Canadian Pharmacists Conference 2015

Innovation and Collaboration

# Medication reconciliation: A look within and beyond the hospital walls

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*Jointly presented by the Canadian Pharmacists Association (CPhA) and the Ontario Pharmacists Association (OPA)*

# Disclosure

**Vince Teo**

- None to declare

**Patti Madorin**

- None to declare

… we both feel MedRec is very important!

# Learning objectives

- Describe the rationale for medication reconciliation and associated interventions across the health care spectrum
- Describe what is known about the spread and degree of uptake of these interventions in the hospital sector
- Describe current gaps and barriers to integration of medication reconciliation across all spectrums of healthcare
- Describe one organization's experience (Sunnybrook's journey) in medication reconciliation

# Nature of the problem in hospital

- 50% of patients will have at least one medication discrepancy (error) on admission

  → 39% have the potential to cause moderate to severe harm
- Similar at transfer and discharge
- Patients admitted to hospital are at greater risk of unintentional discontinuation of evidence based chronic therapies resulting in increased risk of death, hospitalization and ED visits in the following year

Cornish PL, Knowles SR, Marchesano R, et al.. Arch Intern Med 2005;165:424-9; Kwan Y, Fernandes OA, Nagge JJ, Wong GG, Huh JH, Hurn DA, et al.. Arch Intern Med. 2007;167:1034-40; Wong JD, Bajcar JM, Wong GG, Alibhai SM, Huh JH, Cesta A, et al. Ann Pharmacother. 2008;42:1373-9.; Bell CM, Brener SS, Gunraj N, et al. JAMA 2011;306(8):840-47.

# What happens to the accuracy of the medication history in community?

- Only 44% of primary care physicians reported medications prescribed by an external physician on their patient's profile
- Primary care provider medication lists were completely accurate only 1-8% of the time

*Spina JR. Med Care 2011; 49:904-910.*

*Balon J. J Nursing Scholarship 2011; 43(3):292-300.*

*Barber K, Elms S, Martin D. Making a case for medication reconciliation in primary care. National Medication Reconciliation Webinar February 12, 2013*

# What's happening - selected

- Accreditation Canada
  - MedRec across all transitions in all services by 2018
  - Includes selected patients in ambulatory care and selected non-admitted ED patients

- Safer Healthcare Now!
  - Getting Started Kits (GSKs) for Acute Care, Home Care and Long-Term Care

# What's happening - selected

- ISMP/ Health Quality Ontario (HQO)
  - Ontario Primary Care MedRec Guide (http://www.ismp-canada.org/download/PrimaryCareMedRecGuide_EN.pdf)

- Health Quality Ontario
  - Quality Improvement Plans (Admission and Discharge MedRec)
  - bestPATH supporting Healthlinks (coordinated care for complex patients)

# How are we doing?

- Hospital
- Community

# Hospital

- Audit methods and measurement criteria vary making comparisons of MedRec rates difficult

  - Accreditation Canada
  - National MedRec Quality Audit
  - Health Quality Ontario (Quality Improvement Plans – QIPs)

# Accreditation Canada

| ROP | Compliance with Standard (%) | | |
|---|---|---|---|
| | 2011 | 2012 | 2013 |
| **MedRec as an Organizational Priority (Development and implementation of an organizational plan)** | 77 | 82 | 90 |
| **MedRec at Admission*** | 60 | 71 | 70 |
| **MedRec at Transfer/ Discharge*** | 50 | 62 | 61 |

*** At least one client service area**

# National MedRec Quality Audit

- February 2015 (initial audit was Oct 2013)
  - 173 sites across the country volunteered to participate
  - 5,201 patients/residents reviewed

# National MedRec Quality Audit tool

**MedRec Completed***

**Collect**

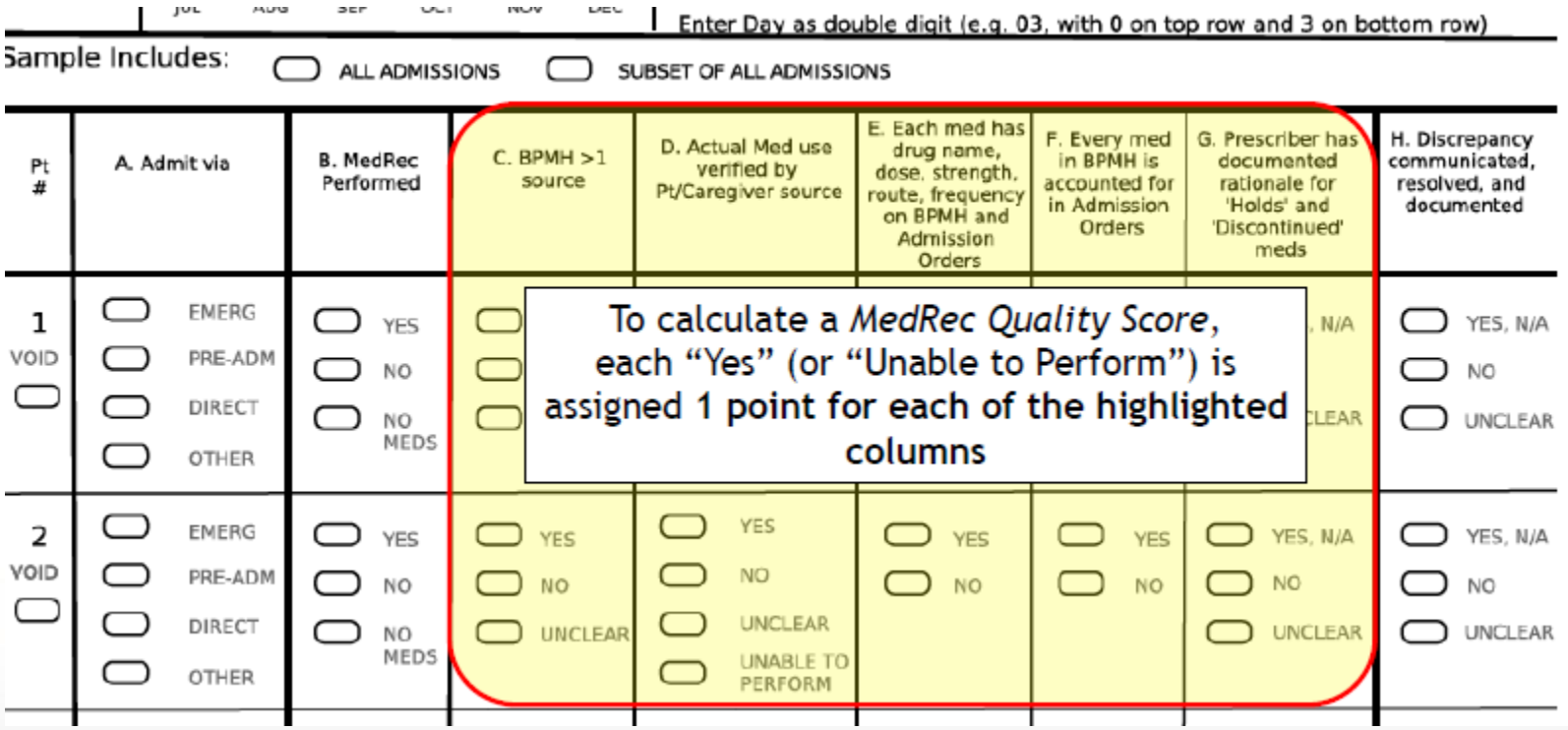
**Compare**

**Communicate**

| B. MedRec Performed | C. BPMH >1 source | D. Actual Med use verified by Pt/Caregiver source | E. Each med has drug name, dose, strength, route, frequency on BPMH and Admission Orders | F. Every med in BPMH is accounted for in Admission Orders | G. Prescriber has documented rationale for 'Holds' and 'Discontinued' meds |
|---|---|---|---|---|---|
| ☐ YES | ☐ YES | ☐ YES ☐ NO ☐ UNCLEAR ☐ UNABLE TO | ☐ YES ☐ NO | ☐ YES ☐ NO | ☐ YES, N/A ☐ NO ☐ UNCLEAR |
| ☐ NO | ☐ NO | | | | |
| ☐ NO MEDS | ☐ UNCLEAR | | | | |

*Organization's own definition

# MedRec Quality Score



# What was learned?

## Acute care (91% of patients)

- 80% of audits indicated that “MedRec was performed”
- 40% of audits had a MedRec Quality Score of 5/5 (i.e., all of the quality components of admission MedRec were performed)
- Average quality score 3.5/5

## Long-term care (9% of patients)

- 98% of audits indicated that “MedRec was performed”
- 30% of audits had a MedRec Quality Score of 5/5 (i.e., all of the quality components of admission MedRec were performed)
- Average quality score ~3.6/5

# Health Quality Ontario (HQO)

- "Transforming Ontario's healthcare system"
  - Better patient experience
  - Better patient health outcomes
  - Better value for money

- Quality Improvement Plans (QIPs)
  - Set targets, identify change ideas, methods, measures and goals
  - Admission MedRec, Discharge MedRec

# Common themes from hospital QIPs

- Roles and accountabilities
- Education
- Measurement
- Technology
- Scaling up, spread
- Quality

# Common themes from hospital QIPs


- "SHN audits for quality"
- "Design, test and utilize quality endpoints"
- "Define and communicate accountabilities for accuracy"
- "Dedicated pharmacy technicians for efficient, high quality BPMHs"

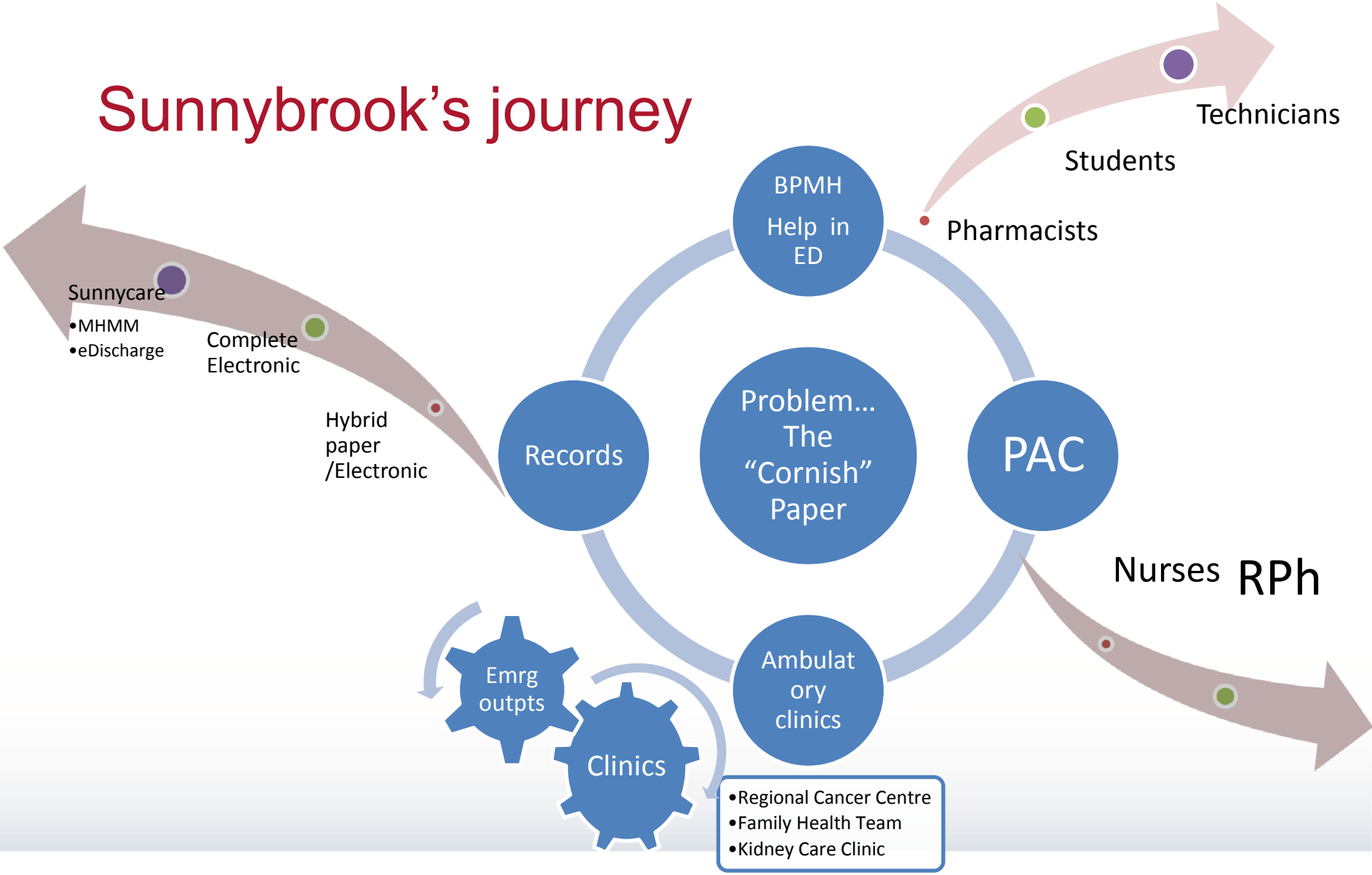
# MedRec indicator on QIPs

- Hospitals report a wide range of baseline admission MedRec rates

- In 2014/2015
  - 45% of hospitals improved their admission MedRec rates
- More hospitals are including improvement initiatives for Discharge MedRec

*www.hqontario.ca/portals/0/Documents/qi/qip-analysis-hospital-en.pdf*

# Sunnybrook's journey



# MedRec as an interprofessional process

- Pharmacists
- Pharmacy technicians
- Pharmacy students
- Nurses
- Physicians

# Pharmacists, BPMH and MedRec

## BPMH

- More accurate and complete than other health care professionals

*Reeder TA, Mutnick A.Am J Health Syst Pharm 2008;65(9):857-860.*

*Carter MK, Allin DM, Scott LA, Grauer D.. Am J Health Syst Pharm 2006;63(24):2500-2503*

## MedRec

- In studies where medication reconciliation has had a positive impact on clinically significant events
  - Pharmacists play a key role
  - Part of an interprofessional process that supports optimal medication management
  - Reduces preventable adverse medication events (post-discharge)

*Fernandes O. Shojania KG. Healthc Q 2012;15(Special);42-49.*

*MARQUIS Manual. http://tools.hospitalmedicine.org/resource_rooms/imp_guides/MARQUIS/Marquis_Manual2011.pdf*

*Schnipper JL Arch Intern Med 2006;166:565-571*

# Pharmacy students and nurses

## Pharmacy students

- Able to obtain BMPH's from patients
- Able to determine discrepancies during reconciliation resulting in positive impact in patient care
- Able to identify significantly more medications on patient's BPMH
- Limitations and gaps in literature
  - Supervised student pharmacists
  - No direct comparison to pharmacists

*Lancaster JW, Grgurich PE. Am J Pharm Educ 2014; 78 (2) Article 34.*

*Lubowski TJ, Cronin LM, Pavelka RW, Briscoe-Dwyer LA, Briceland LL, Hamilton RA. Am J Pharm Educ 2007;71(5):94.*

*Padiyara RS. J Am Pharm Assoc (2003). 2008;48(6):701.*

*Walker PC, Tucker Jones JN, Mason NA. Am J Pharm Educ. 2010; 74(2):Article 20.*

## Nurses

- Nurse – pharmacist collaboration
  - Decreased discrepancies, prevented harm
  - Cost-effective

*Feldman LS. Journal of Hospital Medicine 20122012;7:396–40*

# Pharmacy technicians

- BPMH's obtained by pharmacy technicians
  - Decreased medication discrepancies
  - Decreased adverse drug events
  - Similar accuracy and completeness as pharmacists

* "trained" pharmacy technicians

*Michels RD, Meisel SB.. Am J Health-Syst Pharm 2003; 60: 1982-6*
*van den Bemt et al, Ann Pharmacother 2009; 43(5): 868-74*
*Leung et al, Can J Hosp Pharm 2009; 62(5): 386-91*
*Johnston R, Saulnier L, Gould O. Can J Hosp Pharm 2010;63(5):359–365*

# The challenge

*Every institution's discharge is another's admission*

*-Author Unknown*

# What do we know about people who come to EDs?

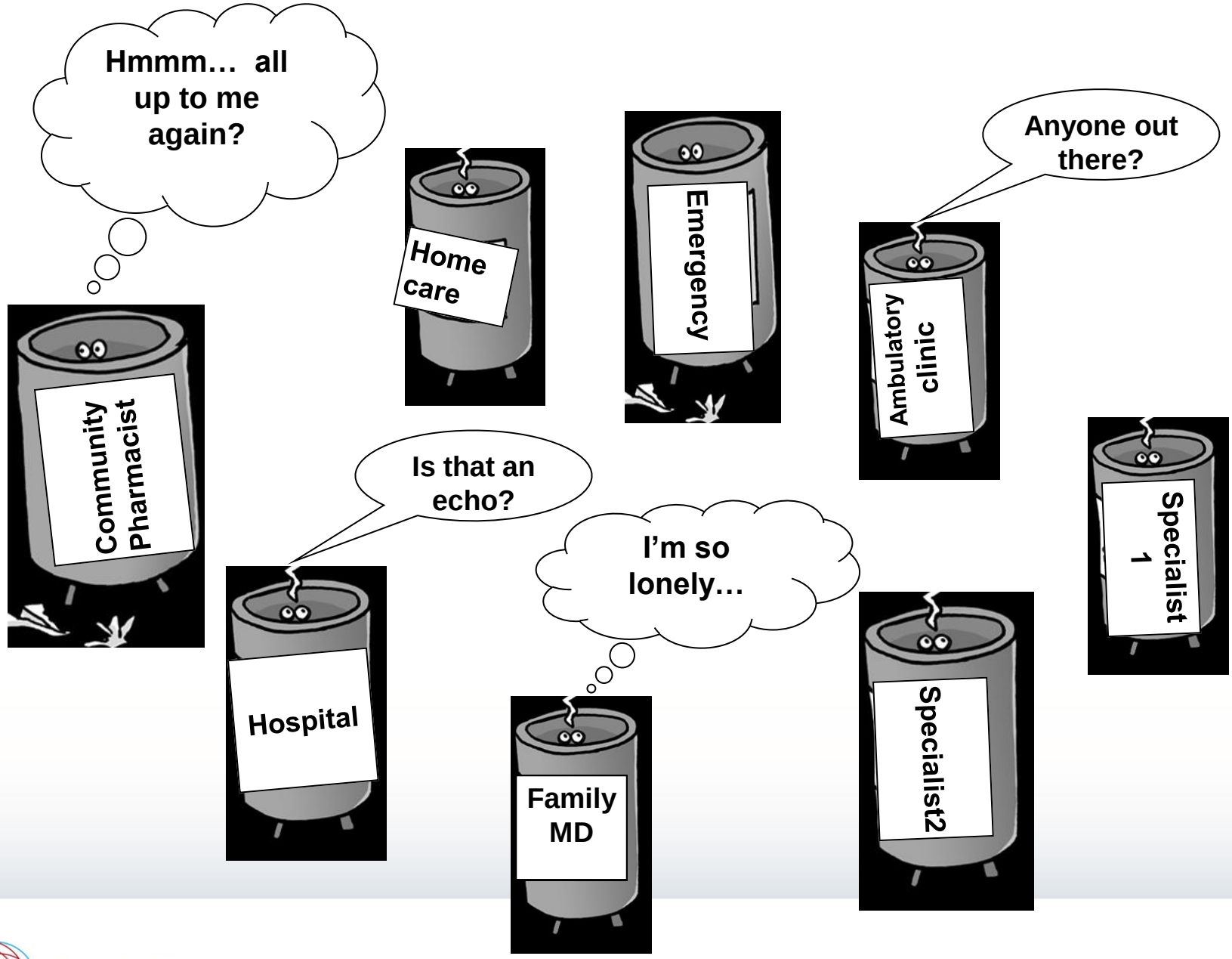
- ADEs are responsible for 1 out of 9 (12%) of ED visits
- Most commonly due to adverse drug reactions (39%), non-adherence (28%), and wrong/ suboptimal drug (12%)
- 68% were deemed to have been preventable
- Emergency physicians attribute ~37% of presentations deemed medication – related to a non-medication related cause (1/3 are missed)
- Odds of being admitted was double (OR 2.18)

*Zed PJ et al. CMAJ 2008;178(12):1563-9*
*Hohl CM et al. Ann Emerg Med. 2010;55:493-502*

# Why are medication histories so bad in community patient records?

- Not primary care culture (at least not yet!)
- Lack of communication – multiple prescribers, emergency room reports, specialist consults
- Multiple pharmacies used
- Samples not recorded

*Sears K, Scobie A, MacKinnon NJ. Can Pharm J 2012;145:88-93.*


Hmmm… all up to me again?
Community Pharmacist
Home care
Emergency
Anyone out there?
Ambulatory clinic
Specialist 1
Is that an echo?
Hospital
I'm so lonely…
Family MD
Specialist2

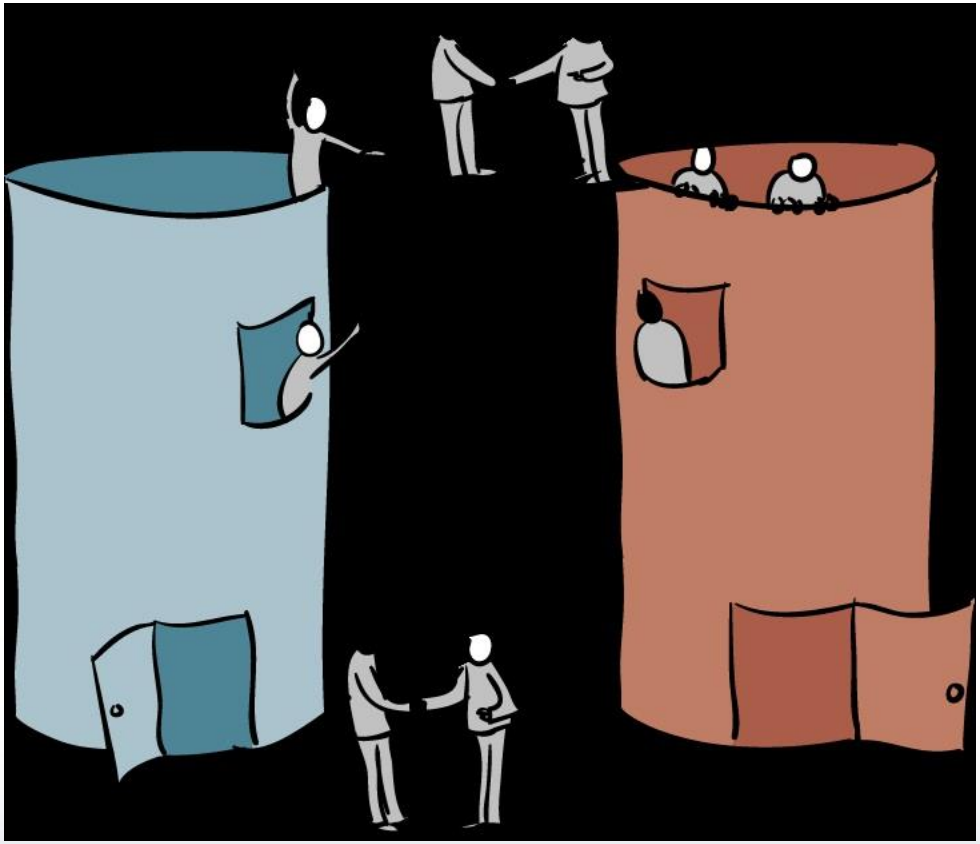
# One example of connecting silos

- MOHLTC + OMA working through MCPWG
  - Demonstration projects to Improve the Care of Medically Complex Patients for Ontario General and Family Practice Physicians
  - Sunnybrook's FHT, Emergency, Allied Health, CCAC, Patient Collaborative
    - Patients at high risk for emergency visits
    - Developing a *shared* care plan (includes MedRec)
    - Connecting community and hospital pharmacists
      - Data gathering
      - Development of a working model
      - Outcome measurement

# How to keep the ball rolling?


Developed collaboratively by CPhA, CSHP, ISMP Canada, UofT Faculty of Pharmacy, 2012

# Connecting silos



# Interprofessional teamwork

# Role of the patient

- We must ensure work completed in one practice setting is transferred to all practice settings a patient may visit
- The patient is often relied upon to transfer information between practice settings
- Keeper of information
- How can we support our patient?

# Recap…

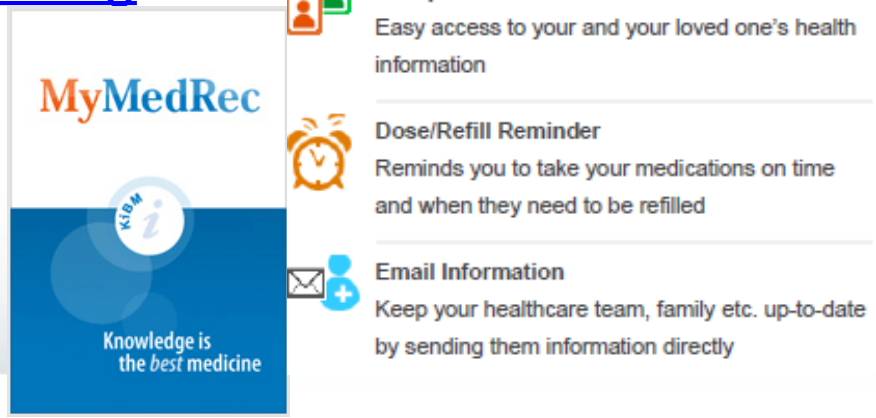
- Medication reconciliation is an important part of medication safety
- There has been a lot of focus on achieving medication reconciliation related goals in hospital over the last 5-10 years
  - Shifted from just quantity to measuring quality
- There are a variety of strategies being employed
- We must ensure work completed in one practice setting is transferred to all practice settings a patient may visit

# Useful links

- Safer Healthcare Now!  (see interventions and national calls)
  - http://www.saferhealthcarenow.ca/EN/Pages/default.aspx
- CPSI Community of Practice
  - http://tools.patientsafetyinstitute.ca/Communities/MedRec/default.aspx
- ISMP
  - https://www.ismp-canada.org/medrec/
- Marquis
  - *http://tools.hospitalmedicine.org/resource_rooms/imp_guides/MARQUIS/Marquis_Manual2011.pdf*

# Useful links to use with patients


- Dr. Mike Evans
  - www.youtube/user/DocMikeEvans
  - 'One simple solution for Medication Safety'
- Knowledge is the best medicine
  www.knowledgeisthebestmedicine.org
  - "My Med Rec" App
    - (for Android, Blackberry, iPhone)
    - developed with ISMP



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## Questions?

*Hand with Reflecting Sphere* by M. C. Escher. Lithograph, 1935.