

Training for adverse and critical events in safety (TRACES) for health care: What have we learned to date?

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Outline of presentation

- Funding, partnership, project background
- Project goals, objectives, methods
- What we have learned to date

Project funding

A project funded by the Canadian Health Services Research Foundation (CHSRF) – Research, Exchange and Impact for System Support [REISS] competition

The REISS initiative was developed to create **partnerships between researchers and decision-makers** – to work together on applied health services and policy research programs.

Key Components of the 4-year funding model:

- Collaborative: Inter-professional teams of researchers and decision makers
- Capacity building, knowledge exchange, dissemination
- Periodic deliverables over the course of the project
- Evidence-based support for the organization, management and policies of the Canadian healthcare system

“TRACES” partnerships



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“TRACES” project

The project is based on *“new view”* thinking and recognition that the health care system is a **complex socio-technical system, marked by competing demands and interactive complexity** and thus requires a new breed of **non-linear accident models** that will support a better understanding of critical incidents, and thus increase the likelihood of formulating useful recommendations for system improvements that will reduce the risk of recurrences.

Project background: Conceptual framework (Dekker, 2007)

Old View Thinking

- The system is basically safe
- Human error is a cause of adverse events
- Unreliable people are the biggest threat (random performance degradations)
- Progress on safety (restricting the unreliable component (people) through rules, regulations and procedures)

New View Thinking

- The system is NOT inherently safe
- Human error is NOT an explanation but demands an explanation (human error is a symptom of deeper trouble within the system)
- People create safety (human error is connected to features of tools and tasks)
- Progress on safety (understand the vulnerabilities and strengths of the system in which people work)

Project background: Conceptual framework continued

Underlying assumption: Health care delivery is complex and dynamic

- Constant influx of new patients, each with their own biological and cultural variability
- Many discontinuities and transitions in care
- Complex performance tasks
- Rapid introduction of new technology
- Demand frequently pushes performance goals (multiple competing interests)
- Strong autonomous and semi-autonomous professional cultures

Project background continued

This project relies heavily on the groundwork undertaken at a major health authority in Canada – the Winnipeg Regional Health Authority (WRHA)

- The WRHA Patient Safety Investigation (PSI) Certification course incorporates “new view” thinking based on an understanding of non linear accident models to better understand adverse events.
- PSI training forms the basis for a comprehensive review of critical incidents to understand the “second story” and increases the likelihood of formulating useful recommendations for system improvements that may reduce the risk of recurrences.

Project background continued

REISS project idea evolved out of key learnings from earlier work

- ✓ Canadian Adverse Events Project (Canadian Institutes of Health Research, 2000-2003)
- ✓ Management and Regulation of Safety in Risk Critical Sectors (Health Canada, 2004-2007)
- ✓ Creating High Reliability Organizations in the Canadian Health Care System (CPSI, 2007-2008)
- ✓ Interaction with international opinion leaders and experts in system safety on emerging ideas of resonance and resilience and safety (Sidney Dekker, Eric Hollnagel, René Amalberti, Richard Cook, etc)

Project goals

- **Training component:** transfer the process of learning for conducting and reporting of critical incident investigations, based on the process used by the Winnipeg Regional Health Authority, to two other regional health authorities in Western Canada.
- **Evaluation component:** assess the impact of the learning, gathering the perspectives of the staff and management regarding how to create and maintain safety, as well as assessing the quality of the investigative reports and the learning from these.

Training component: Objectives

Assist the partner organizations to:

- Recognize the features of health care delivery that make it inherently very complex and unpredictable, and understand the implications of this, in terms of creating safety.
- Understand how safety is created and maintained in complex, dynamic systems (“old view” versus “new view” thinking).
- Recognize that performance variability is both normal and necessary in complex non-linear systems.
- Recognize the need for new accident models to better understand the source of failure in complex, non-linear systems, such as health care (linear versus non-linear models).
- Recognize the challenge of doing critical incident investigations due to the powerful influence of hindsight bias.
- Practical application of theory using real life exemplars.

Project activities

Project launched in January 2009

Three major phases

- Evaluate the impact of the “*new view*” approach at WRHA
- Translate the learnings from WRHA to two pilot sites (health authorities) through critical incident review training that includes a mentoring component
- Evaluate the impact of the “*new view*” approach at the two pilot sites

Measurement tools

Pre and post training measures include:

- Safety culture survey
- Interviews with senior decision-makers and providers of care
- Focus groups with care providers (nurses, physicians occupational and rehab therapists)
- Textual analysis of reports regarding critical incidents using pre-specified criteria

Work Completed to Date

Interviews and focus group work at all three partner sites

Survey work at two sites (WRHA and 1 pilot site)

Two rounds of training completed at one site, and one round at the second site, with more training scheduled at both sites in June and July 2010

6/4/2010

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What have we learned to date?

- Safety is important, but people are still looking for standard fixes and are influenced by conventional opinion leaders (e.g. Safer Health Care Now campaign, and Saving 100,000 Lives Campaign).
- Confusion regarding the difference between safety and quality exists and the confusion is greater at more senior levels in the organization (i.e. people continue to think that if you improve quality through standardization, guidelines, procedures, etc) that safety will automatically follow.
- People at senior levels focus on the need to develop robust systems that are marked by guidelines, protocols, rules and also focus on training, technology, rules and enforcing compliance as solutions.
- People at the front lines (the practitioners) understand the need to adapt their behaviour and practice in unusual situations, but are tentative in how they discuss this with both their peers and managers, aware of potential negative consequences or sanctions, if things don't work out well.
- With respect to “narratives” that explain critical incidents, these tend to change as one moves from the sharp end to the blunt end (Waring, 2009)

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What have we learned to date? continued

- Set of ingrained attitudes about how work is performed, i.e. there is no gap between work as imagined and work as done, i.e. work can be performed in a high quality manner, despite the context – this is an easy perspective for senior management to adopt since it feeds off the sense, amongst most professional groups in healthcare, that they are, or should be, perfect and can provide high quality care under a range of conditions.
- We often heard claims (particularly from those in risk management positions) that the organization has adopted the “new view” and operates according to a “just culture” that does not “blame” individuals, but to a large extent incidents are still explained by personal/professional attributes, investigations are still highly influenced by hindsight bias, and the recommendations that follow are largely focused on sharp end solutions (e.g. educating the individuals involved in the incident, revising/adding procedures, adopting technology to protect the system from human error).
- At both the sharp and blunt ends of care, people seem unaware and/or unwilling to accept that accidents are “normal” in dynamic, complex systems.

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Conceptual stumbling blocks

- Lack of deep understanding of the source of failure in complex organizations.
- Superficial understanding of hindsight bias and its impact on what you look for when you are doing critical incident investigations.
- Accountability remains a thorny issue, particularly at the senior management and governance level, with little consideration of the accountability/authority dynamic.

Education and training efforts must focus on building an understanding of the health care system as a complex socio-technical system, non-linearity and how hindsight bias operates, with well explicated examples.

The conversion to “new view” thinking is a major challenge requiring commitment from senior levels within the organization and willingness to dedicate staff time for learning, reflection, discussion.

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Practical considerations for training

- The structure or configuration of the safety initiatives within the partner organizations influences the perspective of our partners and likely has influenced their openness to the “new view” model of critical incident investigation (e.g. both pilot sites are configured differently from WRHA model, and at one site the individuals charged with a formal risk management role, are also those responsible for doing critical incident investigation).
- As would be expected, there are competing demands on time, subsequently our partners were initially quite determined to protect their staff from “training overload” (contrasted with how participants responded. Our approach with the partners has been marked by patience, but the need to remain very firm about the required time for training.
- Staff and management are looking for a quick fix, thus recommendations made on the basis of simplistic analyses remains the default response.

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