

Improving EMR Adoption, Utilization and Analytics: Working Towards Obtaining HIMSS Stage 7

Erin Anstey RN, MN, *Clinical Practice Leader*
Wendy Odell, *Manager of Clinical Information*



About Ontario Shores-Our Vision

Recovering Best Health

Nurturing Hope

Inspiring Discovery

Our vision is bold and transforming. Ontario Shores Centre for Mental Health Sciences is recognized by many as having an approach to mental health care and unique services that are focused on recovery, hope and inspiration through discovery.

Recovering Best Health

Our specialized care focuses on individual paths to recovery and mental wellness.

Our highly skilled staff are leaders in promoting optimum well-being.

Our comprehensive services and innovative practices are integrated with our community partners.

Nurturing Hope

Our advocacy with the community eliminates the stigma of mental illness.

Our commitment to care extends beyond the scope of client recovery to educating and informing our families and communities.

We proudly embrace diversity and offer individualized care.

Inspiring Discovery

We are avidly leading new developments and research in collaboration with other organizations.

We lead the international mental health care community in safety and innovative practices.

Our relationships with the private sector provide unique opportunities to be innovative.



Objectives

- To learn how a big bang EMR implementation went from paper to Stage 6 hospital on the HIMSS Electronic Medical Record Adoption Model (EMRAM)
- To learn how to use the EMRAM model to refocus and reenergize teams in the implementation, adoption and utilization of EMR's in a more effective and efficient way to improve the quality of care
- To discuss optimization of the EMR and related processes to achieve HIMSS Stage 7 to improve patient safety and outcomes

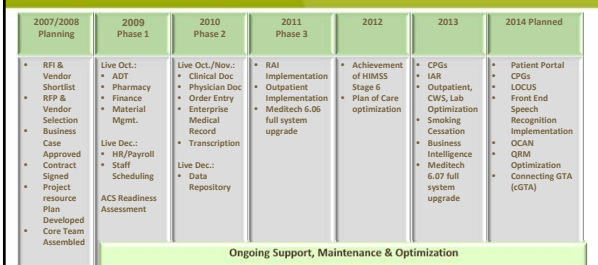


Ontario Shores Today: Our Program Clusters

- Assessment and Reintegration – complex general psychiatry and rehabilitation
- Forensics
- Geriatric mental health and neuropsychiatry
- Adolescents/Dual Diagnosis
- Specialized Outpatient/Outreach Services
- Integrated Health Services – metabolic clinic, outpatient ECT dental services, primary care



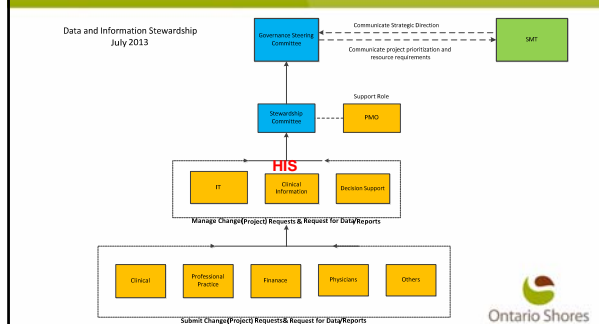
Overall Timeline for EMR Implementation/Optimization



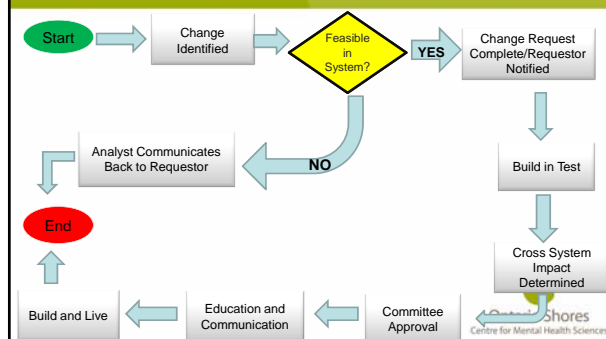
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HIS and Data Information Stewardship



Governance – EMR Change Request Process



Professional Practice and Clinical Informatics

- Maintains, sustains and optimizes the system that enables care delivery and clinical practice
- Supports clinical practice effectiveness through work flow analysis and interpretation and understanding the processes that can optimize care delivery and practice
- Ensure evidence-based practices are integrated in the system
- Collaborates together in education, training, optimization and implementation of practice related system changes
- Enables clinical decision support at the time of care delivery through technology
- Supports the analysis of clinical performance measures from a Clinical Informatics perspective
- Responds to gaps identified in practice related system evaluations

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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



HIMSS - Canada EMR Adoption Model 2013/14

Canada EMR Adoption Model SM			
Stage	Cumulative Capabilities	2013 Final	2014 Q1
Stage 7	Complete EMR; CCD transactions to share data; Data warehousing; Data continuity with ED, ambulatory, OP	0.0%	0.0%
Stage 6	Physician documentation (structured templates), full CDSS (variance & compliance), full R-PACS	0.6%	0.6%
Stage 5	Closed loop medication administration	0.0%	0.5%
Stage 4	CPOE, Clinical Decision Support (clinical protocols)	3.8%	3.6%
Stage 3	Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology	32.2%	32.5%
Stage 2	CDR, Controlled Medical Vocabulary, CDS, may have Document Imaging; HIE capable	29.1%	28.9%
Stage 1	Ancillaries - Lab, Rad, Pharmacy - All Installed	14.5%	14.5%
Stage 0	All Three Ancillaries Not Installed	19.8%	19.4%

Data from HIMSS AnalyticsTM Database © 2014
<https://www.himssanalytics.org/stagesGraph.asp>

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HIMSS



transforming health through IT

HIMSS is a global, cause-based, not-for-profit organization focused on better health through information technology (IT). HIMSS leads efforts to optimize health engagements and care outcomes using information technology.

HIMSS Vision

Better health through information technology.

HIMSS Mission

Globally, lead endeavors optimizing health engagements and care outcomes through information technology.



<http://www.himss.org/AboutHIMSS/index.aspx?navItemNumber=17402>

HIMSS Stage 7 - Criteria

- Paperless
- Criteria is updated each year
- Site Visit
 - System Overview and Pervasiveness of Use
 - Clinical & Business Intelligence
 - Clinical Decision Support
 - Health Information Exchange
 - Business Continuity/Disaster Recovery



HIMSS Stage 7 - Indicators

4 months of consistent data

- CPOE – 90% of orders must be entered in EMR by the ordering provider
- eMAR/BMV – 95% of the time a nurse must attempt to scan a patient barcoded armband and the medication

3 examples of data from clinical system used to improve quality of care - 2 quarters worth of data

Suggestions:

- Restraint/Seclusion
- Medication Reconciliation
- NRT adoption
- Choking Risk Assessment
- RAI

Expectation that rules trigger decision support from physician documentation

- Clinical Practice Guidelines

Evidence based order sets



Governance – Stage 7

- Detailed Workplan with target dates and various Leads
- Bi-weekly review of status – Health Information Service Operations Team
- Monthly review – IM/IT Project Executives
- Managed within current resources



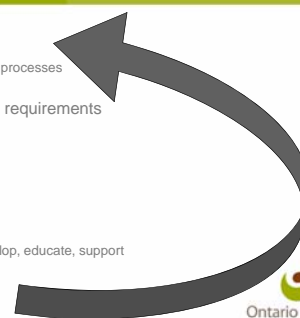
HIMSS Stage 7 - Tour

- Clinical Units
 - Observe med admin process
 - Meet with an MD
 - Review documentation
 - Look through paper charts and examine scanning
- Pharmacy
 - Medication orders are electronic
 - Dispensing functions are automated
 - Orders from all shifts are verified by pharmacist
 - Medication/IV are barcoded
 - Conflict checking and CDS
- Health Information Management
 - Scanning
 - Transcription
 - Coding
 - Legal Medical Record



Stage 7 Workplan/Steps

- Review of current state
 - Capture the practice and processes
- Organize and associate requirements
 - Identify gaps
 - Process
 - Practice
 - Identify successes
- Identify gaps
 - Categorize, design, develop, educate, support
- Review



Infection Control Status Board

Infection Control									
226 accessible patients and 1 suppressed patient as of 30/05/14 13:07									
My List	Lists	Name	Location	Alerts	FRJ	Temp	Order		
Find Account		Account Number							
Any Location		Registration Status/Type							
Recently Accessed		Onset 0607, Unverified			13:33 Chills or feels feverish: No				
RAI		PIRA	WHO000136/13	Alert	16:40 Cough (new or worse): Yes			11:37 Isolation:...	
Infection Control		ADSM IN			16:40 Shortness of Breath: No				
by Unit		Test, Alan Chipmunk			16:40 Headache: No				
		FRJ	WHO000015/14	Alert	09:12 Chills or feels feverish: No				
		ADSM IN			09:12 Cough (new or worse): No	36.7 ...	09:31 Isolation:...		
					09:12 Shortness of Breath: No				
					09:12 Headache: No				
		Austen, Jane							
		FPRI	WHO000172/13	Alert	10:00 Cough (new or worse): Yes				
		ADSM IN							
		Maria, Agnes							
		NPS	WHO000216/13	Alert	17:00 Chills or feels feverish: Yes				
		ADSM IN			17:00 Cough (new or worse): Yes				
					11:00 Shortness of Breath: Yes				
					11:00 Headache: No				
		OMTEST007, BARNEY							
		NPS	WHO000094/13			36.9 ...	15:23 Isolation:...		
		ADSM IN							
		Barker, Michele							
		FPRI	WHO000146/13				15:52 Isolation:...		
		ADSM IN					15:52 Isolation:...		
		TEST, TOSV							
		ASU	WHO000208/13				14:29 Isolation:...		
		ADSM IN							
		ITS, GREEN							

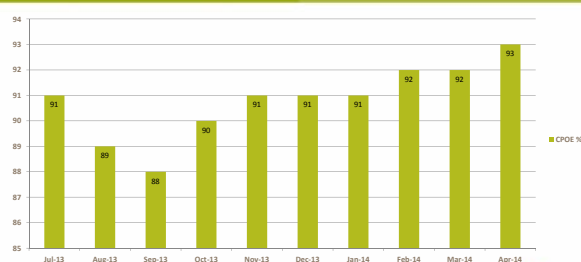
Stage 7 Workplan - Review

- Continue to build in decision support in physician documentation (Clinical Practice Guidelines project)
- Review outbound and inbound interfacing systems for growth and sustainability
- Ensure scanning timelines are adhered to and all clinical information is in the EMR
- Engage clinical units around site visit process

Stage 7 Workplan - Review

- Priority
 - CPOE Rate
 - eMAR/BMV Scanning Rates
 - Medication Administration Process
 - Documentation of all ECT Meds in eMAR
 - Electronic Status Boards
- Collate data for site visit presentation on quality
- Implement predictive surveillance status board in Infection Control & Smoking Cessation program

Computerized Physician Order Entry (CPOE)



Computerized Physician Order Entry (CPOE) – How are we doing it?

- Medical Director of Informatics
- Senior Management Team
- Physician in Chief
- Audit
 - Reports sent at program level
 - Individual reports sent to physicians with comparison to peers
- Education
- Support, support and support



Medication Reconciliation

- Medication Reconciliation is a formal process in which healthcare providers partner with patients and their families to ensure accurate and complete medication information transfer at interfaces of care.
- The aim is to eliminate undocumented intentional discrepancies and unintentional discrepancies by reconciling all medications
- Corporate goal for 2013- 2014 to increase Med Rec on Admission rates to 95%.
- January 2014 reported year to date rate of 99.4%



Documentation Percentages

Type	Handwritten	Dictation/ Transcription	Structure Forms	Structure forms w/ Discrete Data
H&P	0%	6%	0%	94%
Progress Notes	0%	0%	60%	40%
Consult Notes	0%	85%	0%	15%
Discharge Notes	0%	20%	0%	80%
Problem List	0%	0%	0%	100%
Diagnosis List	0%	0%	0%	100%



Medication Reconciliation How did we do it?

- Corporate Goals & Objectives
- Med Rec on Discharge across organization –YTD 97.8% (6 months of data)
- Med Rec on Admission/Discharge built as intervention in EMR
- Med Rec on Discharge report in development
- Training of outpatient clinicians was re-enforced as part of Outpatient Optimization project



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- Mario Shores
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Clinical Decision Support General Medical Assessment



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Clinical Decision Support Physician Admission Assessment

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Clinical Decision Support Nursing Documentation

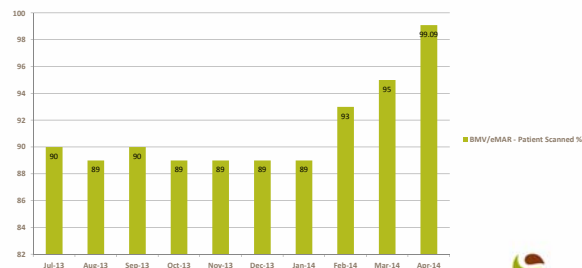
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Clinical Decision Support Order Set References

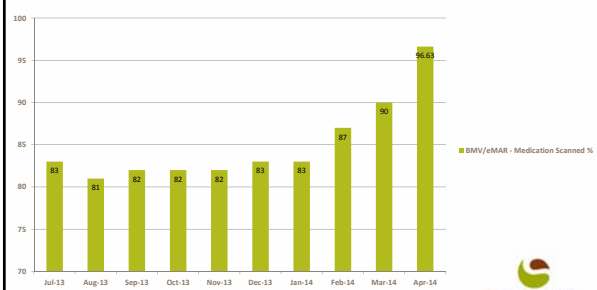
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eMAR/BMV Patient Scanned



eMAR/BMV Medication Scanned



BMV/eMAR Medication Scanned How are we doing it?

- Review processes, and practice
- Audit – identify threshold, communicate results to committees
- Letters of Expectation to those under expectation.
- Reports to unit managers
- Communication on intranet
- Offering of food through friendly competition

BMV/eMAR Medication Scanned How did we do it?



Thank You.....

Questions?



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Future Steps

- Continue collaborative structure for further adoption and optimization
- Implement Clinical Practice Guidelines throughout organization
- Strive towards achievement of HIMSS Analytics Stage 7
- Further enhancement of Business Intelligence and Clinical Decision Support
- Research

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