper driven)?
- Who is on your multi-disciplinary committee? Do you have documentation of meetings (e.g., minutes)?
- What is your process for analyzing errors?
- Can you provide quality assurance and performance improvement data related to medication errors and sentinel events?

During the MERP survey process development period the Department partnered with hospital associations, pharmacy organizations, and hospitals in order to receive and provide input into the process. Representatives from 72 hospitals participated during stakeholder meetings and two “table top” survey simulation exercises were held in Los Angeles and Sacramento during 2008. An All Facilities Letter (AFL 08-39) was issued in December, 2008 which provided additional information about MERP surveys. (CDPH AFLs can be located at www.cdph.ca.gov/certlic/facilities/Pages/LnCAFL.aspx). The Department anticipates that each survey will be unique as each facility’s plan is different from others. There is no “boiler plate” that surveyors will use to determine a facility’s success during the survey process nor is there only one “correct answer” to questions asked by surveyors. It is our desire and anticipation that you will have great success in your medication error reduction efforts. The Department anticipates surveying approximately 150 hospitals each year for a triennial survey. Each facility to be surveyed will be notified in the previous quarter that they will be visited sometime during the subsequent quarter. You also will be asked for those (“blackout”) dates during the quarter when you would appreciate not having surveyors at your facility (e.g., when a key individual is on vacation).

If you have questions please contact MERP Task Force Leads and CDPH Pharmaceutical Consultants Joan Jones (909-383-6703) or Michael Alexander (559-437-1502)

Kaizen — One Approach to Continuous Process Improvement

“Kaizen” (literally “change,” “good”) describes a Japanese philosophy of continuous improvement. Last month’s article (Process Improvement — A Human Factors View) finished by saying, “…the first step on the road to success is defining the standard.” Once you’ve defined a single standard for a process (such as preparing to place a central line), the kaizen approach to continuous process improvement is measuring the outcome and then adjusting the steps of the process to achieve the desired results (in this case, zero central-line infections).

Tying it all together, you might want to use the IDEA mnemonic. Author Matthew May (The Elegant Solution and In Pursuit of Elegance) describes it like this:

Investigate: Simply have them capture best practices from within and outside your organization.

Design: Have your end-users, the clinicians who actually will be using the process, design the process. Combine the
Kaizen, continued from page 3

best practices described above and format them to define the standard.

Evaluate: Do several trials with individual teams of clinicians to work the bugs out. Then implement the refined process, and ensure that you have 100% compliance. This enables you to measure outcomes and accurately evaluate the standard you’ve adopted.

Adjust: Now that you have actionable data, you can make measured adjustments to achieve the desired outcome. This step really begins the IDEA loop over, in that you’re investigating to discover why you’re falling short of the desired outcome, and re-designing the process to address the shortfall.

If you iterate continuously, the process will get you closer and closer to the ideal outcome. The kaizen approach has led to high-quality outcomes in many fields of endeavor, and is the secret to continuous process improvement.

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

**WHO Surgical Safety Checklist Survey Underway**

To follow up on the endorsement of the WHO Surgical Safety Checklist principles by both CHPSO and the California Hospital Association, CHPSO sent out a brief, three-question survey April 15 to CHA member hospitals. The survey assesses the extent of testing and/or adoption of the checklist at each hospital. Individual hospitals will not be identified in the results. Please contact Rory Jaffe (rjaffe@calhospital.org) if you have any questions or comments.

**Hospitals in Pursuit of Excellence**

The American Hospital Association recently launched a new initiative — “Hospitals in Pursuit of Excellence” — to disseminate examples of successful approaches to reducing patient harm, including tools and resources. Currently, there are 28 case studies contributed by hospitals throughout the country. These materials are available on the website www.ahaqualitycenter.org/ahaqualitycenter/hpoe/index.html.

Among the current case studies are the following examples:

Missouri Baptist Medical Center describes the organizational changes it went through to improve medication safety. This resulted in a:

- Nearly a 20-fold decrease in medication-related patient harm from January 2001 to June 2008.
- 78 percent reduction in use of narcotic reversal agents associated with patient-controlled analgesia.

Contra Costa Regional Medical Center discussed the changes that resulted in dramatic improvements in medication reconciliation, with an increase in completely reconciled medications at discharge rising from 64% to 96%.

All hospitals are encouraged to share their case studies that strive to reach care that meets the 6 Institute of Medicine aims: safe, timely, equitable, efficient, effective and patient centered (S.T.E.E.E.P.). The website for submission is www.ahaqualitycenter.org/ahaqualitycenter/jsp/caseStudySubmit.jsp.

**IJ Corner**

**Administrative Penalties**

Effective January 1, 2009, the California Department of Public Health (CDPH) is authorized to assess administrative penalties in the amount up to $50,000 for the first Immediate Jeopardy (IJ) penalty, up to $75,000 for the second subsequent IJ administrative penalty, and up to $100,000 for the third and every subsequent IJ violation. An administrative penalty issued after three years from the date of the last issued IJ violation shall be considered a first administrative penalty as long as the facility has not received additional IJ violations and is found to be in substantial compliance with state and federal laws.

CDPH defines IJ as a situation in which the licensee’s noncompliance with one or more requirements of licensure has cause, or is likely to cause, serious injury or death to a patient.

CDPH has been authorized to administer administrative penalties for IJ violations since January 2007 (previous fines were up to $25,000). To date 63 administrative penalties have been issued; 28 were related to medication safety.

The column will provide monthly updates on the types of IJs and prevention strategies.

**Strategies to Avoid IJs:**

- **Ensure Surgical Safety** — Eight IJs are related to surgical safety with at least 3 where the patient was returned to the OR to remove a retained foreign object. Hospitals should ensure that they are using a Universal Protocol, such as the one adopted by The Joint Commission (available at www.chpso.org). Hospitals should also consider adopting the World Health Organiza-

- **Food Safety** – Three IJs were issued for issues related to food safety. Hospitals should ensure that food freezers and refrigerators have temperatures that are consistent with hospital policy. One IJ cited that freezer temperature was out of range and ice buildup on food in freezer (signaling thawing and refreezing). It does not appear that any of these food safety events resulted in patient harm; however, the department made the citation based on the “potential harm” of not following appropriate food-safety policies.

- **Labeling of Specimens** – One IJ was issued for a mislabeled biopsy that led to an unnecessary surgery. Hospitals should ensure that labeling of specimens is done according to policy.

— Debby Rogers, drogers@calhospital.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.

**May**


**June**

2: Board of Pharmacy: Subcommittee to Evaluate Drug Distribution with Hospitals. San Francisco.

2: Hospital Council: Developing, Measuring and Documenting Employee Competence (audience: HR and ancillary support staff). Oakland.


**July**


**August**


**September**


**October**


**December**


For further information on these events:

Board of Pharmacy: www.pharmacy.ca.gov/about/meetings.shtml#distribution

CAPSAC: Theresa Manley, manleyt1@pamf.org

HASC: Catherine Carson, ccarson@hasc.org

Hospital Council: Cheree Muñoz, cmunoz@hospitalcouncil.net

**Article Submission**

Prospective authors may submit articles to Rory Jaffe, MD, MBA (rjaffe@calhospital.org, 916-552-7568). Typical articles will be brief — between 200 and 400 words. Additional information may be provided as web links. If accepted, the additional information may be hosted on the CHPSO website.

**Why CHPSO?**

The California Hospital Patient Safety Organization’s (CHPSO) distinct advantage over other PSOs is its focus on the laws, regulations, and patient-safety initiatives specific to California. Hospitals sharing a common market area will be able to work together and focus their patient-safety and quality-improvement efforts on issues relevant to their communities.