



*Realizing Opportunities.  
Promoting Patient Safety.*

EHR & Patient Safety  
May 7-8, 2007, Toronto



Canada Health  
Infoway Inforoute  
Santé du Canada



Canadian Patient Safety Institute  
Institut canadien pour la sécurité des patients



iCARE about health  
Integrated Centre for Care Advancement through Research

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# What we know; What we need to know

Dr. Nicola Shaw

Micaela Brown & Nicole Grimm

**iCARE** *about health*

*Integrated Centre  
for Care Advancement  
through Research*



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# EHRs & Patient Safety: Evidence, Issues & Future Directions

*Reviewing the environmental scan*



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# Introduction

- Partnership
  - Canada Health Infoway
  - Canadian Patient Safety Institute
  - iCARE (Integrated Centre for Care Advancement through Research)
- Environmental Scan
  - Broad literature scan
  - Stakeholder interviews



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# Focus

- Intersection of Electronic Health Records (EHR) and patient safety
- Definition
  - An EHR is defined as the electronic management and communication of a patient's chart, within and between professionals.
  - Inclusive of:
    - Computerized Provider Order Entry (CPOE),
    - Clinical Decision Support Systems (CDSS),
    - Medication administration / bar-coding,
    - Public health surveillance,
    - Transition of care between providers.



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# Methodology - Literature

- Inclusive
  - Grey literature (Web sites, newspapers, non peer-reviewed work)
  - Peer-reviewed publications
- Over 300 publications identified initially
- 135 publications reviewed in detail



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# Interviews - Methodology

- Stakeholder Interviews
  - Purposive sampling
    - Decision/Policy makers
    - Researchers
    - Health care providers
  - Within Canada and internationally
  - 28 interviews
  - January - February 2007



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# Interview Focus

- Stake holder's role and how it relates to Electronic Health Records and/or patient safety;
- Definition of the Electronic Health Record;
- Relationship between Electronic Health Records and patient safety;
- Linkage between patient safety and EHR agendas in the stakeholders' countries;
- Gaps in knowledge for patient safety and EHRs;
- Suggested next steps to advance EHR and patient safety agenda



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# What do we know?

*That is, **really know**, not just  
assume....*



# **Computerized Provider / Physician Order Entry (CPOE)**

**Reduces  
medication  
error**

# Clinical Decision Support Systems (CDSS)

**Reduces  
medication  
error**

# Medication Administration / Bar Coding

**Reduces  
medication  
error**

# Surveillance

**Ability to identify  
patterns &  
individual patients**



# Continuity of care



?

# Implementation

**... is  
never  
easy**

# Unintended Consequences

**Decreases  
patient  
safety**



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# Complex contradiction

- Implicit assumption that EHRs ***must*** improve patient care
- Increasing recognition that there is very little evidence for the impact of EHRs on patient care (safety)



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# What do we need to know?

- Evidence v. Information
  - EHRs & patient safety outcomes
  - Implementation issues
- Research, development & standardization
- Money & politics
- Recognizing Opportunities
- Increased communication & collaboration



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# Discussion



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UNIVERSITY OF  
**ALBERTA**



Capital  
Health

Edmonton and area

# Dr. Nicola (Nikki) Shaw

## Research Chair, Health Informatics

[Nicola.Shaw@Capitalhealth.ca](mailto:Nicola.Shaw@Capitalhealth.ca)

(780) 492 3185



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