



ECRI Institute Perspectives on Clinical Alarm Safety

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health. DEVICES

TOP 10 HEALTH TECHNOLOGY HAZARDS

Our List of High-Priority Hazards
You Should Address for 2013

JOHNS HOPKINS WINS ACHIEVEMENT AWARD

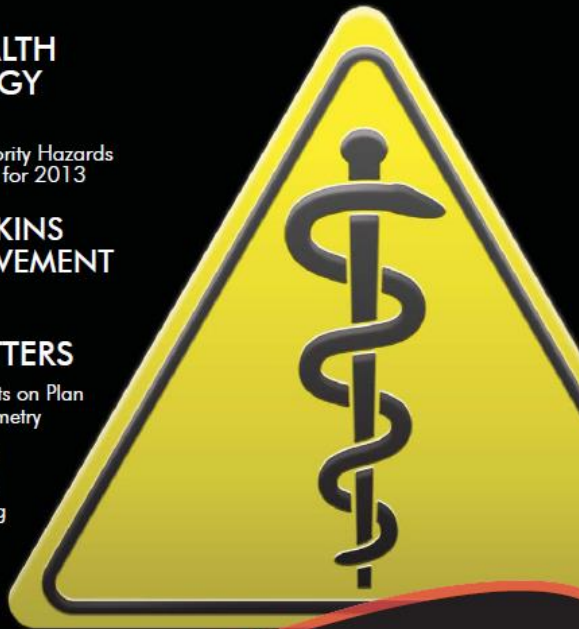
SAFETY MATTERS

FCC Seeks Comments on Plan
Affecting WMTS Telemetry

Keeping CPOE Safer

CDC to Deploy EHR-
Compatible Reporting
Platform

... And More



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THE LIST FOR 2013

1. Alarm hazards
2. Medication administration errors using infusion pumps
3. Unnecessary exposures and radiation burns from diagnostic radiology procedures
4. Patient/data mismatches in EHRs and other health IT systems
5. Interoperability failures with medical devices and health IT systems
6. Air embolism hazards
7. Inattention to the needs of pediatric patients when using "adult" technologies
8. Inadequate reprocessing of endoscopic devices and surgical instruments
9. Caregiver distractions from smartphones and other mobile devices
10. Surgical fires

An Alarming Problem

- ▶ More and more devices with alarms
- ▶ More and more patients are connected to one – or many alarm-based devices
- ▶ 150-400 (or more) alarms per patient per day can be typical in a critical care unit
- ▶ Alarm-based devices are not standardized in many institutions
- ▶ Flexible alarm setting features allow for inconsistent use of alarms

My Own Alarm Fatigue



<https://www.ecri.org/blog/Lists/Posts/Post.aspx?ID=140>

<https://www.ecri.org/blog/Lists/Posts/Post.aspx?ID=143>

Top Ten Considerations

- ▶ Steady flow of problem data
- ▶ Routine ECRI Institute accident investigations – in a variety of settings
- ▶ ECRI Institute surveys
- ▶ A complex problem to solve
- ▶ Some solutions do exist
- ▶ The “front page” factor



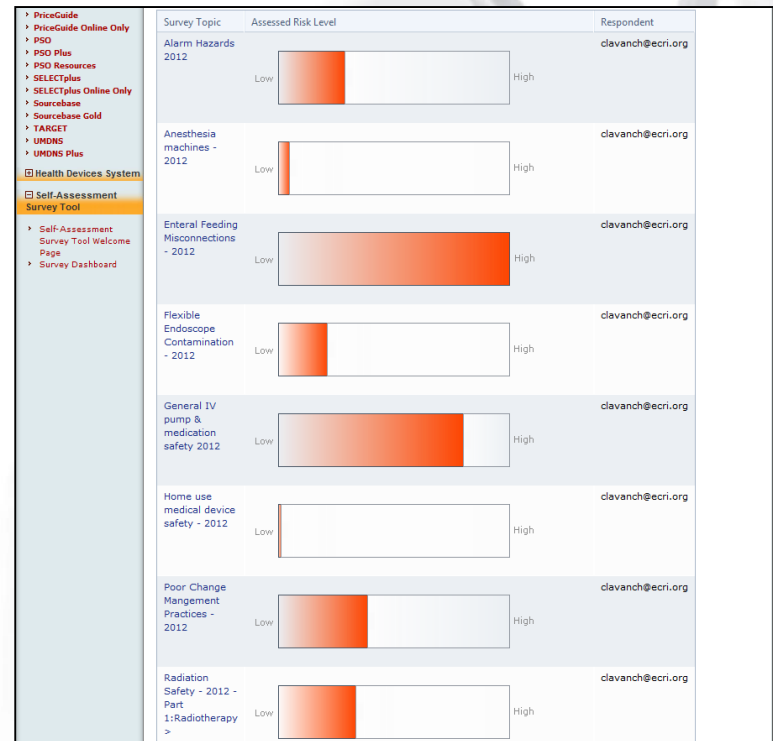
Important Recommendations

- ▶ Set as a **Top Patient Safety Priority**
- ▶ How are alarms used in your institution?
 - Assessment of specific patient care areas
 - What does your clinical staff think?
- ▶ What kind of problems have you had?
- ▶ Defined protocols and user permissions
 - According to specific care areas
- ▶ Standardization and training
- ▶ Awareness and clinician “buy-in”



ECRI Institute Alarm-Related Resources

- ▶ Alarm Safety Resource Site
 - https://www.ecri.org/Forms/Pages/Alarm_Safety_Resource.aspx
- ▶ Accident investigation and RCAs
- ▶ Alarm management reviews
- ▶ Self-assessment tools
- ▶ *Health Devices* journal
 - Evaluations and Guidance Articles



Other Useful Resources ... With Contributions from ECRI Institute

- ▶ Pennsylvania Patient Safety Authority
 - Physiologic Alarm Management
- ▶ Healthcare Technology Foundation
 - National Clinical Alarm Survey
- ▶ Association for the Advancement of Medical Instrumentation
 - 2011 Clinical Alarm Summit Report



Thank You