Lessons Learned from North America's First All-Digital Hospital

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MED TECH Conference 25 May, 2016 Freeport

H+ HUMBER RIVER HOSPITAL

Patient Care Reinvented.

All Doctors Onboard,
Getting 100% CPOE Adoption

Agenda

I. Background and Objective

II. Methodology

    1. Proactive Psychologically Based Change Facilitation Strategy
    2. 3-Stage Multi-Modal System Training
    3. Rapid Rolling Go-Live Implementation with Minimal Recourses

III. Results

HUMBER RIVER HOSPITAL

Patient Care Reinvented.

Background

Humber River Hospital (HRH), Toronto Canada in 2014	
Community hospital	**System use by inpatient physicians**
• 3 sites, 549-beds • 7 inpatient departments • 240 inpatient physicians	• 70% - data view, no entry • 30% - data view + non-structured documentation • documentation back-end dictation

Objective

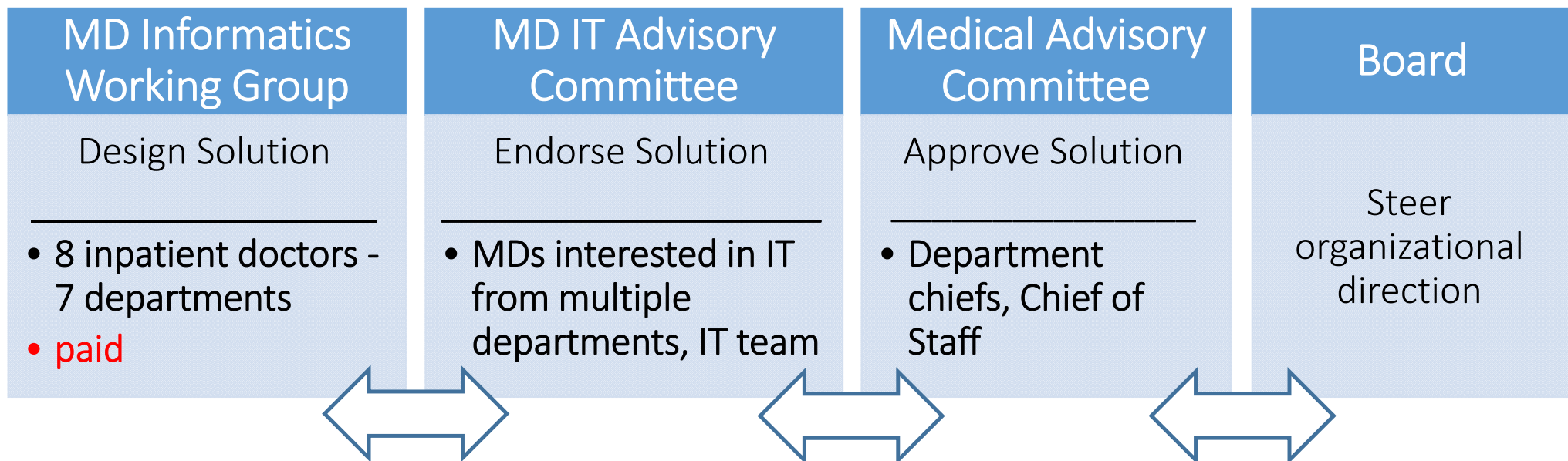|	
HRH Vision	In October 2015 Move to a new 1.8 million sq. ft 656-bed inpatient site, First fully digital hospital in North America

Objective	To implement **Computerized Provider Order Entry (CPOE)** and **Electronic Physician Documentation (PDoc)** modules
	
	• in 7 inpatient HRH departments
	• within 11 months from planning to close
	• using appropriate:
	   - change facilitation methodology;
	   - communication approach;
	   - training program;
	   - implementation strategy.

Objective

Target	To achieve • > 90% CPOE utilization by inpatient physicians • paperless inpatient environment
Measurement	• Number of orders entered by physician vs. other provider • Number of progress notes written on paper
Measurement means	• Weekly report on all electronic orders by physician • Notification from health records for all written progress notes

Change Facilitation

I. Physician Involvement in Governance

- Multilevel
- Multispecialty

MD Informatics Working Group	MD IT Advisory Committee	Medical Advisory Committee	Board
Design Solution	Endorse Solution	Approve Solution	
_____	_____	_____	Steer organizational direction
• 8 inpatient doctors - 7 departments • paid	• MDs interested in IT from multiple departments, IT team	• Department chiefs, Chief of Staff	

Change Facilitation
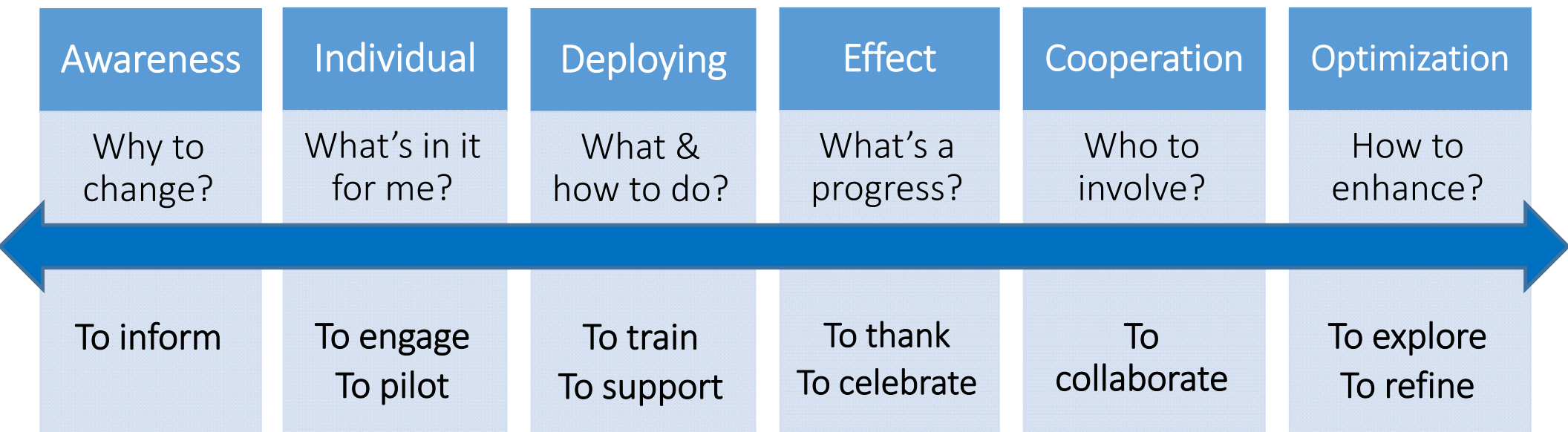## II. Communication Plan

Approved by Physicians

Communication Channels	Frequesncy	All physician	Champions	Resistors	Department leads	Super Users	Medical Informatics	cis/is/IT	Consultants	Messages & Activities
3 site broadcast										
MD Rounds	Qtly	V					V	V	V	EMR demo, presentations
Meetings										
Medical Staff Association	Qtly	V					V			EMR updates, presesntations
Med Advisory Committee	Mthly				V		V			EMR updates, decision approval
MD IT Advisory Committee	Mthly		V				V	V	V	EMR updates, solution endorsment
MD Informatics Working Group	Wkly		V				V	V	V	Presentation, solution design
Departments	per	V					V			Updates, EMR demo, training
Individual	request	V	V	V	V		V			Questions, training
HRH site										
MD Informatics Tab	ongoing	V					V			Videos, tip sheets, updates
MD IT newsletter										
"Physician Focus"	Qtly	V					V		V	EMR updates, info-notes
HRH email										
Open Forum, emails	ongoing	V					V			Updates, FAQs, decision support
FAQ folders										
EMR Manuals, Info-notes	as needed	V					V			Tip sheets, manuals, updates
Informal Gatherings										
MD Forums in lounges	Qtly	V				V	V		V	Questions, Training
On-the-go updates	ongoing	V				V	V			Questions

Formal

Informal

Change Facilitation
III. Individual Psychological Approach to Change

- Medical Informatics Specialists (MIS) – Informatics professionals with MD background

Awareness	Individual	Deploying	Effect	Cooperation	Optimization
Why to change?	What's in it for me?	What & how to do?	What's a progress?	Who to involve?	How to enhance?
To inform	To engage To pilot	To train To support	To thank To celebrate	To collaborate	To explore To refine

3-Stage Training

Preparation → Training → Optimization
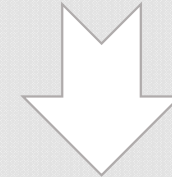
3-Stage Training

Preparation

- Communicating the change
- Assessing computer literacy
- Training on computer & EMR basics
- Identifying training needs
- Signing commitment

Assessment:
- Survey - self assessment
- Checklist - functional knowledge
- Scoring (7 scale) - learnability

Instructor-led Training:
- one-on-one
- small group (3)
- general demos

Recommended
based on individual needs
- links to typing classes
- On-Line videos (eLearning)

3-Stage Training

Training

- Training based on literacy, specialty and workflow
- Approaching site by site
- Defining "pain points" to reinforce

CPOE Training
based on individual scores
- pilot & low levels (1-3) - 5 hr classes
- high levels (4-7) - eLearning+1hr validation

Classroom ratio:
Trainer : Trainee
1 : 1-5

3-Stage Training

Optimization

- At-the-elbow coaching and support
- Reinforcement of important points
- Providing updates

Post-Go-Live Coaching

- 6 super users & MIS
- 7 specialty-scenario checklists
- Updating, coaching, reinforcing

Post-Go-Live Support

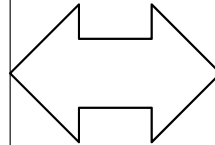- On-call Help desk - 24/7 ongoing
- Super Users 12 hrs daily

Plan

- Yearly Updates

Implementation

3 Sites

7 Inpatient Departments

- Surgery
- Medicine
- Obstetrics
- Nephrology
- Anaesthesiology
- Paediatrics
- Psychiatry
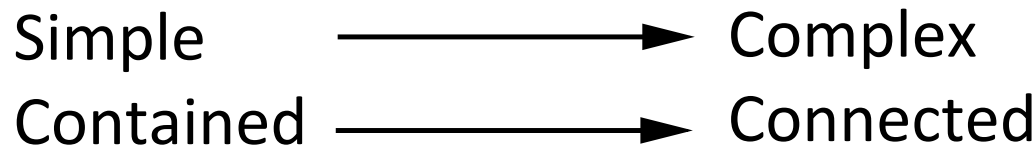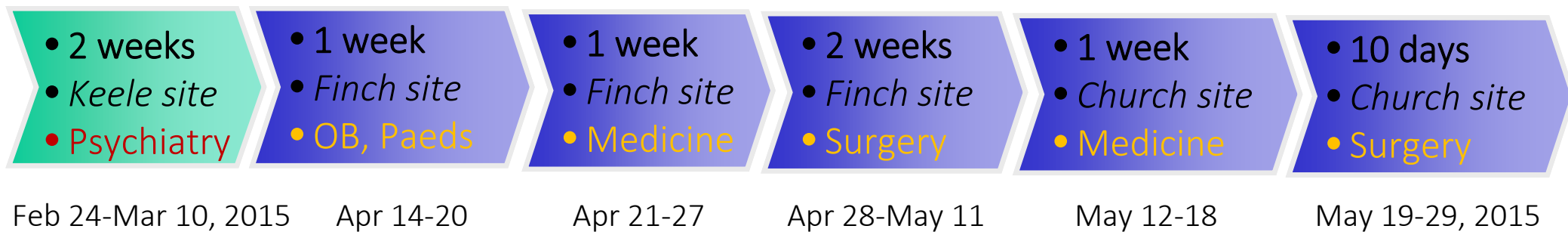
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Go-Live Support 24/7

1 Implementation Team

- Medical Informatics Specialists
- Clinical Informatics Specialists
- IS/IT team
- Consultants - 2
- Super Users - 18 trained nurses (1:unit)
- Clinical Practice Leads - 7

Implementation

PILOT ──────────────── ROLLING GO – LIVE ────────────────▶

- *Process*
- *Stabilization*

• 2 weeks *Keele site* • Psychiatry	• 1 week *Finch site* • OB, Paeds	• 1 week *Finch site* • Medicine	• 2 weeks *Finch site* • Surgery	• 1 week *Church site* • Medicine	• 10 days *Church site* • Surgery
Feb 24-Mar 10, 2015	Apr 14-20	Apr 21-27	Apr 28-May 11	May 12-18	May 19-29, 2015

Simple ──────────▶ Complex
Contained ──────────▶ Connected

Results

Physician Performance

- 100% of inpatient physicians entering orders in CPOE

- 94% of inpatient orders entered directly by physicians, remaining 6% as verbal or telephone

- 0 inpatient progress notes on paper

- Numbers reached upon go live and sustained for 1 year and counting

Summary

Critical Success Factors for Physician System Adoption
HRH experience

- ## Change Facilitation Methodology
  - psychologically based
  - personalized

- ## Active Physician Engagement
  - involvement in governance
  - two-way communication
  - diverse communication channels

Summary

Critical Success Factors for Physician System Adoption
HRH experience

- **Effective Training Program**
  - staged education
  - individualized approach
  - multiple training modes
  - schedule flexibility

- **Wise Implementation Strategy**
  - piloting
  - department based deployment
  - rapid rolling go-live to utilize minimal resources
  - 24/7 support

Thank You!

Q & A