Outline

- Evolution of Computerization at SickKids
- Building a Nursing Informatics Portfolio
- Implementing a Clinical Information System
  - Design
  - Communication
  - Education
  - Go-Live
  - Post Go-Live
- Key Success Factors
- Lessons Learned
SickKids Hospital

Grand Total
Planned Beds 274
Clinic Visits 73,907
Medical Day Care Visits 28,971
Day Surgery Visits 5,146
Inpatient Surgical Visits 6,238
Emergency Visits 54,580
Discharges 13,803
Average LOS 7.3
Patient Days 100,332
Average Daily Census 274.9
# Evolution of Computerization

- Complex infrastructure - comprises diverse platforms, applications, client devices

- Complex and dynamic technological environment with >140 information technology systems/applications in use

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
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<tbody>
<tr>
<td>44 main clinical applications</td>
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<tr>
<td>12 patient management</td>
<td></td>
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<tr>
<td>5 decision support</td>
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<tr>
<td>3 interface technology</td>
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<tr>
<td>15 scheduling and departmental</td>
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<tr>
<td>14 personal productivity</td>
<td></td>
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<tr>
<td>23 business services</td>
<td></td>
</tr>
<tr>
<td>18 network/computing infrastructure</td>
<td></td>
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<tr>
<td>6 communications</td>
<td></td>
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</tbody>
</table>
Evolution of Computerization cont’d

- 1980s first clinical information system – home grown system (functionalities included laboratory order entry / results retrieval and dietary order entry)

- 1989 Poison Control Centre switches from microfiche to electronic database (electronic charting 1997)
Evolution of Computerization cont’d

- 1992/1993 DOS based system (Kidcom) – ADT, CPOE, eMAR, some clinical documentation

- 1996 Telemedicine launched

- 2000 - ICUs – all clinical documentation except CPOE
Evolution of Computerization cont’d

- Other common systems
  - PACS
  - Scanned historical paper chart
  - Schedule Book
  - Transcription and Dictation System
  - Ambulatory Referral Management System
  - eCHN – EHR
  - Surgical Information System
  - Emergency Department Information System
Evolution of Computerization cont’d

● 2005 – KidCare Phase I (transitioning Kidcom to Windows based system)
  ○ Patient Lists
  ○ Results retrieval

● 2008 – KidCare Phase II (transitioning remaining functions)
  ○ CPOE
  ○ eMAR
  ○ Clinical Documentation (e.g. Admission Assessment, LOA, Discharge Summary)
Our Vision

● Fully electronic patient chart across the inpatient and ambulatory areas
  o Progress Notes
  o Flow Sheets
  o Consents
  o Diagrams/Photographs, etc.

● Universal Workstations
  o Single Sign-on
  o Multiple form factors
Building a Nursing Informatics Portfolio

● Prior to 2003
  ○ Variety of titles
  ○ Variety of responsibilities
  ○ Variety of compensation strategies
  ○ Little opportunity for specialist-specific professional development

● 2003
  ○ First Director of Nursing Informatics
  ○ Mandate – build a portfolio
Building a Nursing Informatics Portfolio

● 2007/2008
  ○ Informatics Nurse – common job description and ranking
    ■ Informatics Nurse – Application Specialist
    ■ Informatics Nurse – Education Specialist
    ■ Informatics Nurse – Workload Specialist

● Currently
  ○ Monthly business/professional development meetings
  ○ Bi-monthly hospital CIT Forum
C.I.T. Matrix Organizational Chart

Chief Information Officer

- Directors/Managers - IS
  - Mgr – Informatics Education
  - IN – Application Specialists
  - IN – Education Specialists

Chief – Inter-Professional Practice and Chief Nurse Executive

Director – Clinical Informatics and Technology

- Centre for Nursing
  - IN – Workload Specialists
  - IN – Application Specialists
  - Clinical Technology PM

Directors – Clinical Programs

Managers – Clinical Programs

Clinical Programs

- IN – Application Specialists

Direct Reports

Matrix Reports
Implementing a Clinical Information System

- Design
- Communication
- Education
- Go-Live
  - Command Centre
  - Support
- Post Go-Live
Design

- Application and Education Specialists
  - Knowledge of practices and processes
  - Consultation with clinical departments/areas and IS staff
  - Advocacy / Liaison
  - Theoretical perspectives
  - Testing – unit, functional, integrated
  - Reports
Communication

● Hospital-wide engagement/profile

● Steering Committee
  o Executive Sponsor
  o Physician Leadership
  o Nursing Leadership
  o Professional Services

● Project Team
  o Diverse membership - Application and Education Specialists – IS and Clinical Programs
Communication cont’d

- Built off of successes of KidCare Phase I

- User Groups
  - Nursing, Professional Services, Physicians, Others

- Super Users
  - Meetings
  - Emails
Communication cont’d

- Hospital publications
  - This Week (print)
  - Daily News (homepage)

- Website
  - KidCare
  - Countdown
Communication cont’d

- Clinical Program Director meetings
- Clinical Program Manager meetings
- Nurse Educator meetings
- Division/Department meetings
  - Medical
  - Professional Services
Informatics Education

3500+ staff
8 Weeks
Education Design

- 3 team leads
  - Nursing
  - Physician
  - Professional Services and Administration

- Instructor led class curriculum

- Reference material
Education

- Pre-education
- Communication and Advertising for Education
- Blended Learning Approach
- Go-live
- Post Go-live Support
Pre - Education

KidCare Phase 2

- New Health Issues in the Patient Info Tab
- Weight Displayed in the Patient Header
- Adding New Health Issue - Transplants Using Search Tab
- Adding New Health Issue - Chronic De From Favourites Tab
- Adding New Health Issue - Devices Using Search Tab
- Creating a Criteria Based List by Orders
- Sliding Scale Medication Order Entry
Pre – Education Open Forums

Come and See What’s New in KidCare Phase II!

It's time to show you all what the KidCare Project Team has been working on!! We are excited to share some of the new features of KidCare Phase II.

Please feel free to bring your lunch, light snacks and refreshments will be served.

The forums are scheduled as follows:

August 12th @ 1200-1330 in room 7704, Atrium
Topic: Order Entry

August 25th @ 1200-1330 in room 7704, Atrium
Topic: Order Entry

August 26th @ 1200-1330 in room 7704, Atrium
Topic: Patient Information
Pre-Education Open House

Informatics Education Invites All

KidCare Users to Our Open House

Garden Terrace
Tuesday, April 24th
10 a.m. to 2 p.m.

Sneak Peek at KidCare Phase 2
Great Prizes
Time Saving Tips and Tricks
Cake and Beverages
Handouts
Pre – Education Open House
Communication and Advertising

<table>
<thead>
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<tr>
<td>A 1</td>
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<td>A 3</td>
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<td>C 8</td>
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<td>E 29</td>
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<td>E 30</td>
</tr>
</tbody>
</table>

**A.**

**Title:**

*KidCare Phase II Classes Are About to Commence*

KidCare Phase II Classes are starting on Wednesday, September 4th. Don’t forget to register! Remember, the first 1500 staff to complete training before Saturday, October 4th will receive a goodie bag filled with treats and will be entered into a draw for a gift certificate.

**B.** (Link underline to: http://www.sickkids.ca/scm[section asp?s=FAQs+and+Responses&sID=25900])

**Title:**

*FAQs About KidCare Phase II*

Are you looking for some answers regarding KidCare Phase II? Are you unsure whether KidCare Phase II applies to you? For a list of Frequently Asked Questions regarding KidCare Phase II, visit the [KidCare internal website](http://www.sickkids.ca/scm/) to view a list of questions and answers regarding KidCare Phase II.

**C.** (KidCare homepage: http://www.sickkids.ca/scm/)

**Title:**

*Have you registered for your KidCare Phase II Class?*
Are you ready for go-live?

KidCare Phase II is set to go-live! The scheduled go-live date is Tuesday, November 4th.

If you currently use KidCare or Kidcom, you should register and complete a class. Approximately 4000 staff at SickKids must be trained prior to go-live. At the time of printing, here is a breakdown by division of the amount of staff that are currently registered/trained:

<table>
<thead>
<tr>
<th>Division</th>
<th>% of staff enrolled/trained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing</td>
<td>48%</td>
</tr>
<tr>
<td>Professional Services</td>
<td>20%</td>
</tr>
<tr>
<td>Physicians</td>
<td>19%</td>
</tr>
<tr>
<td>Information Workers</td>
<td>7%</td>
</tr>
<tr>
<td>Total</td>
<td>35%</td>
</tr>
</tbody>
</table>

Classes are now available for registration in the Training Registrations database in Lotus Notes. All classes have been posted and no more classes are set to be scheduled. To ensure that staff have the required education prior to go-live, early sign-up and training completion are highly recommended. As an added bonus for completing an early class, goodie bags are being distributed to the first 1500 staff that complete training.

For staff who complete training early and are interested in a refresher, there are ½ hour practice sessions available Friday afternoons starting October 10th through to October 31st. Registration for practice sessions is available in the Training Registrations database in Lotus Notes.

Tips to ensure you get the class you want:
- sign-up early
- go to www.sickkids.ca/scm/ for a .pdf on how to sign up
Dear Doctor,

Thank you for completing The Hospital for Sick Children’s KidCare training program on .

This activity is eligible for 3.0 MAINPRO Section 1 credits.

Please retain this letter as confirmation of attendance as per MAINCERT guidelines.

Suzan Schneeweiss, MD, MEd, FRCPC (C)
Director, Continuing Medical Education
Department of Paediatrics
Faculty of Medicine
University of Toronto
Register for your KidCare Phase II class today

KidCare Phase II is set to Go-Live on Tuesday, November 4, 2008.

If you currently use KidCare or Kidcom, you should register and complete a class. Classes are now available for registration in the Training Registrations database in Lotus Notes.

To ensure that you have the required education prior to go-live, early sign-up and training completion are highly recommended.

Tips:
- Complete your Computer Based Tutorial (CBT) within the two weeks prior to the class to keep the information fresh.
- Complete the CBT Agreement Form at least one week prior to ensure the CBT agreement form has been processed.
- Register in an early class to avoid crowded classes.
- Be one of the first to complete a class and receive a bonus goodie bag filled with treats and a chance to win a $50 Best Buy gift certificate.
- 1/2 hour practice sessions are now available for sign up - they will run every Friday afternoon from October 10th to October 31st.
- Visit www.sickkids.ca/scm/ for more information.
Attention SickKids Staff

KidCare Go-Live Support Information

KidCare Phase II is set to Go-Live on Tuesday, November 4, 2008

Where do I get Help?
Reference Material can be found in each department and online at www.sickkids.ca/scm/.

If you need further assistance with KidCare, your primary resource is your SuperUser Coach.

Tip: a handy online list of SuperUser Coaches is available at www.sickkids.ca/scm/ - click User Groups from the left navigation menu.

What if I can’t find my SuperUser Coach?
In the event that a SuperUser Coach is not available, contact the Command Centre at extension 28888 and the Triage desk will mobilize the appropriate resource.

Is training still available?
If you still need training, classes are still available for registration in the Training Registrations database in Lotus Notes.

Can I practice with KidCare?
½ hour practice sessions are available for signup in the Training Registrations database in Lotus Notes.

Visit www.sickkids.ca/scm for more information.
Communication and Advertising

- Leadership
- Nursing
- Physician
- Professional Services and Administration
### KidCare Phase II

**Physicians Report Summary**

<table>
<thead>
<tr>
<th></th>
<th>Registered</th>
<th>Trained</th>
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</thead>
<tbody>
<tr>
<td></td>
<td># staff</td>
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</table>

#### All Physicians

<table>
<thead>
<tr>
<th></th>
<th>Registered</th>
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<tbody>
<tr>
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<td># staff</td>
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#### Paediatrics

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<tbody>
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</tbody>
</table>

#### General Paeds Residents

<table>
<thead>
<tr>
<th></th>
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</thead>
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</table>

#### Surgical

<table>
<thead>
<tr>
<th></th>
<th>Registered</th>
<th>Trained</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># staff</td>
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</tbody>
</table>

| Caveat: This list is a reflection of the current HSC directory - if you see errors, please contact your directory administrator to update the listings. |  |

<table>
<thead>
<tr>
<th>Total Surgical</th>
<th>Registered</th>
<th>Trained</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># staff</td>
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</tbody>
</table>

| total staff: 1572 | % |  |
| registered: 75.63% |  |
| trained: 57.19% |  |
Blended Learning Approach

- **Computer-based Tutorials (CBTs)**
  - Mandatory pre-requisite
  - General/Basic information
  - Decreased in-classroom time
  - Staff themselves decided when and where

- **Instructor Lead Classes (ILC)**
  - Complex process or changes in process/concepts
  - To anchor knowledge – provide hands-on training
CBTs

- 5 modules
  - General Overview
  - Order Entry
  - Documentation
  - eMAR
  - Task Viewer

KidCare Phase II CBT based on Role
All staff are required to complete a computer based tutorial (CBT), prior to attending their instructor led classroom training session.

There are 9 different CBTs, their content varies depending on the required functionality of the different roles found in the hospital.

Please refer to the lists below, to help determine which CBT is appropriate, based on your role/job.

If you have any questions or are unsure of which CBT is right for you, please call the Informatics Education Team at Ext 5482.

<table>
<thead>
<tr>
<th>CBT1</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHS Administrator</td>
</tr>
<tr>
<td>Dietary Technician</td>
</tr>
<tr>
<td>Information Workers (All)</td>
</tr>
<tr>
<td>Nursing-Ambulatory Areas</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>CBT2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Life Specialist</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>CBT3</th>
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</thead>
<tbody>
<tr>
<td>Haematology/Oncology Registration Clerk</td>
</tr>
<tr>
<td>Lab Ordering Registration Clerk</td>
</tr>
<tr>
<td>Nursing-Ambulatory Areas (Lab Order Entry)</td>
</tr>
<tr>
<td>Nursing-CCU/CCC/NICU</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CBT4</th>
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</thead>
<tbody>
<tr>
<td>Cardiology Technician</td>
</tr>
<tr>
<td>DI Support Technician</td>
</tr>
<tr>
<td>DI Technician</td>
</tr>
<tr>
<td>Neurology Technician</td>
</tr>
<tr>
<td>Orthopaedics Technician</td>
</tr>
<tr>
<td>PFT Technician</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>CBT5</th>
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</thead>
<tbody>
<tr>
<td>APN Student</td>
</tr>
<tr>
<td>Audiologist</td>
</tr>
<tr>
<td>Clinical Dietician</td>
</tr>
<tr>
<td>Interpreter</td>
</tr>
<tr>
<td>Nursing-Ambulatory Areas (Lab &amp; Doc Entry)</td>
</tr>
<tr>
<td>Occupational Therapist</td>
</tr>
<tr>
<td>Orthotist</td>
</tr>
<tr>
<td>Physiotherapist</td>
</tr>
<tr>
<td>Psychology</td>
</tr>
<tr>
<td>Social Worker</td>
</tr>
<tr>
<td>Speech Language Pathologist</td>
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<tr>
<td>Transitional Care Coordinator</td>
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</table>

<table>
<thead>
<tr>
<th>CBT6</th>
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</thead>
<tbody>
<tr>
<td>APN</td>
</tr>
<tr>
<td>Medical Student</td>
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<tr>
<td>Nursing: ER</td>
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<tr>
<td>In Patient</td>
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<tr>
<td>Nephrology</td>
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<tr>
<td>SDA</td>
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<tr>
<td>VAS</td>
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<tr>
<td>Pharmacist</td>
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<tr>
<td>Physician</td>
</tr>
<tr>
<td>Respiratory Therapist</td>
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<tr>
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<tbody>
<tr>
<td>Child Youth Counsellor (CYC)</td>
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<td>Nursing-Diagnostic Imaging (non-IGT)</td>
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<tr>
<td>View Only: Admins</td>
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<td>Nursing</td>
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<tr>
<td>Physician</td>
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<td>Professional Services</td>
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<table>
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<tr>
<th>CBT8</th>
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<tbody>
<tr>
<td>Nursing-PACU</td>
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<tr>
<td>Pharmacy Technician</td>
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<tr>
<th>CBT9</th>
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<tbody>
<tr>
<td>Nursing-IGT</td>
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<tr>
<td>Nursing-Extern (inPI Areas)</td>
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</table>
KidCare Phase II Agreement Form

This form is to acquire your agreement that you have completed the Computer Based Tutorial (CBT) for KidCare Phase II. The CBT can be completed internally from the KidCare (SCM) website OR externally, by taking home a KidCare CD. In order to participate in the class and be allowed access to KidCare Phase II, you need to mark that “YES”, you have completed the CBT.
Super User Education

Job Description
- proficient at all functionality on legacy system and KidCare Phase I
- recognized ability to lead and support all health care colleagues
- availability to act as a SU during implementation

Attend Super User training

KidCare Super User (Coach) - Job Description

Roles and Responsibilities:
- Acts as a liaison between the KidCare project team and clinical area to communicate the key information about training.
- When possible and during staff meetings, encourage staff to regularly visit the KidCare website, listen to the KidCare Phone Line, attend Open Forums and Open House.
- On the day of Go-Live, participates in the back entry of orders from Kidcom to KidCare (depending on position, for example, RN, APN, MD)
- Starting at Go-Live, supports all disciplines within a specific clinical area by assisting with all KidCare functionality including how to enter orders, how to chart for medications/IVs/blood products/TPN, and how to document on various forms such as the Patient Care Summary and Admission Assessment etc.
- Coaches staff and directs them to various resources so that they will become more proficient with KidCare.
- Acts as a front line resource and escalates any unresolved issues to the KidCare Project Team for resolution.

Skills required for this position:
- Must be proficient in the use of Kidcom, more specifically, how to enter orders, how to chart medications and patient information.
- Must be proficient with current KidCare functions such as creating patient lists, searching for patients/visits, viewing lab results and viewing patient information and applying filters.
- Upon completion of training, must have a good understanding of KidCare Phase II functions.
- Must have an excellent working knowledge of basic Windows skills such as minimizing/maximizing windows, the use of a mouse (i.e. right click versus left click), using the file menu, using icons, navigating through multiple windows, etc.
- Must have excellent communication skills both written and verbal.
- Must enjoy coaching.
- Must be well respected by peers.
- Must have had previous experience in mentoring staff.
- Must be interested in computer technology.

Preparation to be a KidCare Super User (Coach):
- Where possible, participates in integrated testing prior to Go-Live.
- In preparation for being a coach, expect to attend additional training sessions in addition to discipline-based training session.
Original Goal

3500+ staff

8 Weeks

- Outcome:
  - Between Sep 4\textsuperscript{th} and Nov 4\textsuperscript{th}
  - 3083 staff were trained
  - 585 classes were held

88% of staff were trained by go-live
Go-Live

- Education continued through go-live
  - 3 Informatics Educators
    - Scheduled and adhoc training
    - Ongoing education for existing clinical systems
  - 4 Informatics Educators
    - Go-live support

- Reference material
KidCare Reference Material

This page can only be viewed by SickKids Staff.

Please click the links below to view KidCare Reference Material:

- Administrative and Support Staff
- APNs
- Nursing
- Professional Services Staff
- Physicians - Last Updated July 29, 2009

View Only
Communication tools
External Support Staff and Super Users
Go-Live cont’d

● Daily meetings at 1300 with all clinical managers – get a sense of how staff were doing

● Tips and Tricks
Post Go-Live

- Ongoing education
- Clinical Applications Resources and Education Support (CARES)
- Ongoing communication
  - Tips and Tricks
  - Website updates
- KidCare Duty Officer (KDO)
- Stabilize the system for a period of time before making any revisions
Key Success Factors

- Hospital engagement
  - Hospital-wide project – ownership
  - Go-live day was a “marked event”

- Communication mechanisms
  - Countdown
  - Posters
  - Clinical Managers, Directors, VPs

- Education
  - Model
  - Daily communication
  - CME Credits
Key Success Factors

- **Go-Live Support Model**
  - Command centre
  - Super Users
  - Informatics nurses
  - Hiring skilled activation support resources helped the front-line users tremendously throughout the activation process.

- **Post Go-Live Support Model**
  - Continuing training session
  - CARES
Lessons Learned

- **Application**
  
  - Ensure sufficient resources for both the project team and support staff
  
  - Cross-train more of the project team members on system configuration
  
  - Having one consistent vendor project manager is necessary for continuity
Lessons Learned

• Application

  o Changes to a legacy system should be restricted to only those that are critical

  o Printing should be tested earlier in the Project
Lessons Learned

- Training
- Ensure you have sufficient technical expertise to support training
- No grab bags
- Have an admin assistant
- An LMS would help!
- Regular debrief sessions
Lessons Learned

- Training
  - Create a mock training environment for educators to practice
  - Create a practice database for staff to practice after attending training
Lessons Learned

- Communication

- Communicate project scope to the users – functionality

- Communication mechanism to all relevant project team members re changes and decisions
Lessons Learned

- Support

  - Extended activation support should be planned for and acquired (for example, contracted project team members should not be released shortly after activation)
Contact Information

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