

# Healthcare E- Vitalized at Ontario Shores

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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?



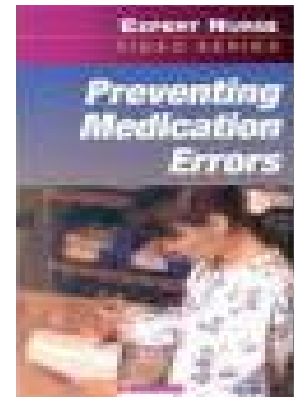
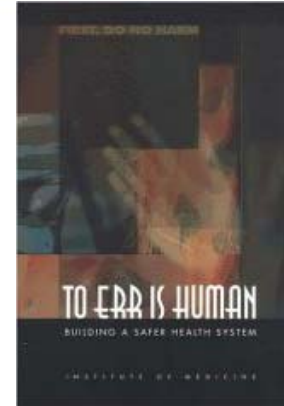
# Patient Safety and Quality of Care

- 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 1.89m<sup>2</sup> 21.0kg/m<sup>2</sup>

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
<b>Restraint Summary</b>					
<b>Restraint</b>					
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...
<b>Left Radial</b>					
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

<b>Good Catches</b>	<b>May</b>	<b>June</b>	<b>July</b>
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??

