AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Medication Reconciliation Bundle of Care

Margaret Duguid, Pharmaceutical Advisor

Singapore, 21 August 2013

MATCH UP medicines

Overview

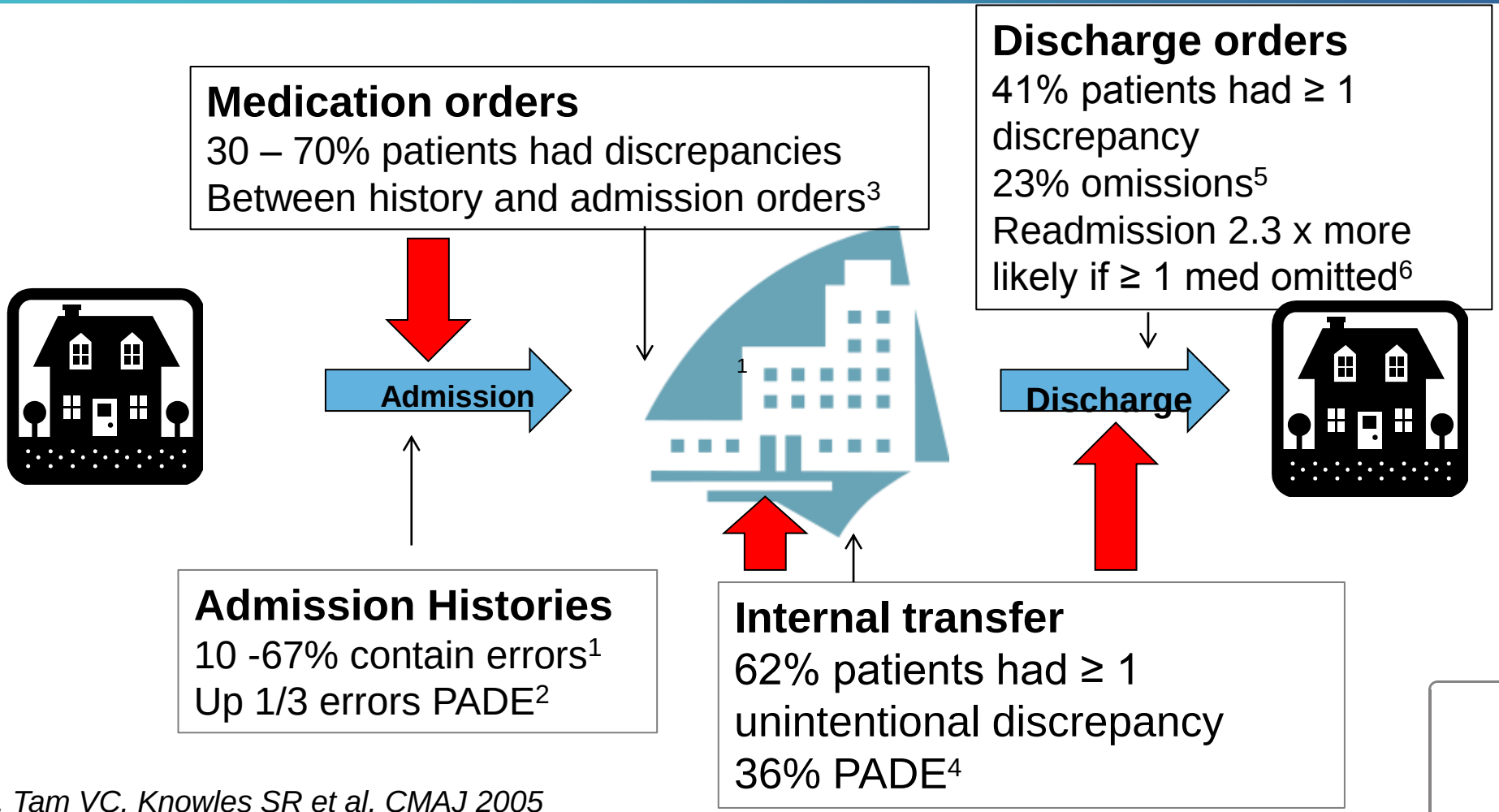
- Problem of medication errors at transitions of care
  - Who is at risk
- Recognition as a patient safety issue
- Medication reconciliation as a solution
  - Effectiveness
  - Medication reconciliation bundle
- Challenges to implementation

Medicines and Patient Harm

- Medication errors are common
- Interfaces of care prone to error
  - Over 50% of hospital medication errors occur at interfaces of care[1]
  - Medicines ordered
    - On admission
    - Transfer from one unit to another
    - Discharge home or another facility

1. Sullivan C, Gleason KM et al J Nurs Care Qual 2005;20:95-8

Medication errors at transfer of care – the risk



1. Tam VC, Knowles SR et al, CMAJ 2005

2. Cornish PL, Knowles SR, Archives Int Med 2005 3. Lee J et al Annals Pharmacotherapy 2010

4. NICE NPSA Tech Bulletin medication reconciliation 2007 5.Wong J et al Annals Pharmaco 2009

6.Stowasser, J Pharm Pract Res 2002

Medication errors at transfer of care – the risk

- Patient harm
  - Adverse drug events
    - Temporary
    - Permanent
    - Death
- The “second victim”
  - Heath professional

Medication errors at transfer of care – the risk

- Inefficiencies
  - Time to follow up, delays in discharge
  - Duplication of effort
- Economic burden to health service
  - ↑ length of stay
  - Additional interventions
  - Unplanned readmission
  - ↑ Emergency department visits post discharge

Who is at greatest risk?

- Elderly >65 years [1]
- Multiple medicines (> 4 – 13 medicines) [1]
- > 3 co-morbidities [1]

- High risk drugs [2]
  - Opioids, sedatives, antipsychotics
  - Anticoagulants
  - Insulin
  - Digoxin
- Clinical concerns [2]
- Patient/carer can't provide medicines containers or list [2]

1. Mueller KS et al ARCH Int Med 2012;174(14); 1057-69

2. MARQUIS Implementation Manual 2011

Who is at greatest risk?

- Risk of discontinuing medicines after discharge [1]
  - Patients on chronic medicines
  - ICU stay
- Transfer between units (e.g. ICU to ward) [2]
  - Patients without a comprehensive medication history
  - Taking multiple medicines before admission
  - Prescribed multiple medicines at time of transfer
  - Omissions most common unintentional discrepancy[3]
    - 50% may reach patient

1. Bell C et al JAMA 2011
2. Lee J et al Annals Pharmacotherapy 2010
3. Santell J Jt Comm J Qual Patient Saf 2006

Medication reconciliation

Formalised medication reconciliation at admission, transfer and discharge reduces medication discrepancies (errors)

by 50 – 94%

Medication reconciliation

- **Reduces workload and rework**
  - Nursing time at admission ↓ >20 mins per pt
  - Pharmacists time in patient discharge ↓ > 40 mins per pt [1]
- **Cost effective**
  - Medication reconciliation interventions at admission cost effective
  - Pharmacist-led reconciliation intervention had highest expected net benefits
  - ***Medication reconciliation cost effective use of NHS resources*** [2]

1. *Rozich JD, Regar RK, Jt Comm J Qual Saf. 2004*
2. *Karnon, J Eval Clin Pract 2009*

WHO Patient safety solution no. 6

The Joint Commission | Joint Commission International

WHO Collaborating Centre for Patient Safety Solutions

World Health Organization

Aide Memoire

Assuring Medication Accuracy at Transitions in Care

Through process of medication reconciliation

Patient Safety Solutions
| volume 1, solution 6 | May 2007

► STATEMENT OF PROBLEM AND IMPACT:

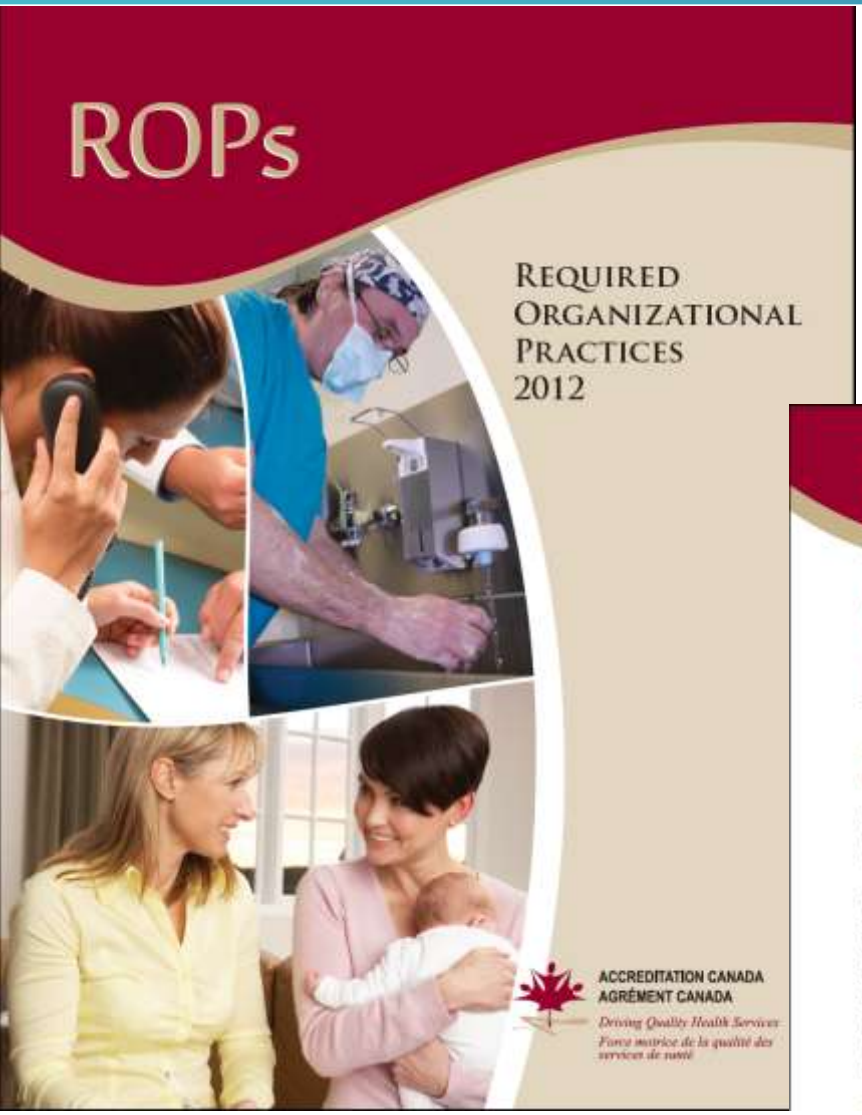
Errors are common as medications are procured, prescribed, dispensed, administered, and monitored but, they occur most frequently during the prescribing and administering actions (1). The impact is significant, as medication errors harm an estimated 1.5 million people and kill several thousand each year in the United States of America (USA) , costing the nation at least US$ 3.5 billion annually (1). Other industrialized countries around the world have also found that medication adverse events are

For example, upon implementing a patient-centered medication reconciliation programme, three hospitals in Massachusetts, USA, experienced an average 85% reduction in related medication errors over a 10-month period (7). Hundreds of health-care provider teams are spreading and sustaining the implementation of this strategy by participating in the *100K Lives*, USA (5) and *Safer Healthcare Now!*, Canada (8) campaigns.

International Initiatives to reduce errors at transfer of care

- WHO High 5s initiative
  - Assuring medication accuracy at transitions of care
  - 5 countries
- Institute for Health Care Improvement (IHI)
  - One of twelve initiatives in 5 million Lives Campaign
- Canadian Patient Safety Institute – SAFER HEALTHCARE NOW!
  - Medication reconciliation collaborative (500 sites)
- The Joint Commission (US) – National Patient Safety Goal & Accreditation requirement
  - Goal : ‘Accurately and completely reconcile medications across the continuum of care’

Accreditation



Required Organizational Practices

COMMUNICATION
Improve the effectiveness and coordination of communication among care and service providers and with the recipients of care and service across the continuum

MEDICATION RECONCILIATION AS AN ORGANIZATIONAL PRIORITY

➲ *For Leadership Standards*

The organization reconciles clients' medications at admission, and transfer or discharge.

GUIDELINES

Medication reconciliation is a structured process in which healthcare professionals partner with clients, families and caregivers for accurate and complete transfer of medication information at transitions of care. Medication reconciliation is complex and requires support from all levels of an organization, and many disciplines within the system.

Medication reconciliation is widely recognized as an important safety initiative. Research suggests that over 50% of patients have at least one medication discrepancy upon admission to hospital, with many discrepancies carrying the potential to cause adverse health effects. Evidence shows that medication reconciliation reduces the potential for medication discrepancies such as omissions, duplications, and dosing errors, while cost-effectiveness analyses have also demonstrated that medication reconciliation is an extremely cost-effective strategy for preventing medication errors. Additional research highlights that successful medication reconciliation can also reduce workload and rework associated with patient medication management.

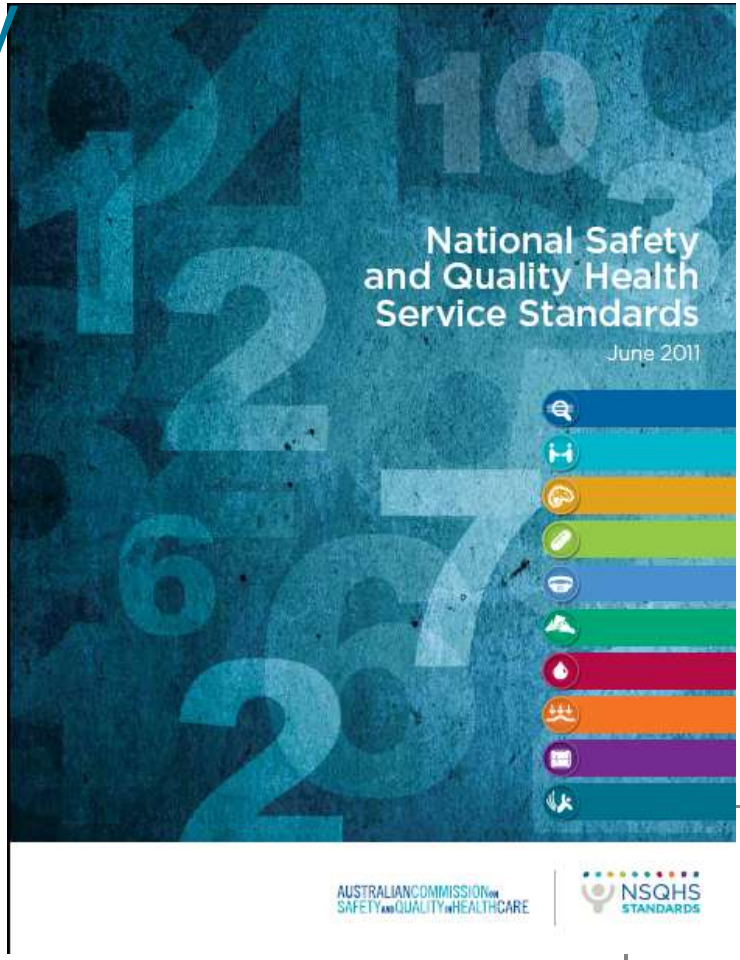
In Canada, Safer Healthcare Now! identifies medication reconciliation as a safety priority. The World Health Organization (WHO) has also developed a Standard Operating Protocol for medication reconciliation as one of its interventions designed to enhance patient safety.

National Safety and Quality Health Service Standards

Standard 4: Medication Safety

s

Medication Safety Criteria
Systems and governance for medication safety
Documentation of patient information.
Medication management processes
Continuity of medication management
Communicating with patients and carers



2013 New accreditation system. All Australian health services assessed against National Safety and Quality Health Service standards

Medication Reconciliation - a patient safety strategy

Annals of Internal Medicine | SUPPLEMENT

The Top Patient Safety Strategies That Can Be Encouraged for Adoption Now

Paul G. Shekelle, MD, PhD; Peter J. Pronovost, MD, PhD; Robert M. Wachter, MD; Kathryn M. McDonald, MM; Karen Schoelles, MD, SM; Sydney M. Dy, MD, MSc; Kaveh Shojania, MD; James T. Reston, PhD, MPH; Alyce S. Adams, PhD; Peter B. Angood, MD; David W. Bates, MD, MSc; Leonard Bickman, PhD; Pascale Carayon, PhD; Sir Liam Donaldson, MBChB, MSc, MD; Naihua Duan, PhD; Donna O. Farley, PhD, MPH; Trisha Greenhalgh, BM BCH; John L. Haughom, MD; Eileen Lake, PhD, RN; Richard Lilford, PhD; Kathleen N. Lohr, PhD, MA, MPhil; Gregg S. Meyer, MD, MSc; Marlene R. Miller, MD, MSc; Duncan V. Neuhauser, PhD, MBA, MHA; Gery Ryan, PhD; Sanjay Saint, MD, MPH; Stephen M. Shortell, PhD, MPH, MBA; David P. Stevens, MD; and Kieran Walshe, PhD

5 March 2013 | Annals of Internal Medicine | Volume 158 • Number 5 (Part 2)

"Providers should not delay adopting these practices"

"Enough is known now to permit health care systems to move ahead"

Making health care safer- Interventions strongly encouraged

1. Preoperative checklists and anesthesia checklists
2. Bundles with checklists to prevent central line-associated bloodstream infections
3. Interventions to reduce urinary catheter use
4. Bundles to prevent ventilator-associated pneumonia
5. Hand hygiene
6. "Do Not Use" list for hazardous abbreviations
7. Multicomponent interventions to reduce pressure ulcers.
8. Barrier precautions to prevent healthcare-associated infections.
9. Use of real-time ultrasound for central line placement.
10. Interventions to improve prophylaxis VTE

Making health care safer- Interventions encouraged

1. Multicomponent interventions to reduce falls.
2. Use of clinical pharmacists to reduce adverse drug events.
3. Documentation of patient preferences for life-sustaining treatment.
4. Use of informed consent to improve patients' understanding of the potential risks of procedures.
5. Team training.
6. Medication reconciliation
7. Practices to reduce radiation exposure from fluoroscopy and computed tomography scans.
8. Use of surgical outcome measurements and report cards,
9. Rapid response systems
10. Utilization of complementary methods for detecting adverse events/medical errors to monitor for patient safety problems.
11. Computerized provider order entry.
12. Use of simulation exercises in patient safety efforts.

What is medication reconciliation ?

“ Medication reconciliation is a formal process in which healthcare providers work together with patients, families and care providers to ensure accurate and comprehensive medication information is communicated consistently across transitions of care.”

safer healthcare Now! Medication reconciliation in acute care getting started kit.

What is medication reconciliation ?

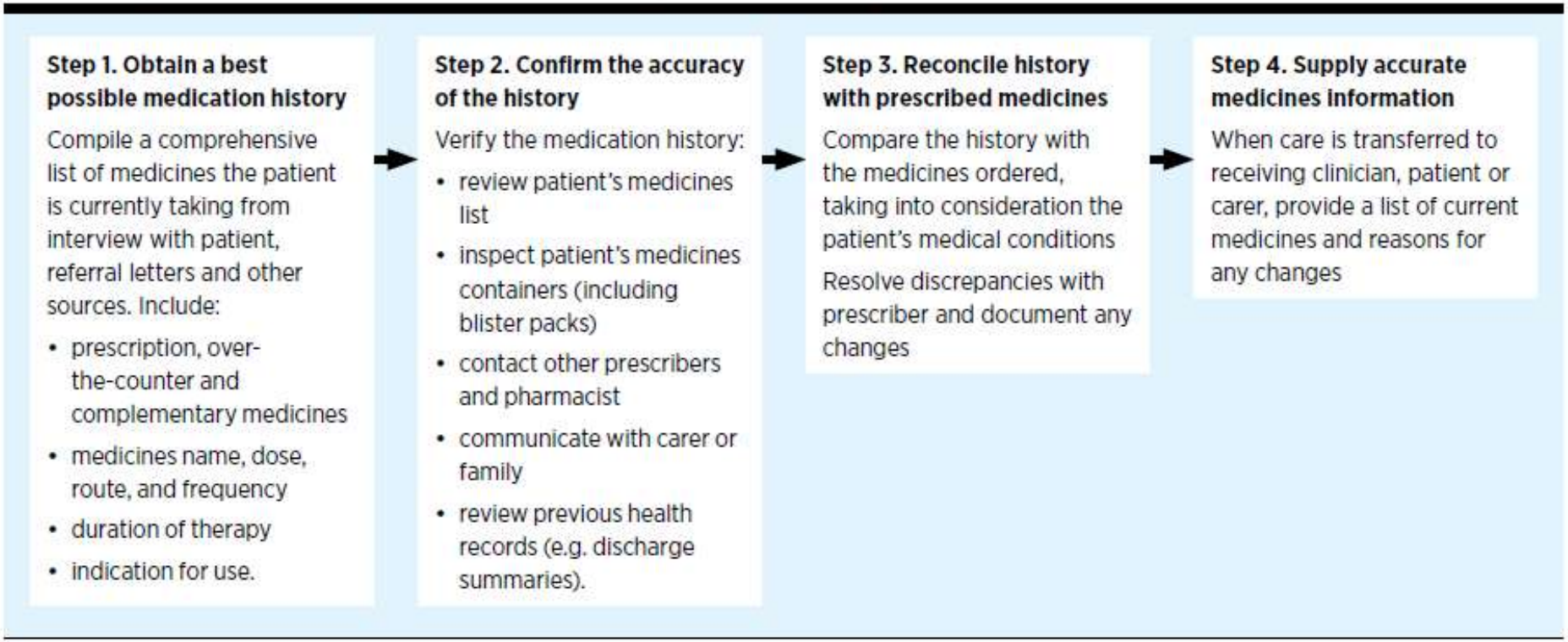
Medication reconciliation is a **formal** process of **obtaining** and **verifying** a complete and accurate list of each patient's current medicines. **Matching** the medicines the patient ***should*** be prescribed to those they are ***actually*** prescribed. Where there are **discrepancies**, these are discussed with the prescriber and reasons for **changes** to therapy are **documented**.

When **care is transferred** (e.g. between wards, hospitals or home), a **current** and **accurate** list of medicines, including **reasons for change** is provided to the **patient** and **person taking over the patient's care**.

ACSQHC

Medication reconciliation on hospital admission

Fig. 1 **Steps in the medication reconciliation process on hospital admission**



Duguid M Importance of Medication Reconciliation for Patients and professionals Aust Prescriber 2012

Discrepancies

Unintentional discrepancy

Errors, omissions, commissions - leading to potential adverse drug event, patient harm, re-admission to hospital, death

"Thyroxine omitted from drug chart on admission. Not noted throughout her stay and sent home without any thyroxine. GP noted omission and restarted after showing clear cut hypothyroidism. Readmitted with worsening of her pre-existing extensive co-morbidity. Initially did well but deteriorated and died days following admission".

Discrepancies

Undocumented intentional discrepancy

Failure to document a medication change - can lead to confusion and extra work, potential adverse drug event, patient harm, re-admission to hospital, death

Patient admitted with exacerbation of COPD. Recently started on warfarin for AF. High INR noted in ED. Warfarin with held but not documented. Patient discharged without warfarin. Suffered a stroke at home.

Step 1. Best Possible Medication History

Step 1

Compiling a **best possible medication history (BPMH) in partnership with the patient and family/carer**

Aims: Find out what the patient is actually taking

Compile an accurate and comprehensive list

- Current medicines (prescription, OTC, Traditional medicines)
- Recent changes, medicines ceased.

- Systematic approach
- It is the baseline from which:
  - drug treatment is continued on admission
  - therapeutic interventions are made
  - self-care is continued after discharge

Use guides, prompts

Best Possible Medication History Interview Guide

Introduction

- Hello Mr./Mrs./Ms./Miss. _____ (client/ patient/ resident)
- My name is _____, (introduce self / profession)
- I would like to take some time to review the medications you take at home.
- I have a list of medications from your chart/file, and want to make sure it is accurate and up to date.
- Would it be possible to discuss your medications with you (or a family member) at this time?
  - Is this a convenient time for you? Do you have a family member who knows your medications that you think should join us ? How can we contact them?

Medication Allergies

- Do you have any medication allergies? ☐ YES ☐ NO If yes, what happens when you take _____?

Information Gathering

- Do you have your medication list or pill bottles (vials) with you?
- *Show and tell technique when they have brought the medication vials with them*
  - How do you take _____(medication name)?
  - How often or When do you take _____(medication name)?
- Collect information about dose, route and frequency for each drug. If the patient is taking a medication differently than prescribed, record what the patient is actually taking and note the discrepancy.
- Are there any prescription medications you (or your physician) have recently stopped or changed?
- What was the reason for this change?

Community Pharmacy

- What is the name of the pharmacy that you normally go to? (Name/Location: anticipate more than one)
  - May we call your pharmacy to clarify your medications if needed?

Over the Counter (OTCs) Medications

- Are there any medications that you are taking that you do not need a prescription for? (Do you take anything that you would buy without a doctor's prescription?) Give example, e.g. Aspirin. If yes, how do you take _____?

Vitamins/Minerals/Supplements

- Do you take any vitamins (e.g. multivitamin)? If yes, how do you take _____?
- Do you take any minerals (e.g. calcium, iron)? If yes, how do you take _____?
- Do you use any supplements (e.g. potassium, glucosamine, St. John's Wort)? If yes, how do you take __ ?

Eye/Ear/Nose Drops

- Do you use any eye drops? If yes, what are the names and how many drops do you use and how often? In which eye?
- Do you use any ear or nose drops/nose sprays? If yes, how do you use them?

Inhalers /Patches/Creams/Ointments/Injectables/Samples

- Do you use any inhalers? any medicated patches? medicated creams or ointments? any injectable medications (e.g. insulin)? For each If yes, how do you take _____? (name, strength, how often)
- Did your doctor give you any medication samples to try in the last few months?

Antibiotics

- Have you used any antibiotics in the past 3 months? If so, what are they?

Closing

- This concludes our interview. Thank you for your time. Do you have any questions?
- If you remember anything after our discussion please contact me to update the information?

Exit room, and wash hands. Proceed to document interaction in chart/file.

***Note:** Medical and Social History, if not specifically described in the char/file, may need to be clarified with patient*

Shiwani Chhibbar BScPhm Candidate and Sara Ingram BScPhm, ACPR, Olavo Fernandes PharmD, University Health Network and Alice Watt BScPhm, Margaret Colquhoun ISMP Canada. olavo.fernandes@uhn.on.ca .

Last Revised Jan 1, 2009

ismp CANADA

safer healthcare now!

UHN Medication Reconciliation Task Force

Use guides, prompts

MEDICATION HISTORY TIPS

Every Patient

- Check tablets, medication list/pack or scripts
- GP letter or Ambo report (always crosscheck)

Patient lives at home

- Ask the carer –ask them to bring pt's tablets
- Ring GP – ask pt for their name or check old notes for name and contact details
- Ring Community Pharmacist (CP)
  - Name/phone No. on tablet bottles
  - Look on patients repeat scripts

Patient lives in Hostel / Nursing Home

- Consult transfer sheet (Note: Be careful – check dates / names and whether ceased)
- Contact nursing home, hostel (or CP) directly to confirm medications

Don't forget

☐ eye drops ☐ inhalers and puffers
☐ creams ☐ OTC (herbals & vitamins)

STILL NO LUCK !?!

- Treat the admitting condition
- Document what you have tried
- Document "medication history to be confirmed" on (1) Chart (2) Notes

ADR/Allergies – record drug, reaction & when occurred in chart & notes

Use a checklist

- Checklist to aid with patient interview

MEDICATION HISTORY CHECKLIST

- ☐ Prescription medicines
- ☐ Sleeping tablets
- ☐ Inhalers, puffers, sprays, sublingual tablets
- ☐ Oral contraceptives, hormone replacement therapy
- ☐ Over-the-counter medicines
- ☐ Analgesics
- ☐ Gastrointestinal drugs *(for reflux, heartburn, constipation, diarrhoea)*
- ☐ Complementary medicines *(e.g. vitamins, herbal or natural therapies)*
- ☐ Topical medicines *(e.g. creams, ointments, lotions, patches)*
- ☐ Inserted medicines *(e.g. nose/ear/eye drops, pessaries, suppositories)*
- ☐ Injected medicines
- ☐ Recently completed courses of medicine
- ☐ Other people's medicine
- ☐ Social and recreational drugs
- ☐ Intermittent medicines *(eg. weekly or twice weekly)*

- Patient risk assessment

MEDICATION RISK IDENTIFICATION

Level of Independence	Yes	No
Lives alone	☐	☐
Lives in residential care facility	☐	☐
Uses dose administration device i.e. spacers, inhaler devices	☐	☐
Uses administration aid (specify):.....	☐	☐
Uses medication list	☐	☐
Swallowing issues	☐	☐
Has impaired hearing	☐	☐
Has impaired vision	☐	☐

Other information:.....

Patient Assessment	Yes	No
Can read/comprehend labels	☐	☐
Can understand English	☐	☐
Can open bottles	☐	☐
Can measure liquids	☐	☐
Recent Home Medicine Review	☐	☐
Suspected non-adherence	☐	☐

Language spoken:

☐ Not an issue

Assess adherence by asking:

- People often have difficulty taking their pills for one reason or another. Have you had any difficulty taking your pills?
- About how often would you say you miss taking your medicines?

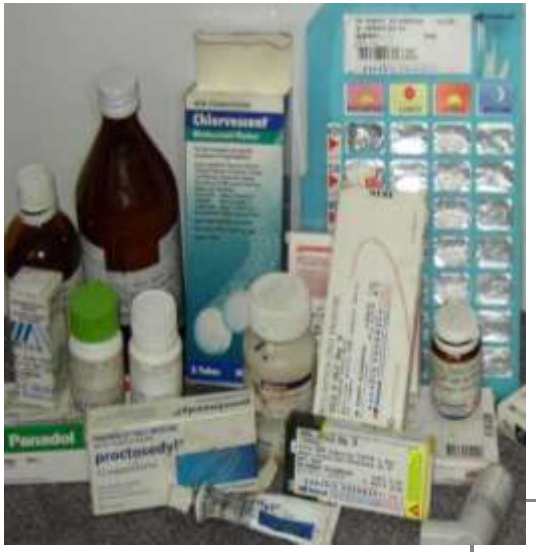
Other information:.....

Step 2 Confirm accuracy of history

Step 2

Confirming the medication history with at least one other source

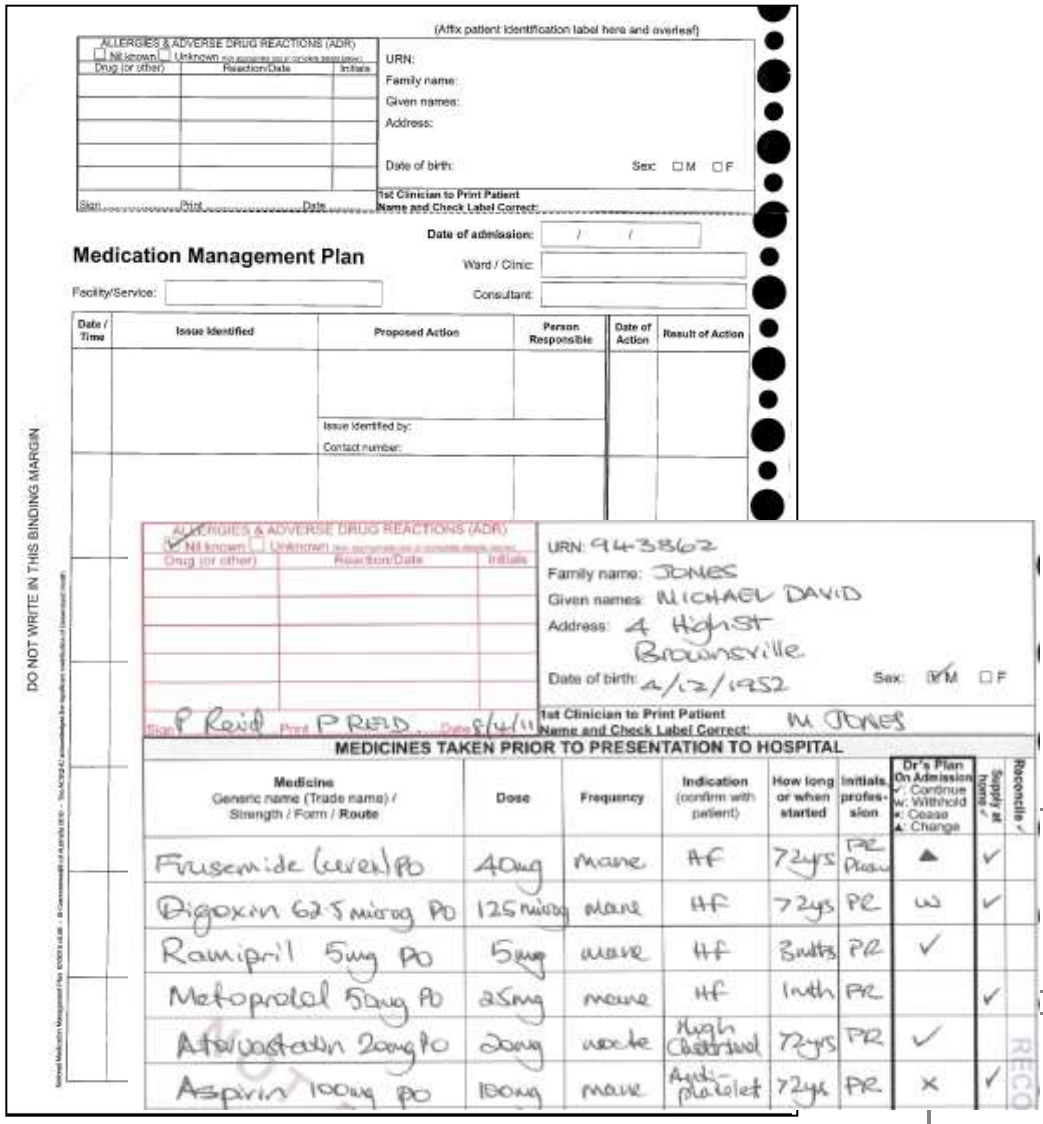
- Medicine containers (including blister packs)
- Medicines lists (patients, electronic health records, pharmacy records, discharge records)
- Carer or family
- Medication charts from other facilities e.g. nursing home



Document in one place in patient record

1. Obtain and document best possible medication history (BPMH)
2. Document sources of information
3. Reconcile history with prescribed medicines.
4. Document issues, discrepancies and actions.

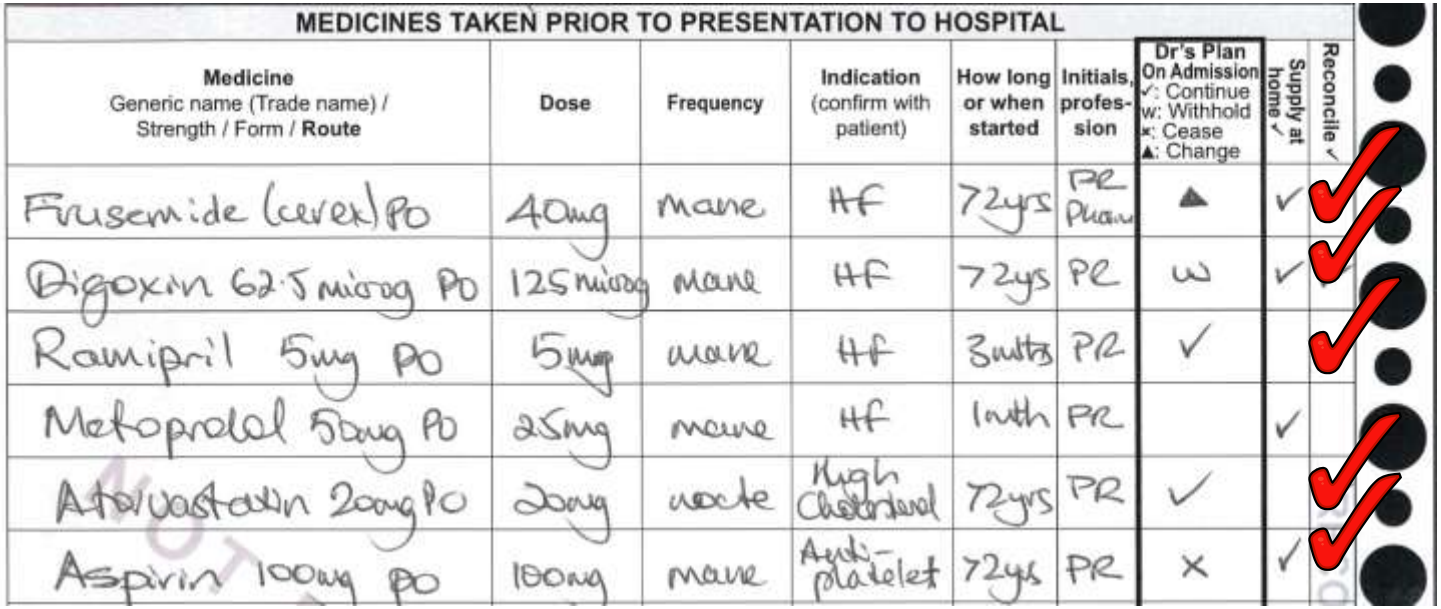
One source of truth



Step 3. Reconcile history with prescribed medicines

Step 3

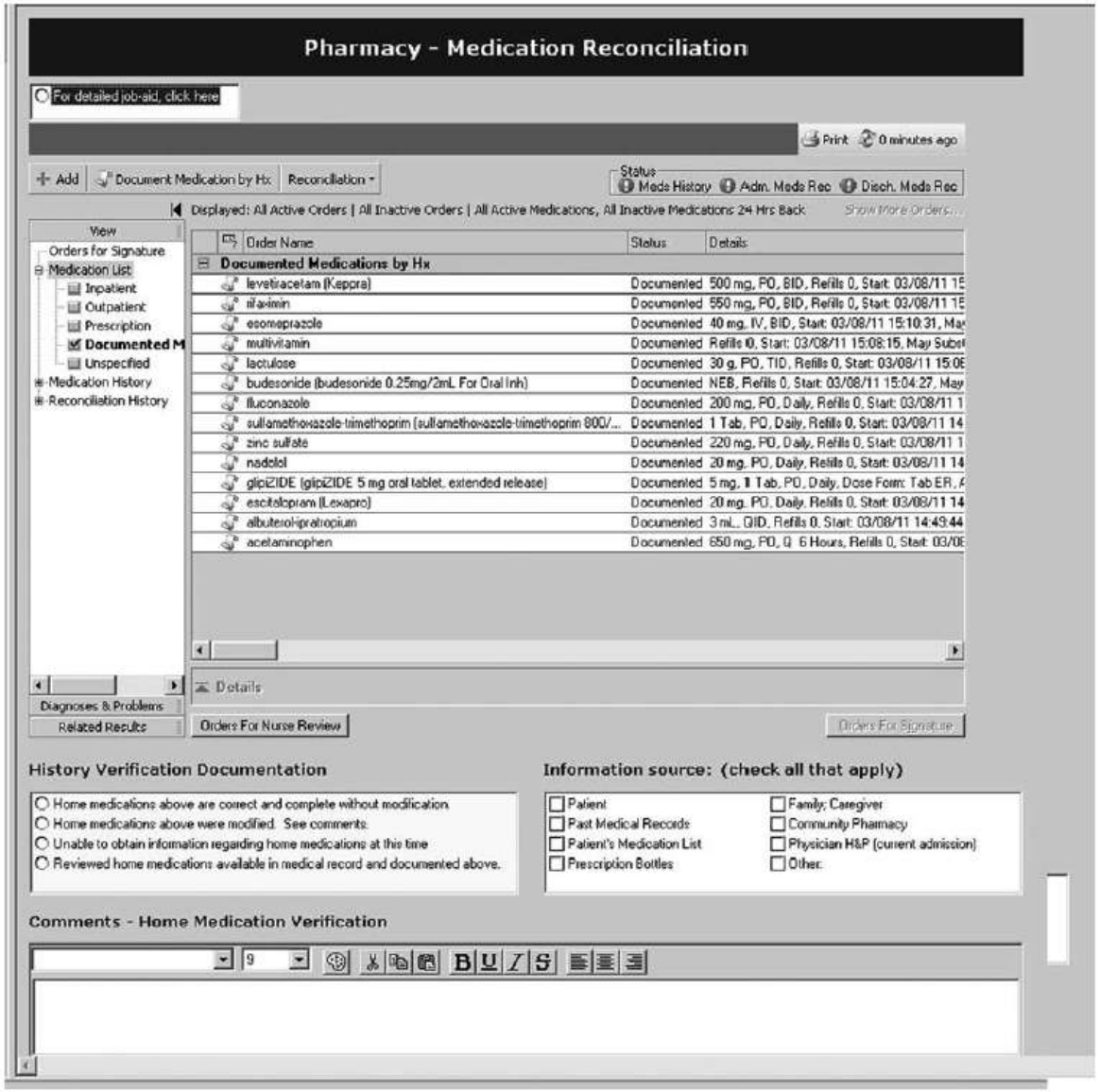
Comparing BPMH with medication orders on admission, transfer and discharge, resolving any discrepancies and documenting changes



MEDICINES TAKEN PRIOR TO PRESENTATION TO HOSPITAL

Medicine Generic name (Trade name) / Strength / Form / Route	Dose	Frequency	Indication (confirm with patient)	How long or when started	Initials, profes-sion	Dr's Plan On Admission ✓: Continue w: Withhold ×: Cease ▲: Change	Supply at home ✓	Reconcile ✓
Frusemide (Lasix) PO	40mg	mane	Hf	72yrs	PR Pharm	▲	✓	✓
Digoxin 62.5 microg PO	125 microg	mane	Hf	72yrs	PR	w	✓	
Ramipril 5mg PO	5mg	mane	Hf	3mths	PR	✓		✓
Metoprolol 50mg PO	25mg	mane	Hf	1mth	PR		✓	
Atorvastatin 20mg PO	20mg	nocte	High Cholesterol	72yrs	PR	✓		✓
Aspirin 100mg PO	100mg	mane	Anti-platelet	72yrs	PR	×	✓	✓

Step 3. Reconcile history with prescribed medicines



Step 4. Supply accurate medicines information to next provider and the patient / carer

Step 4

Supplying accurate medicines information when care is transferred

- The person taking over the patient's care is supplied with an accurate and complete **(reconciled)** list of the patient's medicines and explanation of any changes.
- **Internal transfer of care**
- **Discharge**
  - **Care provider**
  - **Patient and carer**

Is medication reconciliation effective?

Pharmacist related interventions

Author, year (study design)	Impact of Intervention on following outcomes:		
	Medication Discrepancies	Potential Adverse Drug Events	Healthcare Utilization
Michels, 2003[16] (Pre-Post)		+	
Bolas, 2004[17] (RCT)	+		~
Nickerson, 2005[18] (RCT)	+		
Schnipper, 2006[19] (RCT)		+	~
Kwan, 2007[20] (RCT)	+	+	
Bergkvist, 2009[21] (Non-RCT)	+		
Gillespie, 2009[10] (RCT)			+
Koehler, 2009[11] (RCT)			+
Walker, 2009[22] (RCT)	+		~
Vasileff, 2009[23] (Non-RCT)	+	+	
SUMMARY OF POSITIVE STUDIES	6/6	4/4	2/5

+ indicates statistically significant improvement with intervention versus control
~ indicates no statistically significant difference between intervention and control

MARQUIS Implementation Manual 2011 – Based on 17 comparative studies

Studies reducing healthcare utilisation

Gillespie et al Arch Int med 2009

Reduced odds of all hospital visits by 16% (OR 0.84)

- 47% reduction in ED visits
- 80% reduction in drug related admissions in 12 months post discharge

Koehler et al J Hosp Med 2009

Decreased 30 day readmissions/ED visits

- 10% (intervention) vs 38%(control) p=.04

Improvements in health care utilisation

Common themes

- Elderly patients
- High pharmacy involvement
  - BPMH
  - Reconciling medicines on admission and discharge
  - Patient counselling
- Communication with primary care physician at discharge
- Patient follow up after discharge

Electronic/IT related interventions

Author, year (study design)	N	Timing of Intervention	Components of Intervention	Impact of Intervention on following outcomes:		
				Medication Discrepancies	Potential Adverse Drug Events	Healthcare Utilization
Agrawal, 2009[24] (Pre-Post)	NR	Admission	Formation of a medication list from pre-existing electronic sources + reconciliation	+		
Murphy, 2009[25] (Before/ After)	NR	Discharge	Formation of a medication list from pre-existing electronic sources + reconciliation	+		
Schnipper, 2009[26] (RCT)	322	Admission + Discharge	Formation of a medication list from pre-existing electronic sources + reconciliation		*+	
SUMMARY OF POSITIVE STUDIES				2/2	1/1	

+ indicates statistically significant improvement with intervention versus control
* findings were only significant at one of the two sites involved in the study

Schnipper et al electronic med rec tool + process redesign decreased potential ADES 1.05/pt (intervention) vs 1.44/pt (Control) RR 0.72)

Other interventions

Author, year (study design)	N	Timing of Intervention	Components of Intervention	Impact of Intervention on following outcomes:		
				Medication Discrepancies	Potential Adverse Drug Events	Healthcare Utilization
Poole, 2006[27] (Pre-Post)	100	Discharge	Discharge worksheet	+		
Varkey, 2007[28] (Pre-Post)	102	Admission, throughout hospital stay + discharge	Education of staff on medication reconciliation	+		
Midlov, 2008[29] (Pre-Post)	427	Discharge	Use of medication report with reconciled medications on discharge			+
Chan, 2010[30] (Pre-Post)	407	Admission	Education of staff on medication reconciliation	+	+	
SUMMARY OF POSITIVE STUDIES				3/3	1/1	1/1

+ indicates statistically significant improvement with intervention versus control

Mildov P et al Decreased PADEs from 8.9% pre to 4.4% post intervention. Elderly patients admitted from and returning to nursing home

What does the literature say

Mueller KS et al ARCH Int Med 2012;174(14); 1057-69

- Limited data on most effective practices
- Existing evidence supports:
  - Pharmacist-related interventions over usual care
  - High level of pharmacy staff involvement in all Med Rec related process - most effective
  - Targeting high risk patients - may be highest yield

Annals of Internal Medicine | SUPPLEMENT

Medication Reconciliation During Transitions of Care as a Patient Safety Strategy

A Systematic Review

Janice L. Kwan, MD*; Lisha Lo, MPH*; Margaret Sampson, MLIS, PhD; and Kaveh G. Shojania, MD

Ann Intern Med. 2013;158:397-403.

Key Summary Points

Medication reconciliation is widely recommended to avoid unintentional discrepancies between patients' medications across transitions in care.

Clinically significant unintentional discrepancies affect only a few patients.

Medication reconciliation alone probably does not reduce postdischarge hospital utilization within 30 days but may do so when bundled with other interventions that improve discharge coordination.

Pharmacists play a major role in most successful interventions.

Commonly used criteria for selecting high-risk patients do not consistently improve the effect of medication reconciliation.

Most studies assessed patent outcomes during or shortly after hospitalisation.
Benefits of resolving unintended discrepancies may not be evident for some months post d/c.

Critical elements of Med Rec

1. Pre-admission medication lists are critical
   - Accurate and comprehensive lists make Med Rec process easier
   - Access to all available lists (e.g. Patient, EHR, pharmacy records) facilitates high quality preadmission meds lists)

2. Best Possible Medication History
   - Requires skilled interviewer
   - Additional training required

PJ Kaboli and O Fernandes, *Arch Intern Med.* 23 Jul 2012;172(14):p.1069-1070

Critical elements of Med Rec

3. Transitions of care are vulnerable moments for medication discrepancies
   - Focus efforts on these time points

4. Targeted interventions probably most cost-effective
   - Triage high risk patients if resources limited
   - Balance with expectation that safe practices apply to all patients in any high reliability organisation

Kaboli P and Fernandez O Medication Reconciliation – Moving Forward. Arch Int Med 2012

Medication reconciliation bundle

- Medication reconciliation not a single intervention
- “Bundle” of critical elements applied during a high risk period e.g. Hospitalisation
- Medication reconciliation needs to be bundled with other interventions aimed at improving care transitions if we are to reduce readmissions and ED visits

Medication Reconciliation Bundle

11 Critical elements of medication reconciliation

1. Systematic BPMH process on admission
2. Integrated admission to discharge reconciliation processes
3. Discharge delineation of medication changes since admission
4. Pharmacist involvement in reconciliation from admission to discharge
5. An electronic platform to support interprofessional reconciliation
6. Formal discharge reconciliation with pharmacist-provider collaboration
7. Patient education prior to discharge (counselling)
8. Post-discharge communication with the patient,
9. Discharge communication with outpatient providers
10. High risk group focus
11. Pharmaceutical care (Medication Management)

PJ Kaboli and O Fernandes, *Arch Intern Med.* 23 Jul 2012;172(14):p.1069-1070

Different levels of Medication Reconciliation

TABLE 1.
Medication reconciliation in varying levels of intensity, as seen in published studies

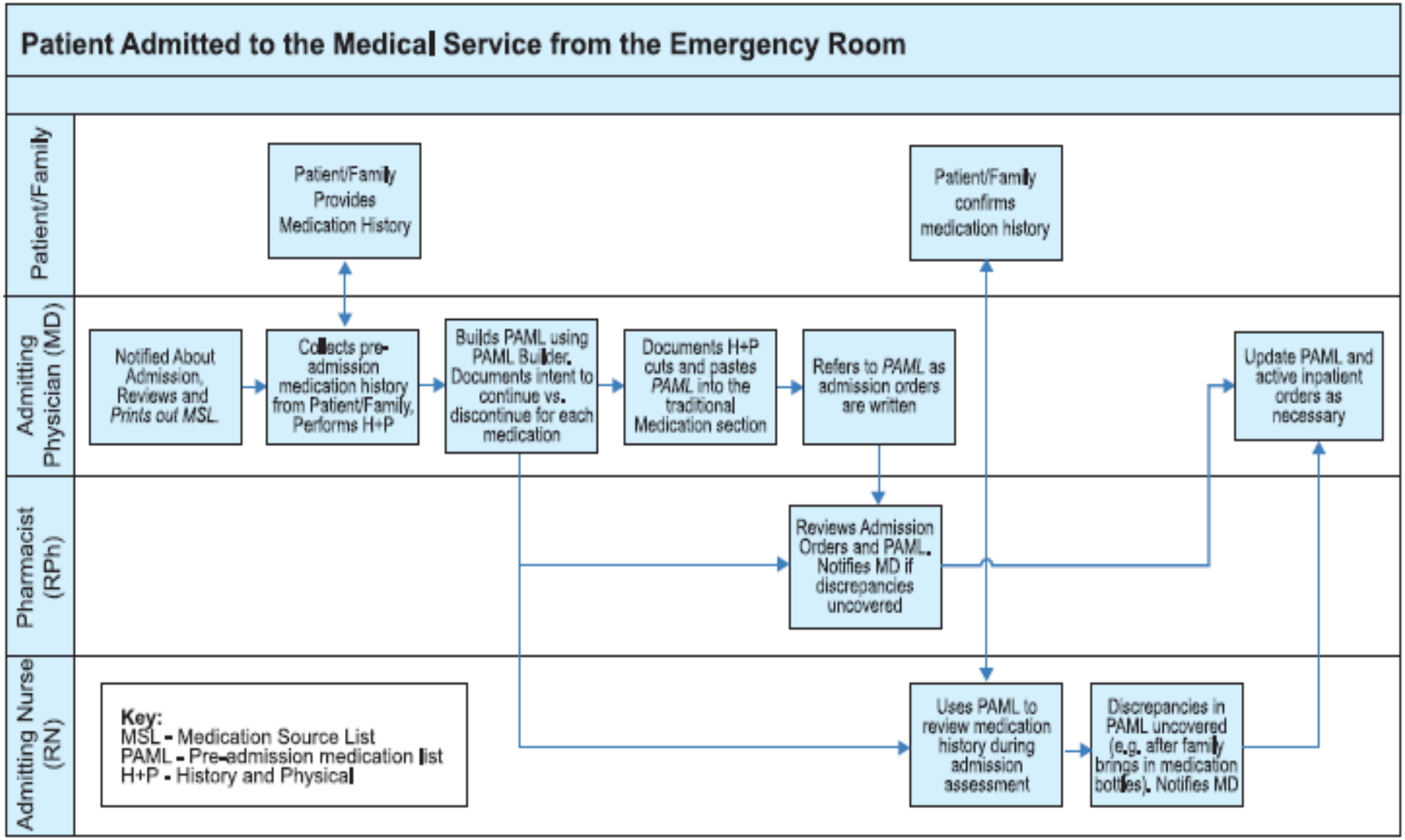
Level	Key Components	Published Examples
Bronze	BPMH with admission reconciliation	Cornish et al. 2005; Kwan et al. 2007
Silver	Bronze level + reconciliation at discharge by prescriber only ± electronically generated discharge prescription	Schnipper et al. 2009; Wong et al. 2008
Gold	Silver level + discharge reconciliation is inter-professional (e.g., prescribing physician and pharmacist collaboration) + electronically generated discharge prescription	Cesta et al. 2006; Dedhia et al. 2009; Schnipper et al. 2009
Platinum	Gold level + attention to broader medication management issues (e.g., appropriateness of agents, safety and effectiveness assessment) + medication counselling prior to discharge (including discussion of medication changes) + provision of patient-friendly reconciled medication schedules upon discharge	Al-Rashed et al. 2002; Dedhia et al. 2009; Makowsky et al. 2009; Murphy et al. 2009; Nazareth et al. 2001
Diamond	Platinum level + additional elements, such as • post-discharge follow-up phone call to patient by hospital clinician (e.g., nurse or pharmacist) • communication of medication changes with rationale directly to community pharmacy and primary care physician	Gillespie et al. 2009; Jack et al. 2009; Karapinar-Çarkit et al. 2009; Schnipper et al. 2006; Walker et al. 2009)

BPMH = best possible medication history.

Fernandes, O. Shojania, K.G. 2012. *Healthcare Quarterly* 15: 42–49.

Implementing medication reconciliation

Medication reconciliation is complex



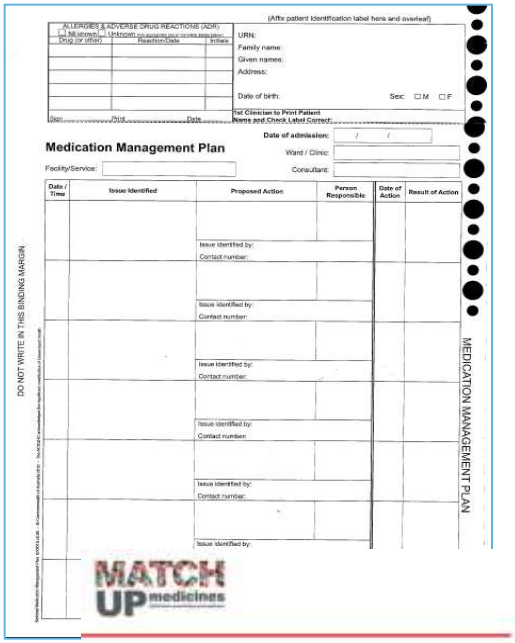
Successful medication reconciliation

- Formal, systematic process
- Multidisciplinary
  - Doctors, nurses, pharmacists, pharmacy technicians
  - Clear about their roles an responsibilities
  - Not just “pharmacy business”
- Partnership with patients, families, carers
- Within 24 – 48 hours of admission
- Integrate into existing processes of care
  - Not an add on

Successful medication reconciliation

- Staff trained, competent
  - BPMH
  - Reconciling medicines
- Staff have access to timely, accurate information
- Tools to support the process

Medication reconciliation resources



Medication management plan + implementation resources

MATCH UP Medicines Resources

Video
Get it Right. Taking a Best possible medication history.
You Tube
www.Safetyandquality.gov.au

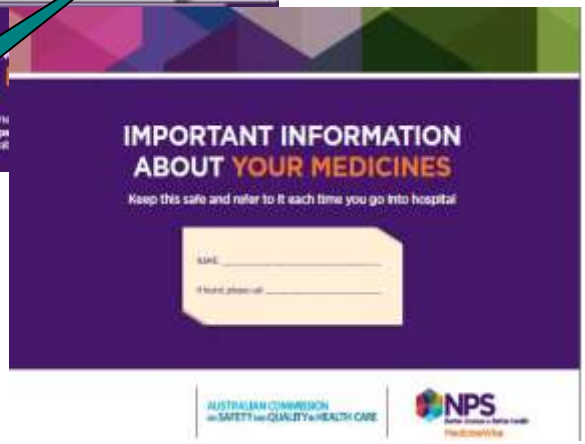
Who does the medication reconciliation?

- Doctors, nurses, pharmacists, pharmacy technicians provided they:
  1. Receive formal training
     - Knowledge, skills and behaviours
     - May involve two jobs - one to collect the sources of information, another to create the BPMH
  2. Follow a systematic process
  3. Are conscientious, responsible and accountable for conducting the process
- Behaviours
- Perseverance in obtaining the BPMH. Attention to detail
- Communication and working in multidisciplinary team

Engage with Patients & Carers

- Only constant in the process
- Contributing to accurate and complete medication history by:
  - Bringing medicines containers into hospital
  - Maintaining a current list of medicines (including OTC, complementary medicines)
  - Being honest about their medicine taking behaviour
- Helping prevent medication errors and adverse events by:
  - Speaking up if they are unsure about their medicines, or suspect a medication error
- Participation encourages ownership and medicines self-management

Engaging with consumers



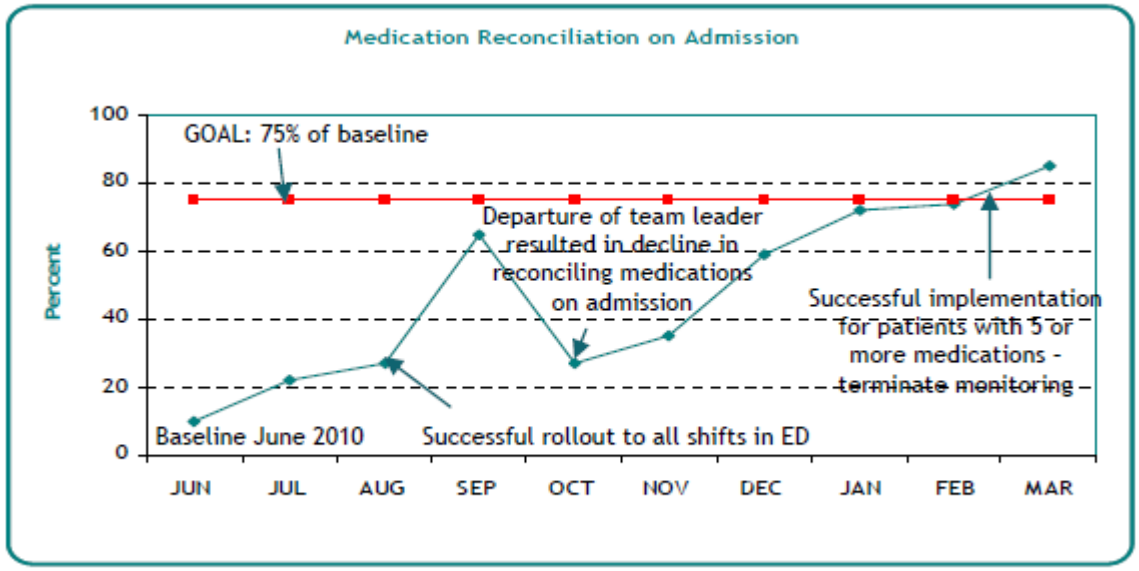
Patient's medicines lists

Change Management

- Identify key stakeholders
- Establish multidisciplinary team
- Secure executive support , clinical leadership
- Develop project plan
- Risk assess process
- Pilot and spread
  - Use QI Methodology, PDSA cycles
  - Measure improvement
- Maintain and sustain

Performance Measures

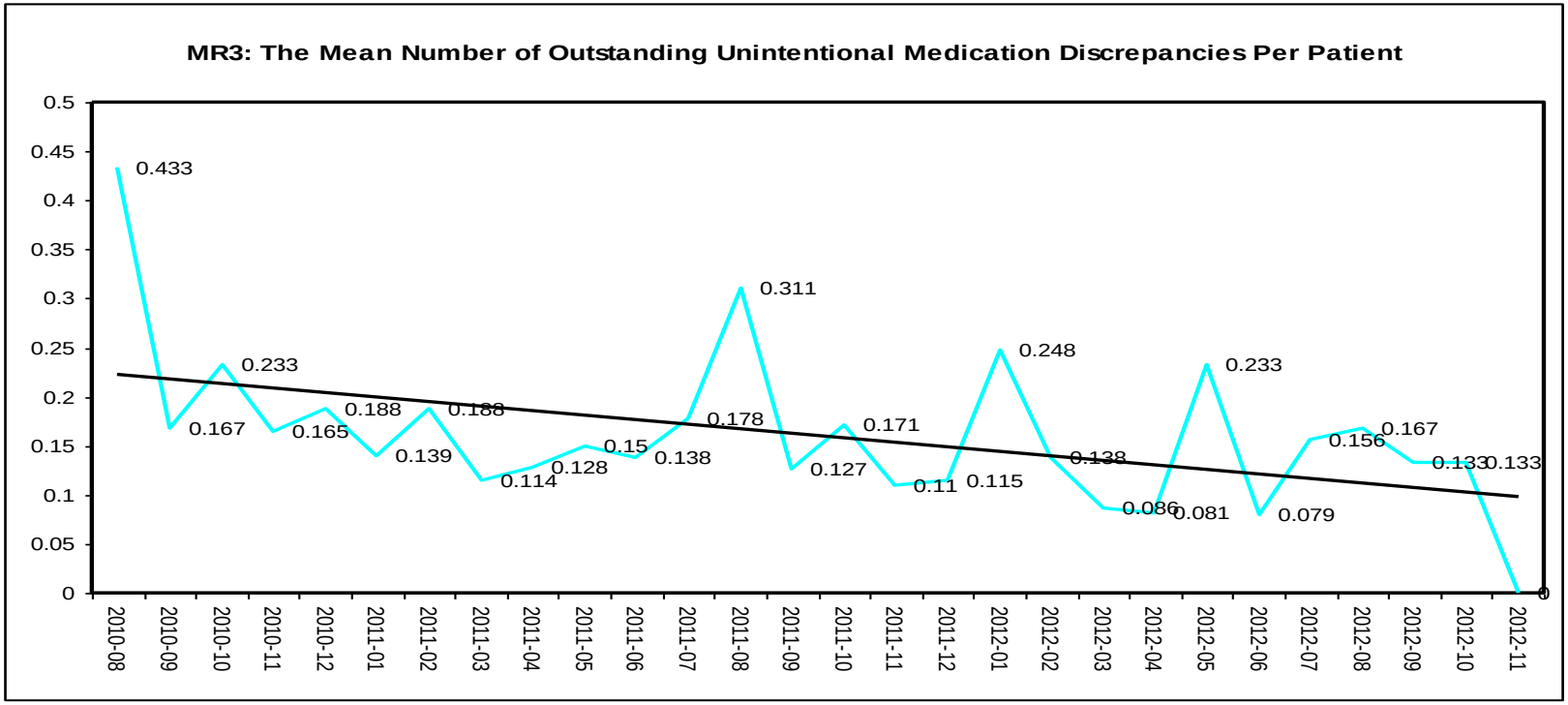
- Rate of medication reconciliation



Source: Safer Healthcare Now Medication reconciliation Getting started kit. Acute Care 2011

Quality of reconciliation

- MR3 – no. unintentional discrepancies/pt
- Target < 0.3
- Random sample of 30 patients per month



Source: Australian WHO High 5s Hospitals

Performance Measures - Feedback

- Useful for indentifying:
  - Quality of process
  - Gaps in the system
    - failure to resolve discrepancies identified during reconciliation process
  - Training needs
- Not so useful for clinician feedback
- Case studies/vignettes
  - Med Rec failures, near misses

Challenges and barriers

- Resources
  - Materials – training, medication reconciliation form
  - Staffing
    - Perform reconciliation
    - Collect data for evaluation
    - Training
- Competing priorities
- Buy in
  - Organisational leadership
  - Staff
- Resistance to change
  - Medication reconciliation seen as pharmacist's role
- Technology
  - Does not yet support MR

Overcoming challenges and barriers

- Clinical champions, leadership support
- Training in taking BPMH
- Engaging with staff
- Providing feedback
  - Performance measures
  - Information about discrepancies
  - Potential harm from unresolved discrepancies
- Communication about SOP

Conclusion

- Medication reconciliation
- Minimises errors at transitions of care
- Bundle of interventions
  - The bigger the bundle the better the patient outcomes
- Is a complex process
- Requires:
  - Cooperation between health professionals
  - Involvement of patients, families, carers

Conclusion cont'd

- Successful implementation requires:
- Recognition as a patient safety priority
- Senior leadership support
- Physician champion leaders
- Comprehensive staff education program
- IT support

- Medication Reconciliation in Canada: Raising the Bar
- Accreditation Canada, CIHI, CPSI, ISMP-Canada, 2012

MATCH UP medicines

- Australian Commission on Safety and Quality in Health Care
- www.safetyandquality.gov.au