From reactive to proactive: implementing a low-threshold reporting system in a large, multisite diagnostic radiology department

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Purpose

- **High-reliability organizations (HRO)**
  - Rely on proactive low-threshold reporting systems in order to decrease downstream failures.
  - Root Cause Analysis effective for the analysis of active errors.
  - Most system failures consist of latent errors not active errors.
- **Existing standard incident reporting tool at our institution**
  - Designed for high impact events
  - Requires detailed entry information; ~5-10 minutes per entry
  - Managed at health system-level
- **No existing reporting pathway for latent errors, ex:**
  - Wrong phone numbers in staff directory
  - Suboptimal (though diagnostic) field-of-view
- **No reporting pathway for successful grassroots "workaround"**

Reason J. Human error: models and management. BMJ. 2000 Mar 18;320(7237):768–70.

Reason J. Beyond the organisational accident: the need for "error wisdom" on the frontline. Quality and Safety in Health Care. 2004 Dec 1;13(suppl_2):ii28-ii33.

Methods

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Quality Improvement Questionnaire

Please complete the QUIQ-Rad (pronounced "quick rad") Submission below.

QUIQ-Rad is a way to improve little things in our workplace by centralizing these opportunities.

Ever had an annoying issue that happens *all the time*? Did you decided to "just deal with it?" No more! Send it in each time it happens (takes 30 seconds). By aggregating issues, we can see trends to convince the bosses for improvement.

Please keep your submissions to objective data. A personnel from the radiology department will review all submissions.

Only those labeled "must provide a value" are required. Give us more information if you can, though!

Thank you!

Condition Date / time * must provide value

Accession number (if applicable)

Location

Modality

Reporter Name * must provide value

Severity * must provide value

Delay in care * must provide value — Did the condition result in a delay in care delivery?

Division / Group * must provide value

Description * must provide value

Action taken — Action taken as a result of the condition

Upload File (e.g. a picture of the issue, optional) — Upload document

Others involved

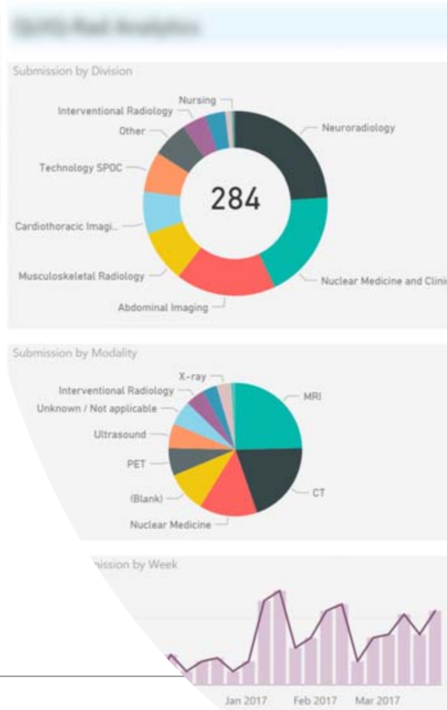
We occasionally email out known issues to ask if other people are having similar problems. — Check if you DO NOT want this submission included.

Submit

Methods

- **First Iteration**
  - "Education-Only"
  - Formal announcement of submission system
  - Dedicated grand round session
  - Submission collected for 12 weeks
- **Second Iteration**
  - Integrated implementation approach
  - Continue education-only approaches
  - Easy access at every workstation by single click
  - Accountability to section "Quality Officer" for closed-loop review
  - Monthly analytic report at departmental Quality and Patient Safety conference
  - Lottery-based reporting incentives
  - Submission collected for additional 12 weeks

Reports

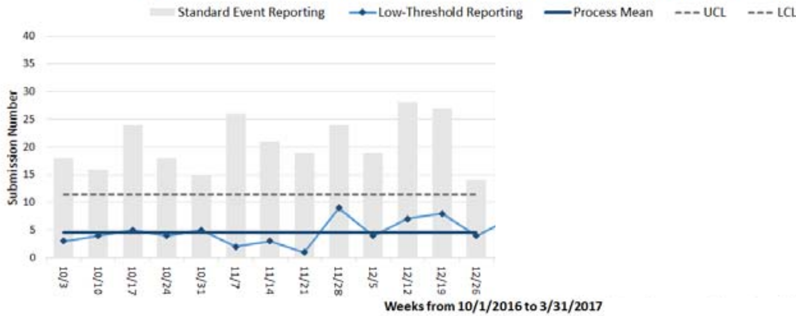


- **Weekly**
  - Provided to subspecialty divisional Quality Officer
  - New submissions each week
  - Pending submissions from previous week
- **Monthly**
  - Analytic data provided to divisional Quality Officers
  - Volume of Submission
  - Pattern
  - Delay in Patient Care
  - Stratification by severity

Lottery-Based Incentive

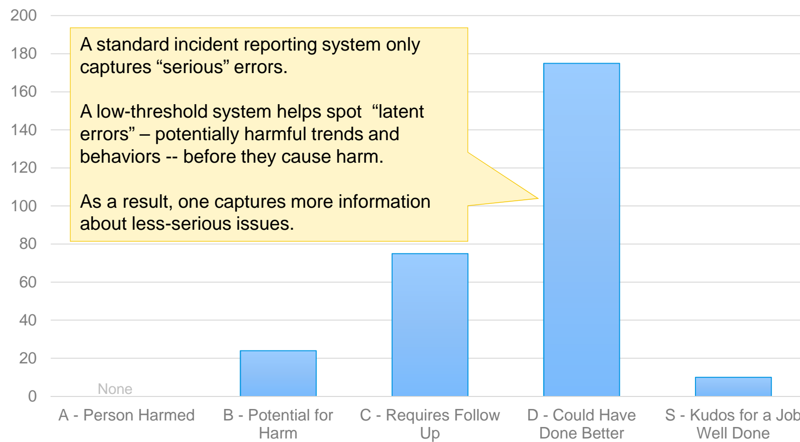
- **Per submission, probability of either winning a nominal prize or be redirected to a radiology-related cartoon (no prize)**

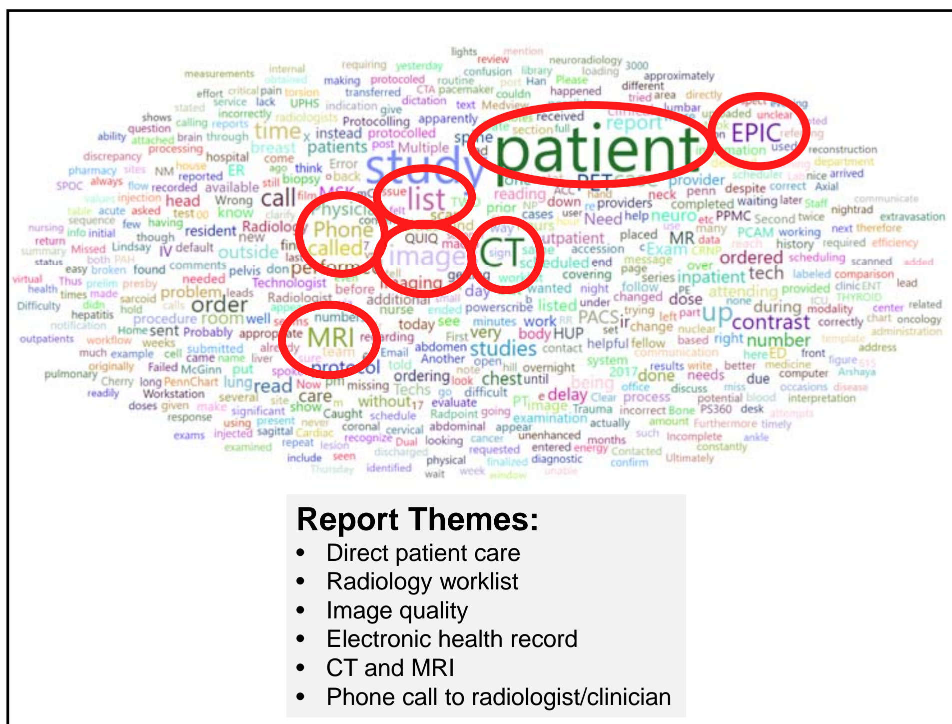
Results



- Higher submission volume with integrated approach versus education-only
- No significant decrease in standard incident reporting (gray bars) as result of increase in low-threshold reporting

Results





Conclusion

- **Low-threshold incidence reporting program is feasible without adversely affecting submissions to the traditional reporting system.**
- **An integrated approach to implementation of low-threshold reporting is more effective than education alone.**
- **Future directions include**
  - Leveraging submitted entries as baseline data for quality improvement projects, and
  - Context-aware auto-population of relevant data such as timestamp and accession number to further decrease submission threshold.

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