

Healthcare E- Vitalized at Ontario Shores

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October 2011



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Learning Objectives

- At the end of this presentation, participants will:
 - Be able to identify the reasons why Ontario Shores chose to implement an integrated EHR
 - Understand how the EHR supports improvements in process, practice and access
 - Be aware of examples of how we have used the new system to support safety and quality of care



Patient Safety and Quality of Care

- Have you ever lost a bag during air travel?



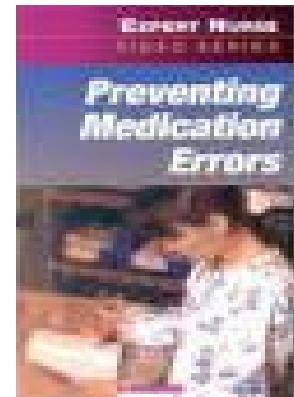
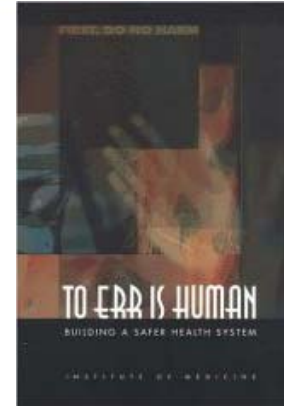
Patient Safety and Quality of Care

- Estimated fatality rate per million hours flown = .0000016%
- 2008 rate of mishandled baggage = 0.519% (2009, Airline Quality Rating @ <http://aqr.aero/aqrreports/2009aqr.pdf>)



Patient Safety and Quality of Care

- “To Err is Human” 1999 (U.S.)
 - 44,000 to 98,000 people die in hospital each year as a result of preventable medical errors
 - 80,000 people are hospitalized and 7,000 die annually secondary to medication errors in inpatient settings
- “Preventing Medication Errors” 2007 (U.S.)
 - 380,000 – 450,000 preventable ADEs occur annually in the U.S. in the hospital setting at a total cost of \$3.5 billion



Patient Safety and Quality of Care

- “The Canadian Adverse Events Study” (2004)
 - Adverse event rate was 7.5 per 100 hospital admissions
 - Of the 2.5 annual million hospital admissions in Canada, approx. 185000 are associated with an AE and close to 70,000 are potentially preventable
 - Baker et al., 2004



Patient Safety and Quality of Care

- Monitoring in Mental Health Practice:
 - For patients initiating SGA drug therapy:
 - < 20% receive baseline glucose testing and < 10% receive baseline lipid testing (Morrato et al., 2008)
 - Suboptimal screening for dyslipidemia (35%), hypertension (67%), and diabetes mellitus (60%) in an outpatient mental health clinic (Jennex et al., 2008)



Patient Safety and Quality of Care

- Monitoring in Mental Health Practice:
 - For inpatients receiving antipsychotic drug therapy
 - Percentage of medical records that have evidence of any documentation of examination for EPS:
 - Dystonia 11%
 - Parkinsonism 29%
 - Akathisia 33%
 - Tardive dyskinesia 6%

Cortese et al., 2004

US EMR Adoption Model

(Data from HIMSS Analytics Database)

Stage Cumulative Capabilities

2011

Stage 7

Medical record fully electronic; CDO able to contribute to EHR as byproduct of EMR

1.1%

Stage 6

MD Documentation (structured templates), full CDSS (variance and compliance), full PACS

4.4%

Stage 5

Closed loop medication administration

7.1%

Stage 4

CPOE, CDSS (clinical protocols)

13.2%

Stage 3

Clinical documentation (flow sheets), CDSS (error checking), PACS available outside of radiology

46.1%

Stage 2

Clinical data repository, Controlled Medical Vocabulary, Clinical Decision Support System (CDSS) capability

12.6%

Stage 1

Ancillaries – Lab, Rad, Pharmacy

5.9%

Stage 0

All three ancillaries NOT installed

9.6%

Canada EMR Adoption Model

(Data from HIMSS Analytics Database)

Stage Cumulative Capabilities

2011

Stage 7 Medical record fully electronic; CDO able to contribute to EHR as byproduct of EMR 0.0%

Stage 6 MD Documentation (structured templates), full CDSS (variance and compliance), full PACS 0.5%

Stage 5 Closed loop medication administration 0.2%

Stage 4 CPOE, CDSS (clinical protocols) 2.3%

Stage 3 Clinical documentation (flow sheets), CDSS (error checking), PACS available outside of radiology 34.5%

Stage 2 Clinical data repository, Controlled Medical Vocabulary, Clinical Decision Support System (CDSS) capability 22%

Stage 1 Ancillaries – Lab, Rad, Pharmacy 14.4%

Stage 0 All three ancillaries NOT installed 26.2%

What were we looking for.....and what did we get??

- Quality of Care, Documentation and Quality of Data
- Accountability and Transparency and Access
- Integration and Standardization
- Improvements in process, practice and access
- Provision of patient care information to clinicians at point of care
- Reduced risk
 - eMAR, CPOE and BMV
 - Decision support/alerts
 - System enabled standardized practice – Restraint use and practices

Translation into Practice

Quality of Care, Documentation and Data

Example - Restraint use and our Strategic Direction to Minimize the use of Restraint and Seclusion

- Audit of current state, practice and policy – identified issues, concerns and gaps

From paper → EHR → Optimized EHR

- Process for ordering, assessment expectations and documentation
- Staff and Physician education



Translation into Process

Accountability , Transparency → Improvements in Process, Practice and Access

- Identify sound clinical practice and insure it is reflected in good policy and evidenced in quality care and measureable outcomes
- Technology enables us to monitor our data and use it to inform practice



Success

Responsiveness/Integration and Access Outpatient access to EHR

- Information easily accessible and interpretable by multiple care-providers at various locations at the same time will:
 - Assist with clinical decision making,
 - Increase clinician time for direct patient care
- Electronic reports containing clinical data will be meaningful



System Enabled Supports

Reduce Risk and enhance Clinical Decision Support :

- Use of Clinical Summary Panels
- Orders trigger Assessment Tools
- Status Boards
- Work Lists



Conference, Toronto

33 F 03/10/1978

ADM IN WHAB3L2S01 WHA32555-A

180cm 70kg 1.89m² 21.0kg/m²

Allergy/Adv: acetylsalicylic acid

WM0000171/11

None

WH00000168

E00000179

Restraints

ADM IN Acct WM0000171/11

Registered 03/10/2011 20:20

| | 03/10/11 21:00 21:14 | 04/10/11 07:30 07:44 | 04/10/11 10:45 10:59 | 04/10/11 11:15 11:29 | 04/10/11 16:00 16:14 |
|---|-------------------------|---|-------------------------|-------------------------|--|
| Restraint Summary | | | | | |
| Restraint | | | | | |
| Edema Type | None | | None | None | |
| Pulse Strength | Normal | | Normal | Normal | |
| Capillary Refill | Immediate | | Immediate | Immediate | |
| Sensation Description | Normal | | Normal | Normal | |
| Skin Temperature | Cool | | Cool | Warm | |
| Skin Color | Normal | | Normal | Normal | |
| Signs of Injury Related to Restraints/Seclusion | No | | No | No | |
| Patient Care Performed | | Nutrition/Hydr... Repositioning/R... Physical Statu... Psych. Status/... | | | Nutrition/Hydr... Repositioning/ Hygiene/Elimir... Physical Statu... Psych. Status... Mobilization Mouth care Ongoing supp... |
| Left Radial | | | | | |
| Pulse Strength | | Normal | | | Normal |

Active Medications

Ambulatory Medications

Measuring Success

Order set utilization:

Admissions pre-implementation: 0%

Admissions post-implementation: 45%

Physician Audit Info:

90% of physician admission histories used a standardized template

87% of physician notes were in a SOAP format

87% of patients were seen more frequently than minimum defined by hospital policy




Measuring Success

Reduced risk to patient & corporation with:

- Implementation of eMAR/BMV and CPOE
- Automation of clinical reminders related to safety assessments
- Capturing “near miss” medication errors



Transparency in Practice and Process

| Good Catches | May | June | July |
|---------------------------------|------------|-------------|---|
| Total doses administered | 81766 | 81238 | 83402 |
| Percentage of doses scanned | 85% | 84% | 84% |
| Incorrect patient account | 188 | 187 | 158 |
| Admin amt More than ordered amt | 139 | 118 | 119 |
| Med is for a different patient | 14 | 6 |  2 |

Strategies for Sustainability and Growth

- Dynamic process - Functional enhancements
- Analytics and Optimization – clinical decision support, management reporting
- Opportunities for seamless exchange between various providers
- Ongoing education - orientation
- Quality Improvement – Evaluation and Audit Process
- Responsive to staff needs and ideas.
- Support programs in development and education of new documents
- Increased opportunities for research



What were we looking for.....and what did we get??

- Corporate Strategic Alignment (Living our values)
 - **Safety** - Patient Safety, testing
 - **Innovation** - mental health focus, alignment with practice
 - **Respect** –dialogue, interprofessional, change management
 - **Community** – standardization, integration
 - **Excellence** – leadership, ON TIME and ON BUDGET
- Evidence based practice – Interprofessional
- Enable Culture Shift



Thank You.....Questions??

