



*Eliminating preventable harm and improving  
the quality of health care delivery*

August 2013

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## Lessons Learned: Waking Up on the Wrong Side of the Operating Table

### ***Frequency of Laterality Errors and How to Prevent Them***

Laterality errors, also known as side discrepancies, refer to instances when the incorrect side is noted in one or more sections of diagnostic reports or documentation. For example, a radiology report that notes that a lesion is on the left side of the body, when in reality it is on the right, would be considered a laterality error. Uncorrected laterality errors are most frequently associated with wrong-side surgeries, which can result in wrong limb amputation, wrong-side arthroscopy, or resection of wrong-side organ.

A recent study published by several members of the Department of Radiology at Massachusetts General Hospital aimed to determine the frequency of laterality errors in radiology reports using a radiology reports search engine. They found that in the year 2007, 88 side discrepancies were reported in addenda, meaning that the error was put in the report, but was later corrected. However, far more reports are not corrected. In January alone of that year, 36 reports with laterality errors were never corrected (only 7 were corrected that month). Fortunately, only 3 patients were affected and no patient harm occurred.(1)

These errors are not exclusive to radiology. A study published in EYE (journal of the Royal College of Ophthalmologists) found that of the 100 randomly chosen ophthalmology notes,

32 had at least one laterality error (confusing right and left eyes), which equates to incorrect laterality documentation in one-third of the random charts reviewed.(2)

**Recommendations on prevention of laterality errors**

1. Avoid using the abbreviations for left and right (L and R). When in a hurry, they are often mixed up and illegible.
2. Involvement of the patient and/or relatives is very important. When consenting patients for surgery or prescribing treatments, explaining to the patient what is to be done and listening to any queries remains an important mechanism in reducing laterality errors.(3)
3. Always rely on written information when composing reports or implementing patient care – listening to a staff member orally explain without anything written to back it up can result in errors.
4. Follow your organization’s procedure for site identification and marking prior to any procedure.
5. Complete the appropriate “Time Out” steps before a procedure is to be performed.
6. Do not use the following abbreviations, which have been categorized as “error prone” by the Institute for Safe Medication Practices. Write the words to identify the anatomy involved.

**Laterality Error Inducing Abbreviations as noted by the Institute for Safe Medication Practices (ISMP)**

a.d.	auris dextra	right ear	"a" can be mistaken as an "o" which could read "o.d.", meaning right eye
a.l. a.s.	auris laeva, auris sinistra	left ear	"a" can be mistaken as an "o" which could read "o.s." or "o.l", meaning left eye
a.u.	auris utraque	both ears	"a" can be mistaken as an "o" which could read "o.u.", meaning both eyes
o.d.	oculus dexter	right eye	"o" can be mistaken as an "a" which could read "a.d.", meaning right ear, confusion with omne in die
o.s.	oculus sinister	left eye	"o" can be mistaken as an "a" which could read "a.s.", meaning left ear
o.u.	oculus uterque	both eyes	"o" can be mistaken as an "a" which could read "a.u.", meaning both ears

**References**

1. Sangwaiya MJ, et al. *Errare humanum est: frequency of laterality errors in radiology reports.* AJR Am J Roentgenol. 2009;192(5):W239–W244. doi: 10.2214/AJR.08.1778.
2. ElGhrably I, Fraser S. *An observational study of laterality errors in a sample of clinical records.* Eye. 2008;22: 340–343
3. DiGiovanni CW, Kang L, Manuel J. *Patient compliance in avoiding wrong-site surgery.* J Bone Joint Surg Am 2003; 85-A(5): 815–819.

## Wrong-Patient Orders

While electronic health records (EHRs) are intended to improve patient care, some risks are increased over the old paper record. Charting on Wrong Patient in EHR (COWPIE) is one such risk. A recent study examining one component of that, Computerized Physician Order Entry (CPOE) has some interesting findings. And, as the authors state, increasing automation, while reducing the opportunities for human error, also reduces the opportunities for humans to identify an error and intervene.

In the children's hospital studied, automated surveillance identified 644 probable CPOE COWPIEs. Only four had been reported to risk management, presumably events in which the wrong patient received the medication. The great majority of these events appeared to qualify as near misses, with the errant order rapidly cancelled and replaced with the correct order for the correct patient.

### **Risk factors included:**

- Age: infants and newborns were much more likely (2.9 and 3.6 times, respectively) to have wrong-patient orders.
- Last name: two-letter overlap 4.4 times more likely.
- Location: patients in nearby rooms 2.8 times more likely.
- Day of week: Friday 2 times more likely than Monday.
- Hour of day: midnight to 6 am 1.7 times more likely than 6 pm to midnight.
- More physicians ordering for the patient: 1.4 times more likely.

It may be easier to pull the wrong patient's chart in an electronic versus paper format, when only a few charts were at hand. Now all the charts in the system are readily available and may be pulled up by error. A standard approach should be taken to assuring that the correct chart is used when entering information

Hospitals may be interested in using this study's surveillance method to identify their risks. In the study, they identified potential CPOE COWPIEs: if a provider 1) ordered a drug on a patient, 2) cancelled the order within 120 minutes, and 3) then reordered the same drug on a different patient within 5 minutes of cancellation, it is presumed to be an error. When the authors performed chart reviews on a subset of these automatically identified "errors", they found that at least 60 percent and perhaps as many as 100 percent of the charts confirmed the error (documentation of the reasons for the provider's actions often was ambiguous).

### **Mitigation strategies:**

- Ensure that providers habitually use two patient identifiers when entering orders into electronic health records, in compliance with the [recommendations of the Joint Commission's national patient safety goal 01.01.01](#).
- For hospitals changing from paper to electronic charts, include in provider training information about how the risk for obtaining the incorrect chart is changing.
- Limit, when practical, the list of available patient records for each provider. This may not be feasible in certain systems or situations and may produce other risks if not implemented with care.

### **References**

Levin HI, Levin JE, Docimo SG. *"I meant that med for Baylee not Bailey!"*: a mixed method study to identify incidence and risk factors for CPOE patient misidentification. AMIA ... Annual Symposium proceedings / AMIA Symposium. AMIA Symposium. 2012;2012:1294–301.

[Grey Bruce Health Services - Ask Don't Tell Video](#)

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## **What's New with CHPSO.org?**

### ***New Sections on the CHPSO Website***

We want to extend a “thank you” to everyone for the feedback we received from last month’s CHPSO member survey. We really appreciate everyone who took the time to give us input on how we can become a better partner with you. It was clear that one area in need of improvement was the organization and accessibility of information on the website. In response to these concerns, we have introduced the following two new sections on our website.

#### [Getting Started Guide](#)

The Getting Started guide is a compilation of basic information on CHPSO participation and tools to assist you in developing your patient safety evaluation system.

- An overview of your benefits/resources as a CHPSO member;
- Information regarding the Patient Safety and Quality Improvement Act of 2005, which authorized the creation of PSOs;
- Data submission information and link to the ECRI portal;
- A downloadable and editable Policy Template; and
- PSES (Patient Safety Evaluation System) Development toolkit and resources/forms.

To access the Getting Started guide, simply click "Getting Started" on the home page or click on the Member Resources tab, then "Getting Started with CHPSO".

#### [Becoming a Safer Organization](#)

This page has four main categories: Human Factors, Just Culture, Leadership, and Transparency. Opening one of these sections gives you access to latest articles, tools and information on each category to assist you in becoming a safer organization. To access this page, simply click on "Becoming a safer organization" on the home page or by clicking on the Knowledge Center tab, then "Becoming a safer organization".

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## **FDA Warns of Insulin Dose Errors with Medtronic Pump Tubing**

The US Food and Drug Administration (FDA) recently issued a safety alert and Class I recall concerning the MiniMed Paradigm insulin pump from Medtronic. On June 7, 2013, Medtronic sent an urgent medical device safety notification to healthcare professionals to inform them of the potential for over or under delivery of insulin if insulin or other fluids contact the inside of Medtronic Paradigm tubing connectors. When that contact occurs, the insulin can temporarily clog up the vents in the tubing connector that permit the pump to properly

prime itself. Vent blockage can cause too little or too much insulin to be delivered, possibly triggering either hypoglycemia or hyperglycemia, which can be severe and lead to serious illness.

The company notification explained to patients and clinicians how to avoid getting the inside of the tubing connector wet. If either the tubing connector or the end of the insulin reservoir becomes wet, patients should start over with a new reservoir and infusion set.

The FDA alert reiterated advice from Medtronic that patients should watch for anything unusual during the process of priming the infusion set, such as insulin continuing to drip from the canula tip after priming is complete. This continued seepage may signify that the vents of the tubing connector are not working properly.

More information on this announcement, including model numbers, is available on the [FDA website](#). Medtronic issued a statement published in *Medscape Medical News* that customers do not need to return the MiniMed Paradigm infusion sets because they will work as intended if pump instructions are followed.

To report problems with the MiniMed Paradigm infusion sets directly to the FDA, contact MedWatch, the FDA's safety information and adverse event reporting program, by telephone at 1-800-FDA-1088 or online at <https://www.accessdata.fda.gov/scripts/medwatch/medwatch-online.htm>.

#### **Reference**

Lowes, R. July 12, 2013. *FDA Warns of Insulin Dose Errors With Medtronic Pump*. Medscape Medical News.

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## **Causal Analysis Learning Series: Developing and Implementing a Corrective Action Plan**

### **August 12, from 10 to 11 a.m.**

Too often institutions use a "band-aid" approach – apply a quick and easy correction that will hopefully stop or cover the immediate problem- to fix a situation, but the environment is too complex and multi-factorial for that to be effective. We'll review low-impact to high-impact strategies, the importance of standardization, and how sometimes simplifying your processes can build strong and effective corrective action plans.

#### **Registration**

This call is for members only. Registration is required and can be found at <http://www.chps.org/event/causal-analysis-learning-series-developing-and-implementing-corrective-action-plan>. Please note that a [website member account](#) is a requirement to sign up for member-only webinars. Registrants will receive an email a minimum of 24 hours before the event. Members registering within less than 24 hours of the event should contact CHPSO for participation information at (916) 552-2600.

#### **Continuing Education**

Provider approved by the California Board of Registered Nursing, Provider #CEP 16084, for 1.0 contact hour.

Full attendance, completion of online survey, and attestation of attendance is required to receive CE for this webinar. CE is complimentary for registrants.

**Past webinars**

Content from the first three webinars in this series, along with other past webinars, is available to members at <http://www.chpso.org/webinar-archive>.

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## Managing the Drug Shortage Crisis: Do's and Don'ts

**CHPSO/ECRI Webinar**

**August 12, from 11:30 a.m. to 12:30 p.m.**

Hospital pharmacists across the nation are spending countless hours managing multiple drug shortages to ensure needed medications are provided in time to prevent any harm from reaching the patient. Many pharmacy directors would agree that drug shortages have emerged as their most important problem of the decade. Congress has responded with key changes to the U.S. Food and Drug Cosmetic Act that require manufacturers to report shortages, giving pharmacy directors more information to develop and gain approval of internal action plans.

- Have you been challenged with managing a drug shortage?
- Do you have support from your leaders and colleagues?
- Has your hospital developed successful processes or are you often in a crisis mode?

This member webinar will help you evaluate drug shortage management strategies and decide which strategies to implement and which strategies to avoid.

**Registration**

This call is for members only. Registration is required and can be found at <http://www.chpso.org/event/managing-drug-shortage-crisis-dos-and-donts>. Please note that a [website member account](#) is a requirement to sign up for member-only webinars.

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## Ongoing Professional Practice Evaluation

**From QA to QI**

[Marc T. Edwards, MD, MBA](#)

In my last column, we took an evidence-based look at the role of Morbidity & Mortality (M&M) conferences in quality improvement and here will briefly examine the potential contribution of Ongoing Professional Practice Evaluation (OPPE). To improve quality, your OPPE data would need to be used as part of a QI process. So the real question is whether you are doing that.

OPPE is a Joint Commission requirement that was intended to assure that provider performance is monitored during the 2 year interval from credentialing to re-credentialing. OPPE focuses on clinical competence. Most organizations have finessed it by developing provider profiles based on administrative data sets (case volume, complications, core measures, resource use, etc.). If that's all that your organization does, you can easily meet the requirement and do nothing to improve quality.

In spirit, OPPE could also be viewed as encouragement for aggregation and analysis of clinical performance data. Data aggregation and analysis can be a valuable activity in support of quality improvement from two angles: feedback and issue identification.

### **Feedback**

Feedback can be very effective to facilitate self-correcting activity when the data are understandable and the performance goals clear. For example, if your OPPE provider profile includes performance benchmarks, it could be used to give performance feedback to clinicians. No self-respecting clinician likes to be below average. Without comparative benchmarks or goals, however, providers are likely to just say, "Interesting, but why are you wasting my time with this?"

### **Issue Identification**

You can also analyze your OPPE data to identify improvement opportunities. Your success with this approach is somewhat dependent on the nature of your data and the sophistication of those who analyze it. The opportunities with the biggest payback potential are more likely to be at the group level than at the individual provider level. Finding improvement opportunities is not of itself sufficient to improve quality. The findings and related recommendations from any such aggregate data analysis need to be connected to your organization's QI process so that they can be effectively resourced and managed for implementation – and we know that implementation typically poses the greatest challenge to success.

### **Contribution of Clinical Peer Review**

Clinical peer review can contribute substantial performance data to the OPPE profile only if it is captured in the review process. Most programs fall short in this regard. My whitepaper *Measuring Clinical Performance* ([http://www.gatoqi.com/wp\\_measurement.htm](http://www.gatoqi.com/wp_measurement.htm)) offers a method for doing this.

*Coming Next: Clinical Peer Review Impact on Quality and Safety – Newest Findings*

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## Upcoming Patient Safety Events

### California Hospital Patient Safety Organization

Unless noted, all CHPSO events are for members only, are free and require registration. The registration link will be located on each webinar's webpage. All times are for the Pacific Time Zone. For more information, contact [info@chpso.org](mailto:info@chpso.org) or call (916) 552-2600.

August 12 10–11 a.m.	<a href="#">Causal Analysis Learning Series: Developing and Implementing a Corrective Action Plan</a> CHPSO monthly member call
August 12 11:30 a.m.–12:30 p.m.	<a href="#">Managing the Drug Shortage Crisis: Do's and Don'ts</a> CHPSO/ECRI Webinar
September 9 10–11 a.m.	<a href="#">Causal Analysis Learning Series: Monitoring for Effectiveness</a> CHPSO monthly member call

### Hospital Council of Northern and Central California

August 1 12–1:30 p.m.	<a href="#">Effective Purchasing of Hospital Health Information Technology Part 1: The EHR Incentive Program and Other P4P Basics</a>
August 8 12–1:30 p.m.	<a href="#">Effective Purchasing of Hospital Health Information Technology Part 2: Mechanics of Procuring Health IT</a>
September 12 11 a.m.–12:30 p.m.	<a href="#">PFCC: Partnership from the Bedside to the Boardroom</a>

### Hospital Association of Southern California

August 22 8 a.m.–12 p.m.	<a href="#">Charge Nurse Education Series: Enhancing the Customer's Experience</a>
September 26 8 a.m.–12 p.m.	<a href="#">Charge Nurse Education Series: Managing Change</a>

### Hospital Association of San Diego and Imperial Counties

For more information visit [www.patientsafetycouncil.org](http://www.patientsafetycouncil.org) or contact [Alicia Muñoz](#).

August 15 9 a.m.–2 p.m.	<a href="#">HASD&amp;IC Quality and Patient Safety Program</a>
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