

# THE BEDSIDE OBSERVER

*using patient and family observations to  
enhance patient safety*

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# The Team

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- Co-investigators:
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  - Susan Greig
  - Ed Kry
  - Judy Komori
  - .... Many others



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- Canadian Patient Safety Institute (CPSI)



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- British Columbia's Children's Hospital



- Child & Family Research Institute (CFRI)



# I have made MISTAKES

- I am not bad
- I care about every patient
- I am human.....

# Hospitals Need to be Safer!

- Adverse Events in Canadian Hospitals (Baker, R. & Norton, P. et al. (2004))
- Incidence rate of 7.5% in hospitals (2000)
- 70,000 preventable adverse events (est.)
- 9,000 - 24,000 preventable AE deaths
- 1.1 million additional hospital days
- Comparable to similar health systems

# Reporting of Adverse Events

- Borrowed from other industries
- Learn from accidents and near misses
- Know what is going on
  - usually healthcare providers
- Understand what is going on
- Redesign the system

# Can we change?



# How can we be safer?

# Family Initiated Reporting?



# Family Initiated Reporting

- 3 Phases of Research Complete:
  1. Literature Review – what have others published on the topic?
  2. Human Factors Evaluation of Web-based tool for family reporting
  3. For 1 year, all patients discharged from pediatric surgical ward offered use of Family Reporting System (n=544)

# Literature Review

- Medline & Pubmed searched for 90 combination keyword searches related to adverse event reporting by patients
- Yielded 11 papers + 2 from reference lists + 4 suggested by colleagues
- Analyzed by: healthcare setting, whether solicitation used, study duration, use of incentives, participation rate, reporting method, report corroboration

# Question

- Are patients able to reliably report safety events?
  - a. Yes
  - b. No

# Literature Review Lessons

- Family reporting found **reliable in all (3) studies where corroboration conducted**
- Most efficient method for each healthcare setting unknown
- Optimal terminology for family reporting unknown
- Too few studies in areas too diverse to allow definitive conclusions
- Review selected as **Editor's Choice**

# Human Factors Evaluation

- Objective: to develop a web-based system to solicit adverse event reports from families of inpatient children
- System face validity and usability measured by standard instruments
- System utility measured by adverse event rate, typology, degree of harm, likelihood of recurrence, and quality of information of reported events

# Human Factors Evaluation

- Family Reporting System (FRS) shown to have:
  - Good face validity
  - Excellent usability
  - Good clinical utility
- Concluded that iterative process used in system design was effective
- Human factors strategies can be used effectively to design an FRS

# Family Reporting Deployment

- Nov 2008-Nov 2009: FRS offered to 544 families being discharged from BC Children's Surgery Ward
- Invited to use the system to report adverse events or near misses
- Problem reports analyzed by type: Medication, Equipment, Complications, Miscommunication Between Staff, Miscommunication Between Family and Staff

# Family Reporting Deployment

- FRS reports also classified by Degree of Harm, Likelihood of Recurrence and Quality of Information in report
- Results to follow via interactive format
- Peer-reviewed publication not available yet
- To be submitted to *Canadian Medical Association Journal* June 2010

# FRS Screenshot

Windows Internet Explorer

https://hs1.bcpsb.ca/Form\_ID=68

File Edit View Favorites Tools Help

My Place Webpage has expired http://www.psych.uaberta... sign out




van art gallery renew online




When a medication is not given exactly as it was meant to be.

Examples

- Medicine given in the incorrect amount
- An allergic reaction to medicine

**★ Do you think a medication problem occurred or was stopped before occurring?** Yes

**Medication problems that occurred:**     
*(Click the  icon on the right to add.)*



**Medication problems that were stopped before occurring:**     
*(Click the  icon on the right to add.)*

**If any other medication problems occurred which were not listed above, or if you would like to provide more information on one you observed, please list the details here:**

**Was staff aware of this problem or concern?**

**If you discussed this problem or concern with staff, did the discussion meet your needs?**

**Did you or your family receive an apology from staff?**

**If you think staff could do anything to prevent this from happening to patients, please select from the list:**   

**Section 2: Complications of Care**

Internet 100%

# Results: Audience Poll

- Of 544 families asked, how many reported problems?
  - a. 121
  - b. 221
  - c. 321
  - d. 421
  - e. 521

# Results

- **Correct answer = 321, or 59%!**
- Significantly higher than classic adverse event rate in hospital!
- Weissman (2008) found patients identify twice the adverse event incidence as chart reviews do
- What percent were legitimate safety issues?

# Results

- Of the 321 reports submitted, how many were judged by 2 reviewers to be actual harm?
  - a. 7
  - b. 77
  - c. 177
  - d. 257
  - e. 307

# Results

- **Correct answer = 177 (55% of reports were direct safety concerns)**
- So, ~60% of families report a safety problem, and of those, ~half are directly safety related
  - Thus, the FRS detects an ~30% Safety Problem Incidence on the study ward
- Much higher than the classic 1% adverse event rate in pediatric hospitalization!

# FRS Example Reports

1. “Nurse hung bag of meds for IV that my daughter was allergic to, despite the large sign on the door and the allergy warning on her bracelet.”
2. “Suction equipment in room was re-assembled incorrectly after being emptied. This led to an accumulation of fluid in the patient.”

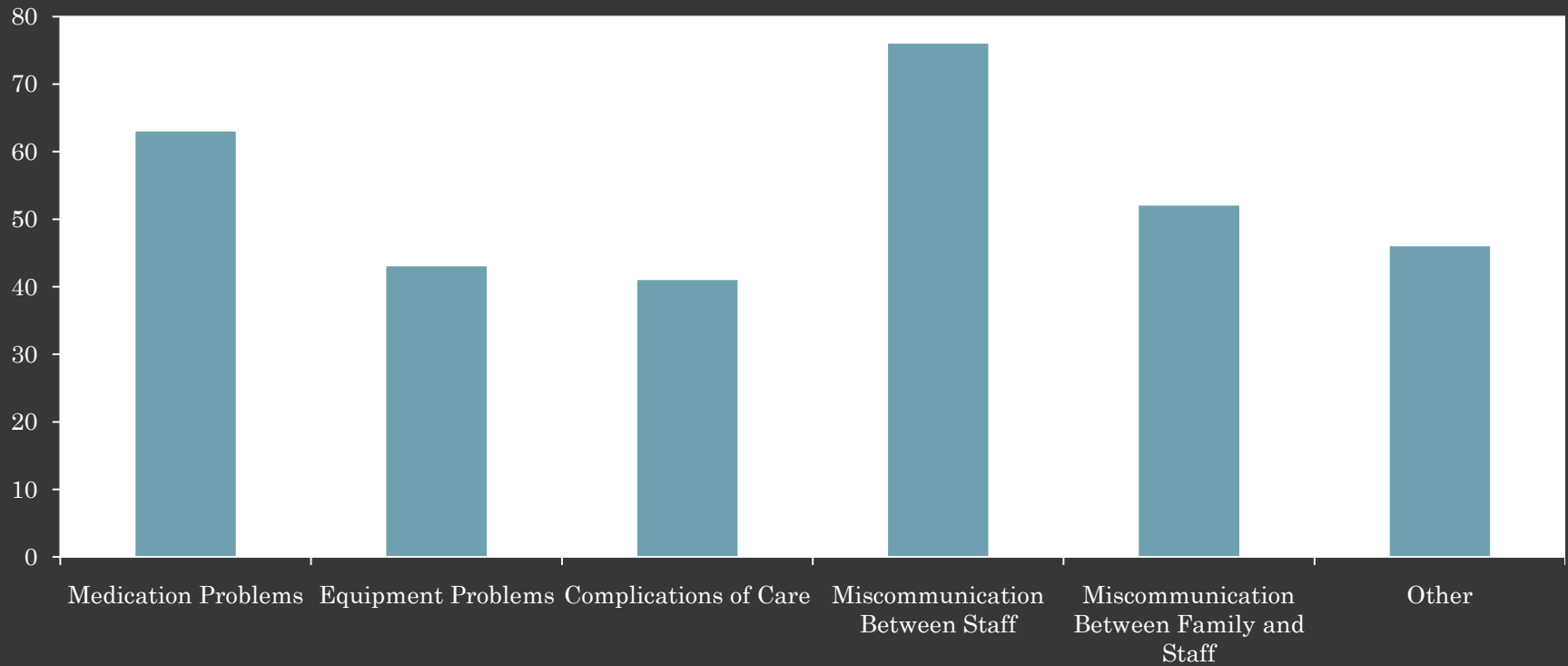
# FRS Example Reports

3. “He got Steven Johnson syndrome and was hospitalized for 2 wks”
4. “Ulcer due to meds caused bleeding.”
5. “Wound developed due to an intravenous line.”
6. “An artery was severed during epilepsy surgery that caused a stroke resulting in loss of motor function on the right side.”

# FRS Event Types: Poll

- Which is the most frequent type of event reported by families?
  - a. Medication Problem
  - b. Equipment Problem
  - c. Complication of Care
  - d. Miscommunication Between Staff
  - e. Miscommunication Between Family and Staff
  - f. Other

# Typology Of Family Reports



# Typology

- Correct Answer = **Miscommunication Between Staff**
- Consistent with literature surrounding adverse events (Kitch 2009)
- Medication and Communication problems predominate!
- Parent reports shown to be consistent with the literature
- Can parents be used to help the system?

# Question

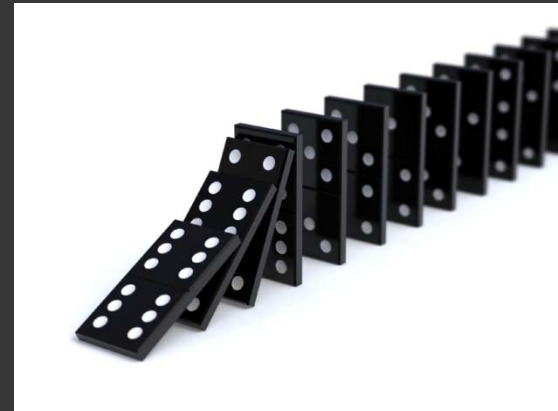
- Will parents report only on an anonymous basis?
  - a. Yes
  - b. No

# Family Identification

- Correct Answer = **No! (81% of parents voluntarily provided name & contact information)**
- Of the parents who left their names, 80% agreed to be contacted to participate in future efforts to improve patient safety
- Clearly, a **motivated** and **reliable** work force!

# Where to now?

- Who should LEAD this initiative?
- Should hospitals fund patient reporting?
- How do they fund this?
- Who should triage reports?
- Who should lead safety improvements?
- How do we change?



# OUR Healthcare System

- In the past, families have been minimally involved in organizational change.
- Only being privy to information if their child was directly involved in a medical error or adverse event.
- We need to focus on what families have to say.
- A more proactive approach to safety improvement.

# Lit Review & FRS Evaluation

1. King A, et al. Time to listen: a review of methods to solicit patient reports of adverse events. *Qual Saf Health Care*. 2010 Apr;19(2):148-57.
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