Joint Implementation of Epic Ambulatory in Two Academic Centers

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Hamilton Health Sciences

- 7 hospital sites, including a Cancer Center and Children's Hospital (second largest in Ontario)
- serves population of 2.3 million (Hamilton and south central Ontario)
- regional referral centre for Cardiac, Stroke, Burns, Trauma, Pediatrics, High-risk obstetrics, Cancer, Rehabilitation services.
- 1,100 beds
- staff of 11,000
- 500,000 clinic visits
- Affiliated with McMaster University and Mohawk College, one of the world's leading health science research organizations.



St Joseph's Healthcare Hamilton

- A premier academic and research healthcare organization
- Affiliated with McMaster University, Mohawk College and the St. Joseph's Health System (SJHS) and home to the prestigious Firestone Institute for Respiratory Health and the high-tech Brain-Body Institute
- With a staff of more than 4,000 and over 650 beds and 355,000 outpatient visits per year, the organization's four locations including the Charlton, West 5th, King and Brantford campuses provide tertiary, secondary and ambulatory health care services for the Hamilton-Niagara-Haldimand-Brant Local Health Integration Network, and the neighbouring regions of Halton, Kitchener-Waterloo, and Norfolk.



The Need

Ambulatory care is ~ 50% of our hospital activity

- over 200 different clinics
- 830,000 visits per year (combined HHS and SJHH)
- 800 Physicians/Surgeons + 700 Residents
- 1500 staff

Variety of paper and electronic systems

- impossible to integrate
- Data silos \rightarrow patient safety issues
- All ordering is paper-based
- Results followup mostly paper-based

Inability to analyze at clinic/population level Inefficiencies

• eg. 15% no show rate

The Plan

Create a complete single, city-wide Clinical Information System for all Ambulatory patients at HHS and SJHH, which is:

- optimized for the care of patients in the ambulatory setting
- integrated with our hospital information systems

Background

- Clinical need for outpatient CIS recognized in 2011
- RFI 2011, RFP 2012
- Lead vendor **Epic** chosen May 2013
- Contract signed July 2013
- Set up, adopt, customize 2013-2014
- Began implementation Oct 2014

Bringing clinics and community together



What is PatientLink?

PatientLink is a digital outpatient system that improves health outcomes and patient experiences, reduces clinical error, and provides system-wide access to patient information from both Hamilton Health Sciences and St. Joseph's Healthcare Hamilton.



Accessible

Trustworthy

Intuitive

Leading Edge



Two Separate Academic Centres



Ambulatory Clinical Information System Platform

One year to build and implement...What could possibly happen?



Collaborating with Integrated Clinical Work Groups ______Through the Implementation Lifecycle_____

PatientLink Guiding Principles

- Aligned with the Mission, Vision and Values of both SJHH and HHS
- utilize principles of process redesign to optimize workflow, communication, efficiency and safety, while reducing duplication
- guided by best practice and are evidence based
- maximize standardization of processes and procedures while valuing the unique requirements of specialty areas
- adhere to rigorous Project Management methodologies
- inclusive, involving communication, education and opportunities for involvement of all stakeholders, including those from SJHH, HHS and McMaster FHS
- opportunities for collaboration of SJHH and HHS staff
- EPIC products provide the default software platform



Project Timelines



Wave A – Go Live October 21, 2014

SJHH	HHS
Mood Disorders	GIMRAC (Boris Clinic)
Diabetes (W5th & King)	Diabetes & Research (Boris Clinic)
Bariatrics (Surgery & Medicine)	

- >200 clinicians and support staff
- 50 Physicians, Nurse Practioners and PA
- Project Team > 100 SJHH & HHS Staff & Physicians and Epic
- Support Service Experts including HIM, Privacy, Diagnostic



Technical Integration

Challenges

 Different Citrix environments

Separate active directory structures

 Different access management and support processes

Rotating residents



Interface /System Integration

Challenges

Different source systems including ADT,
 Scheduling, DI, PACs, Transcription

- Common Laboratory System (HRLMP)

- Separate Interface Engines



Clinical Practice Integration

- Challenge
 - negotiating documentation standards, approaches and roles
- Achieved
 - Joint documentation standards, approaches and role alignment
- Challenge
 - 3 Diabetes sites with different documentation standards, processes and workflows
- Achieved
 - Single documentation templates/standards, processes and workflows
 - Learners and Staff Physicians who work at more than 1 site, have same templates/standards, processes and workflows



Vendor vs Site Approach

	EPIC	PatientLink	
•	Start with Family Practice	X Academic Specialty Clinics only	
•	Use Foundation – minimal customization prior to go live Formal Optimization period for specialty customization	 X Foundation plus: Standardized Discipline Specific Templates (joint standards) Added Specialty Content prior to go live ✓ Formal Optimization period for further specialty customization)
•	All resources must be Epic Certified	 Majority of resources were Epic certified 	
•	Mandatory end-user training with certification	 Mandatory end-user training – complete practice exercises prior to access to PRD 	2
•	Use Cadence Scheduling	X Used each organization's legacy Scheduling system	
•	Build Freeze – 6 weeks prior	X Build Freeze – 2 weeks prior	
•	Foundation Validation Sessions	 Clinic specific workflow and validation needed 	
•	Foundation Pharmacy Build	X Needed Canadian-ization (e.g. Units, Spelling)Pharmacy customization	

Project Tools

- Joint Steering Committee
- Joint Executive Sponsors
- Build Tracker
- Go Live Readiness Assessment
- Workgroups added internal working groups (e.g. Privacy, Health Information Management, MyChart, EpicCareEverywhere etc...)



Weekly Build Status Reports



System Screenshots



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Custom Mental Health Assessment Scales (e.g. HAM-D)

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Benefits Evaluation



Benefit A: Percentage of Unique Patient Visits Completed within 24 hours (SJH)

- **Description:** This metric calculates the percentage of a clinician's visits that were closed on the day of the visit (Target: 85%).
- **Purpose:** The purpose of this metric is to evaluate the percentage of clinician visits that were completed within the same day as the patient's appointments. Patient charts that are unnecessarily opened beyond 24 hours of the patient visit can negatively impact reimbursement time and continuum of care.

Summary of Time Series for St. Joseph Healthcare



- Closing of the encounter signals that all clinical documentation, orders and outgoing communications are complete
- This indicator is on target



Benefit A: Percentage of Unique Patient Visits Completed within 24 hours (HHS)

- **Description:** This metric calculates the percentage of a clinician's visits that were closed on the day of the visit (Target 85%).
- **Purpose:** The purpose of this metric is to evaluate the percentage of clinician visits that were completed within the same day as the patient's appointments. Patient charts that are unnecessarily opened beyond 24 hours of the patient visit can negatively impact reimbursement time and continuum of care.



Summary of Time Series for Hamilton Health Sciences

- Initial interface issues caused additional encounters to be opened which increased the number of open encounters for the HHS clinics
- It has since be resolved
- Some progress towards the target has been made



Benefit D: Average Number of Transcribed Minutes Per Dictated Report (SJH)

Description: This metric calculates the average number of transcribed minutes per dictated report
 Purpose: The purpose of this metric is to examine the change in average number of transcribed minutes per dictated report. It is expected that the average number of transcribed minutes per dictated report will decrease as providers use Patient Link's documentation tools



Summary of Time Series for St. Joseph Healthcare

Total # of Dictated Minutes Volume is for all Ambulatory – not just Wave A clinics



Benefit D: Average Number of Transcribed Minutes Per Dictated Report (SJH)

Description: Purpose:

This metric calculates the average number of transcribed minutes per dictated report The purpose of this metric is to examine the change in average number of transcribed minutes per dictated report. It is expected that the average number of transcribed minutes per dictated report will decrease as providers use Patient Link's documentation tools



Summary of Time Series for St. Joseph Healthcare

 Total # of Dictated Minutes Volume per Dictated Report are for all Ambulatory clinics – not just Wave A clinics



Lessons Learned

Things we did well...

- Bringing together two separate organizations and creating one set of standards. Included:
 - 2 Health Records committees
 - 2 Privacy committees
 - 2 ADT departments
 - 2 Lab processes
 - 2 DI processes
 - 2 Executive
 - 2 Interface teams
 - 2 Device Deployment Teams
- Standardization of clinical build between the 2 organizations
 - 3 diabetes clinics → 1 standard
- Committed and dedicated team project, clinics and vendor
- CRL relationships with clinics
- Detailed Process Mapping
- Adjust approach for specialties



Things we did well...

- Steering Committee cross site and cross disciplinary, very responsive and engaged
- Overall Physician Adoption
 - Engagement and leadership of the CMIOs
- Technical Dress Rehearsal and Clinical Dress Rehearsal

• Overall Go Live Support structure

- Command Center responsiveness to calls/issues; single point of contact ; triage
- Daily Debriefing opportunity for clinic voice/engagement
- Go Live Issue Log to track status of issues
- Executive Support visible at "troubled" areas
- Rapid Resolution to Go Live Issues quick, visible and noticed

• Defined Optimization Plan with the agile rollout of quick wins



Things we need to improve

Interfacing

- challenges with scheduling and allergies
- awaiting Meditech \rightarrow Epic contextual launch
- Consolidate and shorten End-User Training
 - better focus on clinic specific workflows
 - respect the "build freeze" dates
- Allow more time for Integrated Testing
- Improve clinic specific current workflow analysis



Things we need to improve

- Improve post-live communication with users
 - Getting feedback
 - Updates re improvements
- Enterprise Voice Recognition (\$)
- Partial dictation uptake has been smaller than expected –investigate.
- Alerts management process
- Use of Messaging
- Problem List management



QUESTIONS?