



INTEGRATING EMR SOLUTIONS FOR ENHANCED CARE COORDINATION | A PATIENT'S JOURNEY

Dr. Chris Hobson, Chief Medical Officer
September 28th, 2017



Faculty/Presenter Disclosure

- **Faculty:** Dr. Chris Hobson, Chief Medical Officer, Orion Health
- **Relationships with commercial interests:**
 - **Grants/Research Support:** Nil
 - **Speakers Bureau/Honoraria:** Nil
 - **Consulting Fees:** Nil
 - **Other:** Employee of Orion Health, a commercial EHR software vendor
- **No Commercial Support**
- **Potential for conflict(s) of interest:**
 - Dr. Chris Hobson has received salary from Orion Health, a commercial software vendor. Their products have not been discussed in this presentation
- **Mitigating Potential Bias**
- Orion Health Products are not discussed

Agenda | Care Coordination and EMRs

- ❑ John Cardinal | A Care Coordination Story
- ❑ Patient-Centric View of Healthcare
- ❑ Current State
- ❑ Best EMR integration approaches
- ❑ Future Directions

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John Cardinal 68 year old male | A Care Coordination Story

❓ Problems –

- Type 2 Diabetes, date of onset 4/4/2015
- Hypertension since 2010
- Acute Myocardial Infarction 10/03/2016
- Rheumatoid Arthritis, Chronic pain, drug dependency
- Multiple medications including oxycodone, and frequent encounters with the health system across Toronto.
- Struggles to comply with medical advice

❓ Recently seen by colleague with increasing shortness of breath, chest pain and admitted to over -using oxycodone.

- Admitted for management of unstable angina and developing CHF - NYHA 3

❓ Review post discharge in the community

- What is the plan? What about the oxycodone?
- How do I best coordinate management for the patient and of his team?



Imagine Better Care Coordination

- ❓ For care to be better coordinated, it needs to:
 - Be integrated and centered on the patient
 - Provide an up-to-date, shared clinical record and an up-to-date shared care plan
 - Provide real-time alerts and notifications whenever important events happen
 - Enable rapid, reliable communications among care team



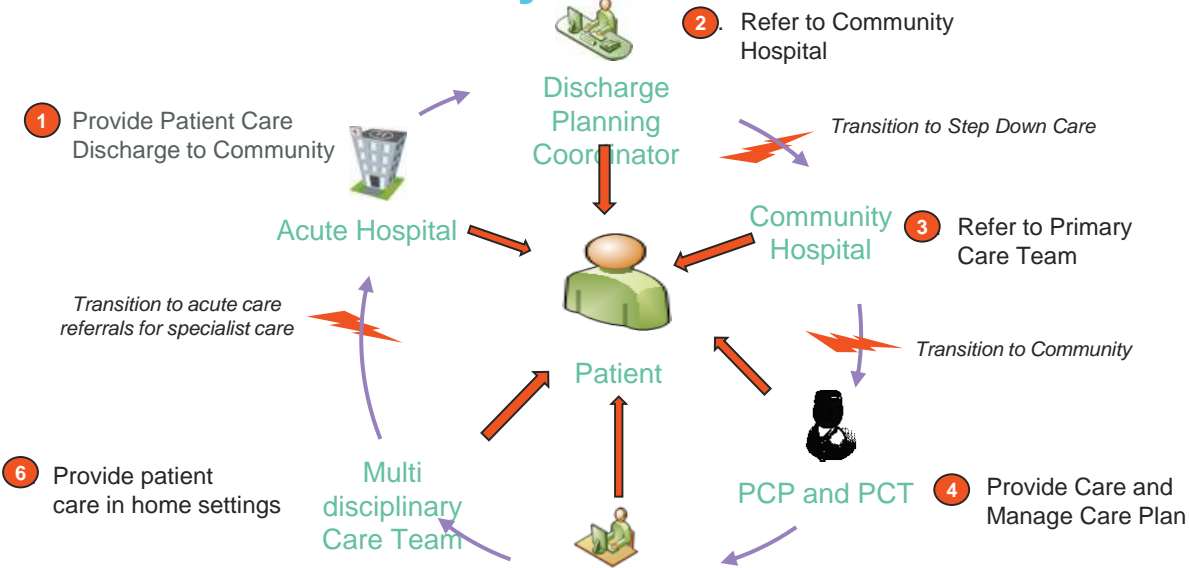
Care Coordination Interventions for John Cardinal

- ❓ Randomized controlled trials aimed at transitional care interventions (TCI) identified issues that typically face John and his physician:
 - lack of understanding of any treatment plan
 - non-adherence to medical therapy, especially medications
 - unawareness of CHF symptom exacerbation
 - irregular follow-up
- ❓ Lack of coordination and communication between hospitalists and primary care physicians (PCPs)
 - PCPs too often do not receive discharge summaries
 - Difficult for PCPs to plan appropriate follow-up after hospital discharge
- ❓ High-intensity TCIs reduced readmission risk regardless of the duration of follow-up

- ❓ * Reference – Ann Fam Med, 2015 Nov; 13(6): 562–571. Department of Family Medicine, McGill University, 5858 ch. de la Côte-des-Neiges, Suite/Bureau 300, Montreal, (Québec) H3S 1Z1 Canada



John Cardinal's Journey



Recommended Software Capabilities

- Patient Lists
- Secure Messaging
- Shared Care Plan
- Referral Tracking
- Patient Monitoring
- e-Notifications
- HRM

5 Coordinate Patient Care



Helping with John's Care Transitions | HRM and e-Notifications

- ❓ Tools like HRM (Health Report Manager) and e-Notifications are key
 - HRM delivers documents and imaging reports directly into receiving physician's EMR
 - e-Notifications delivers important patient event notices in the same way
 - Timeliness is vital
- ❓ As a near real-time electronic message sent through HRM to primary care providers, e-notifications notifies when patients are admitted or discharged from ED and in-patient settings
- ❓ Coordination is improved across the highly critical boundary between primary and secondary care.
- ❓ **No need for physician or nurse to leave the EMR – Hence minimal disruption to workflow**
- ❓ Care plan is partially automated



But wait, there is more information...

The screenshot displays a remote desktop connection to a medical record system. The window title is "Nitika-CSS-VM - Remote Desktop Connection Manager v2.7". The application window is titled "Miss Anastasia Rose Abbott".

Patient Information:

- Name: Anastasia Abbott
- Address: 12 John St. Albany Creek 4035
- D.O.B.: 25/12/2004, Age: 13 yrs, Sex: Female
- Phone: 07 5050500, Mobile: [Redacted]
- Medicare No.: 4133180487 - 4 12/09, Record No.: 104
- Person No.: [Redacted], Comment: On warfarin
- Occupation: [Redacted], Tobacco: [Redacted], Alcohol: [Redacted], Elite sports: [Redacted], Ethnicity: [Redacted]
- Blood Group: [Redacted], Breastfeeding: [Redacted], Pregnant: No

Medications Table:

Item	Reaction	Severity	Type	Due	Reason
02_CCI-CPAMN-U002	Parosmia	Severe	Outstanding requests	11/01/2012	There is 1 outstanding request for the patient!
02_CCI-CPAMN-U003	Aluminium Hydroxide	Diarrhoea			
04_CCI-MSGMNH-U001	Tide	Nausea			
05_CCI-MSGMNH-U002	House dust mite	Bronchospasm			

Alerts / Adverse Drug Reactions:

There are **unchecked** reports for this patient!

Navigation Tree (Left):

- Miss Anastasia Rose Abbott
- Today's notes
- Past visits
- Current file
- Past history
- Immunisations
- Investigation reports
- Correspondence In
- Correspondence Out
- Past prescriptions
- Observations
- Family/Social history
- Clinical images
- Obstetric history
- Cervical smears
- Enhanced Primary Care

Right Sidebar:

There is a Shared Record for L...
Click here to open EMR Connect

Bottom Taskbar:

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An integrated view of John's information

The screenshot displays a medical information system interface. The main window is titled "Nitika-CSS-VM - Remote Desktop Connection Manager v2.7". The application window is titled "Miss Anastasia Rose Abbott".

Navigation Tree (Left):

- OH Clients
- Internal
- Nitika-CSS-VM
- Metro North
- 02_1_Metro North - Dev(TES)
- 01_MNdevw601
- 02_MNdevw602
- 04_MNdevw603
- 05_MNdevw602
- 02_2_Metro North - UAT(PAT)
- 01_CCI_CPFAMN-U001
- 02_CCI_CPFAMN-U002
- 03_CCI_CPFAMN-U003
- 04_CCI_MSGMGN-U001
- 05_CCI_MSGMGN-U002
- 02_3_Metro North - Train(PA)
- 01_CCI_CPFAMN-T001
- 02_CCI_CPFAMN-T002
- 03_CCI_CPFAMN-T003
- 04_CCI_MSGMGN-T001
- 05_CCI_MSGMGN-T002
- 02_4_Metro North - Prod(QH)
- 01_CCI_CPFAMN-P001
- 02_CCI_CPFAMN-P001a
- 03_CCI_CPFAMN-P002
- 04_CCI_MSGMGN-P001
- 05_CCI_MSGMGN-P002
- NIR
- 01ghap4
- 01NIRPhapsody

Main Patient Information:

Name: Anastasia Abbott
Address: 12 John St. Albany Creek, 4035
Medicare No: 4133180467 - 4 12/08 Record No.: 104
D.O.B.: 25/02/2004 Age: 13 yrs Sex: Female
Phone: 07 50550500 Mobile: 3m 15s Finalise visit
Person No.: Comment: On warfarin
Occupation: Tobacco: Alcohol: Prepregn: No
Blood Group: Allergies / Adverse Drug Reactions: Penicillin (Severe), Aluminium Hydroxide (Moderate), House dust mite (Moderate), Aspirin (Severe), Anaphylaxis (Severe), Diarrhoea (Moderate), Nausea (Moderate), Bronchospasm (Mid)

EMR Connect Panel:

ABBOTT, Anastasia Rose (Miss)
BORN: 25-Feb-2004 (13y 6m)
GENODE: Female
IHI: 8003603413556144

Summary Workflows

Allergies & Adverse Reactions

Select All

- BEE STING (High Risk)**
Severe rash
- Penicillin (High Risk)**
Anaphylaxis
- Aluminium Hydroxide (Low Risk)
Diarrhoea
- ANIMAL FUR (Low Risk)**
- House dust mite (Low Risk)
Bronchospasm
- Trifle (Low Risk)
Nausea

Update

Conditions

Select All Filter v

- Asthma**
Onset 05-Oct-2016
- Asthma - Family History**
Onset 05-Oct-2016

Script Table:

Script date	Add	Edit	Delete	Print	Drug name	Strength	Dose	Quantity	Pkts.	Script type	Long term	Last script
9/ 6/2017												

Currenty logged in: Dr. Frederick Findcare

Wednesday 06/09/2017 03:42:57 PM

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Future Proofing

- ❑ Integration of community systems and the EMR
 - Automation of shared care plans especially follow up tasks
 - More seamless end user experience
- ❑ Patient engagement
 - Patient Generated Data is important in motivating patients to engage
 - Devices and IoT
 - Remote patient monitoring
 - Dementia and care of children with chronic disease
- ❑ Expect funding to emphasis quality measures and population-based funding
- ❑ Robust technology that meets clear needs



John's Journey to Better Care Coordination

- ❓ Technology can provide improved mechanisms to efficiently coordinate care so it is:
 - timely
 - appropriate, and
 - contributes to patient satisfaction
- ❓ Everyone agrees care transitions are critical point in the system
 - Referrals
 - Discharges
 - e-Notifications
- ❓ Team-based care requires “EMR +++”
 - Care plans
 - Patient generated data
 - Coordination tools
 - Integrated with larger ecosystem in multiple ways





QUESTIONS?

Dr. Chris Hobson, Chief Medical Officer
Sep 28th, 2017