# Computerized Physician Order Entry in LTC: From Possibility to Reality

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# Faculty/Presenter Disclosure

- **Faculty:** Andrea Moser

- **Relationships with financial sponsors:**
  - **none**

# Disclosure of Financial Support

- **This program has no received financial support**
- **<u>Potential for conflict(s) of interest</u>:**
  - None

# Mitigating Potential Bias

- none

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# Session Objectives

- Identify opportunities for physician engagement in health information technology(HIT) / electronic health record (EHR) implementation in LTC
- Describe key enablers for implementation of computerized physician order entry (CPOE) in LTC
- Describe the impact on quality and safety with implementation of CPOE in LTC

# What are you hoping we cover?

# Polling question #1

- What is your role in LTC?
  - Attending Physician
  - Attending NP
  - Clinical/consulting pharmacist
  - Medical Director
  - Administrator
  - Other

# Live polling question #2

- What is the primary method of order entry in your LTC practice?
  - A. handwritten on paper
  - B handwritten with digi-pen
  - C. electronic order entry
  - D verbal orders
  - E faxed orders

# Polling question #3

What is available to you in the EHR in your LTC practice?

- clinical care documentation
- remote access (ie when off-site or on call)
- quality indicator review
- MDS data
- access to Connecting Ontario viewer

# About Baycrest


Headquartered on a 23-acre campus in Toronto, Canada.

Serves up to 1,500 older adults every day.

More than 1,000 students each year.

1,800 employees, 2,000 active volunteers

# Our Campus


1. Baycrest Hospital (CCC, Rehab, MH, Palliative, Out-patient clinics)
2. Apotex Centre, Jewish Home for the Aged (nursing home)
3. Terraces of Baycrest (retirement community)
4. Reuben Cipin Healthy Living Community
5. Rotman Research Institute (brain health)

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# Baycrest Apotex the Jewish Home for the Aged

- 472 bed faith based, academic LTC home
- 1 of 3 provincial teaching LTC homes (Center for Learning Research and Innovation)
- Organized medical staff with on call, teaching, research
- Geriatrics and geriatric psychiatry on site
- Electronic Health Record in place x 20 years, hospital system, computerized physician order entry (CPOE)
- Access to centralized admin and IT supports

# Terminology/Acronyms

- HIT: Health Information Technology
- HIS: Health Information System
- EHR: Electronic Health Record
- EMR: Electronic Medical Record
- PHR: Personal Health Record
- CPOE: Computerized Physician Order Entry
- IMM: Integrated Medication Management
- eMAR: electronic Medication Administration Record

# Electronic Health Record in LTC

- 6 primary domains
  - Communication
  - Clinical Information System
    - Clinical documentation, Clinical Decision Support
  - Medication Use Process
    - Order entry, medication administration, alert notifications
  - Quality Improvement
  - Regulatory Compliance
  - Transfer of Data

# Benefits of EHR in LTC

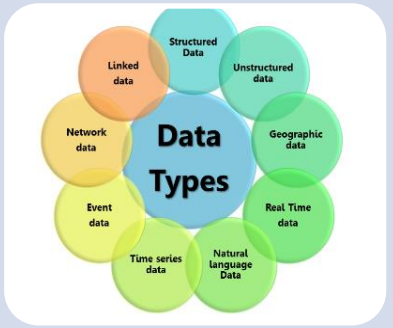
- Continuity of care
- Care coordination
- Improved quality of care
- Decreased errors

# EHR and CPOE Benefits

Common Standards:

Order Sets

Terminology




Defined Data Types:

Order

Meds

Allergies

Platform Independence:

Apple, Android

Windows;

Chrome, IE

Firefox


Device Portability:

Smartphone

Tablet

Laptop

WOW


Provincial Portal:

eConnect

# Rationale for CPOE in LTC

## People

- Heightened focus on LTC-specific patient population, refreshed documentation training, increased collaboration and enhanced interprofessional care.

## Process

- Modernized clinical workflow procedures, better multidiscipline access to information (e.g. Medical, Pharmacy, Nursing).


## Technology

- Enables disciplinary autonomy, while facilitating interprofessional collaboration.

# Reality of EHR in LTC homes

- Present in majority (>85%), lagging other sectors
- Administrative activities
- Used to submit data (MDS RAI)
- Resident care and clinical decision support
- Physician adoption variable
- CPOE limited
- Limited Interoperability/integration with other systems

# Barriers to Implementation in LTC

- Funding
- Organizational factors
- Availability of dedicated IT resources
- Staffing issues, training
- Functionality / Lack of integration
- Multiple systems for providers
- Updating and alignment of practice with process improvements.

# Factors associated with EHR implementation

- Organizational willingness to innovate
- Leadership support
- Presence of IT staff
- Medical Director engagement
- Funding / Occupancy
- Increased ratio registered to non registered staff
- Larger homes (>100 beds or chains)

# Baycrest/s Journey to new Electronic Health Record

PROS

- Updated system needed
- Streamline interprofessional workflow
- Reduction of duplicate data
- Mobility/real time data entry and access
- Regulatory requirements
- Integration with MDS RAI
- Quality indicators and reviews

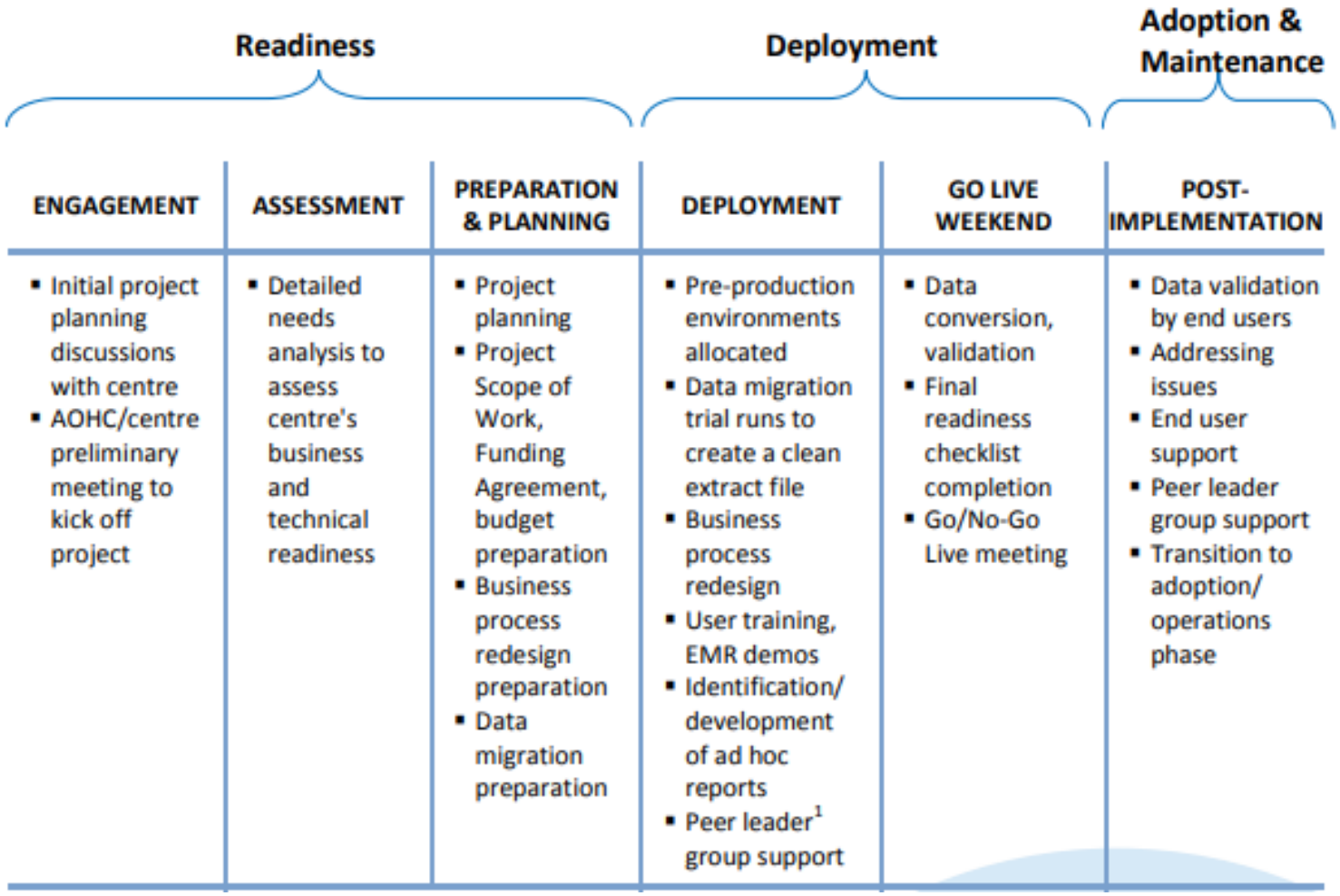
CONS

- Break an integrated EHR
- Order entry change
  - Digi- pen is provincial standard
  - Computerized Physican Order Entry (CPOE) not in place in Canada from this vendor
- Potential impact on finance, dietary, pharmacy work flows
- Learning curve – new system and processes

# EHR implementation

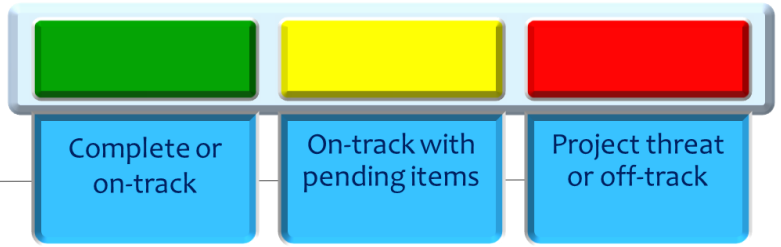
- “…should not be seen as a medical arms race: instead it should be viewed as an efficient way to improve the quality of care”

# Association of Ontario Health Centres (AOHC)
## EHR Implementation Guidelines



# Change Management

# Project Summary (SAMPLE)




**Initiation & Readiness Assessment**

Q3, 17/18

**Procurement, Kick-off & Planning**

Q3, 17/18

**Discipline-specific Requirements Gathering**

Q4, 17/18

**Barriers Addressed, Timelines Revised, Solution Proposed**

Q1, 18/19

**Solutions to Barriers Completed and/or On-track**

Q1, 18/19

**Design & Build; Feedback & Refinement**

Q1-Q2, 18/19

**System Conversion & Testing**

(Data Migration)

Q2, 18/19

**Change Management**

(Communication, Training and Education)

Q2, 18/19

**Close-out**

(Post-live monitoring, support & evaluation)

Oct,30

# OBJECTIVES

Quality of Care

Regulatory Compliance


Maintain Funding Accuracy

Doc. & Reporting Standards


Interprof. Workflow

Innovation: eMAR & CPOE


Reduce Risk


Improve Practice


Secure Messaging

# Moving Parts

User Experience

Governance

Clinical Transform

Evaluation

Operational Readiness

System Development

Project Management

Change Mgt.

Adoption Model

# Operational Readiness

## Structures

e.g. People, knowledge, regulatory

*Leadership
*Governance

## Processes

e.g. Status of gaps, risks, issues; SWOT

*Change Mgt.
*Engagement
*Adoption

## Outcomes

e.g. Impact on practice, metrics, care

*Realize Benefits

## Tools

e.g. policies, resources, technology

* Communication
* Training & Education
*Analytics & BI

# Operational Readiness

|  Triumphs | Lessons  |
|---|---|
| Governance Structures | High level of clinical championship. |
| Clinical Champions (e.g. CMIO) | Transitioning to senior level leadership. |
| Education & Communication Plan | Mandatory in-depth training plans. |
| Technical Teams & Planning | Impact of policy, procedures, process – on practice and |

# Key Project Decision Points

- Policy and Practice Alignment
- Dietary System Integration
- Order Entry
  - CPOE vs Digi-Pen
  - Order Template Structure
  - Drug Data Base availability
  - Non Drug Order Entry
- Devices
- Training and Education

# Scope of CPOE in LTC

- Medication order entry
- Lab and diagnostic imaging
- Diet, Allergies
- Advance Care Plan, code status
- Treatments (ie wound care) eTAR
- Referrals

# Implementation of CPOE: Focus on Medication Orders

- Order Entry Discussions
  - CMIO, medical staff, nursing, pharmacy, apotex leadership
  - Vender and pharmacy provider as project partners
  - Risk/Benefit: Digi-Pen vs CPOE
  - Impact on workflow, after hours, on call
- Solutions explored
  - Custom build order templates for Canadian drug data base
- ‘GO vs NO GO”
  - Decision to Delay Go Live date

# Electronic Devices for eMAR and CPOE– Needs & Options

# Enablers for CPOE

- Organizational leadership support
- Medical leadership engagement (MD, CMIO)
- IT dedicated staff and project management
- Pharmacy and vendor engaged
- Integrated medication management (IMM)
  - EHR vendor and pharmacy system for data flow
- Remote access for physicians
- Training and education pre and post go live

# Out of the Box Medication order entry

# Custom Order Template

# Custom order templates

- All drugs dispensed for greater than 3 days over past 3 years in the LTC home
- Classified into Drug Classes
- Standardize Drug Sentence Structure
- Generic/trade name/ODB and LU in search field
- Regular and PRN for those most commonly used
- Incorporate Antibiotic Stewardship guidelines for UTI, pneumonia

# Implementation planning

- A Collective/Collaborative project
  - Shared responsibility and ownership (leadership, IT, clinicians)
  - Relationship with internal stakeholders and leaders key
- Regular updates with project team
  - Timelines
  - Status reports
  - Openly sharing issues
  - Collaborative problem solve - compromise
- Integration issues
- Celebrations along the way

# Go-LIVE

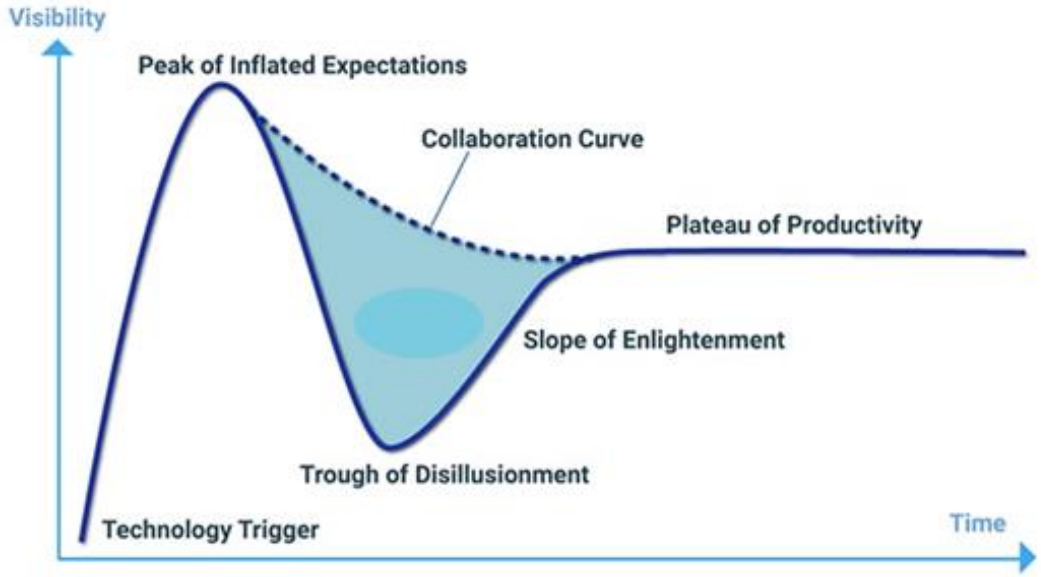
- Training
  - Functionality of new system
  - Changes in process
    - eMAR, POC documentation, assessments, consult orders
- Data migration
  - Interprofessional including physicians
  - Course correction where needed
- Risk management
  - Allergies missed in data transfer

# Key Factors of Success

- Relationship between Medical Leadership and Administration
  - ‘Working with’
  - Mutual appreciation of strengths
- Common shared goals
- Listen to understand
- Appreciate other perspectives and drivers
- Collaborative problem solving
- Willingness to adapt and concede
- Shared ownership for ongoing success

# Thank you!

- Questions?
- Polling question :
  - What is on your wish list for EHR in your LTC practice?



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