Reconciliation & review

Cathy Lynch

UP 2019

What is Medication Reconciliation?

‘ A process for obtaining and documenting a complete and accurate list of a patient’s current medicines upon admission and comparing this list to the prescriber’s admission, transfer and/or discharge orders to identify and resolve discrepancies.’[4]

4. Santell. J Qual Patient Safety. 2006

What is medication reconciliation?

A few other definitions:

- **Comparing** various medication lists to avoid errors such as **transcription, omission, duplication** of therapy, drug-drug and drug-disease interaction (Queensland Health, Safe Medication Management Unit)

- Formal process of **obtaining** and **verifying** a **complete** and **accurate** list of each patient's current medicines and **matching** the medicines the patient should be prescribed to those they are actually prescribed (Australian Council for Safety and Quality in Health Care)

- Process for **obtaining** and **confirming** a **complete** and **accurate** history and comparing to **admission, transfer and discharge** medication orders , while taking into consideration the **medical plan** (Society of Hospital Pharmacists of Australia).

Why perform medication reconciliation?

The evidence:

- 63% of reported medication errors resulting in death or serious injury were due to breakdowns in communication
  - 50% of these errors could have been avoided by medication reconciliation[2]
- 12% of patients have an error on their discharge prescription[3]
  - 68% of these errors are clinically significant[3]

2. Joint Commission Sentinel event database. Issue 35-January 25, 2006. Available from <www.jointcommission.org/SentinelEvents/SentinelEventAlert/ sea_35.htm>.
3. Duguid M, Gibson M, O'Doherty R. Review of discharge prescriptions by pharmacists integral to continuity of care. Letter. J Pharm Pract Res 2002;32(2):94-5.
.

Why perform medication reconciliation?

More evidence:

- 30-day readmission risk more than **doubles** if the discharge summary contains one or more medication omissions or discrepancies[4,5]

- Increased risk (3.5 fold) of preventable adverse events[6]

4. Coleman EA, Smith JD, Raha D, Min S. Posthospital medication discrepancies: prevalence and contributing factors. Arch Intern Med 2005;165:1842-7.

5. Stowasser DA, Collins DM, Stowasser M. A randomised controlled trial of medication liaison services: patient outcomes. J Pharm Pract Res 2002;32:133-40

6. Peterson LA et al Does housetaff discountuity of care increase the risk for preventable adverse events Ann Intern med 1994;121:866-872

Why?

To ensure patients receive all **intended medicines** and **avoid common errors of**:

- transcription
- duplication of therapy
- omission
- drug-drug interactions
- drug-disease interactions.

How?

- Reconcile the medication history with the **current medication chart** at the time of admission.
  - Check with the prescriber or in the medical notes to ascertain if any discrepancies are **intentional** or **unintentional**.
- Reconcile current medication prescribed with **past medical history** and **current medical conditions.**
- Need to ensure discrepancies are **documented** and communicated to the treating doctor

Activity

List six things that should be checked when completing a medication review.

- Compliance
- Can the patient manage their medicines?
- is the medicine working?
- is the medicine necessary?
- side effects
- drug interactions
- are all co-morbidities treated using EBM

Medication review

Adding value after taking the history

- Matching medications with diagnosis
- Are the medications appropriate considering history and presenting complaint?
- Are the medications achieving what is expected?
  - Is the diagnosis correct?
  - Is the indication appropriate?

Identify potential problems

Are all the medications appropriate

- Does the patient still need the medication?
- Is the medicine working?
- Is the use of medicine evidence based?
- Is the dose appropriate?
- Are they any potential drug interactions?
- Is the medicine causing the problem?
- Adverse drug reactions?
- Use a single drug with an infrequent dosing schedule, if possible?
- side effect profile?
- Avoid treating an adverse drug reaction with a drug?

ADAM.

Is the medication causing the problem?

CONSIDER

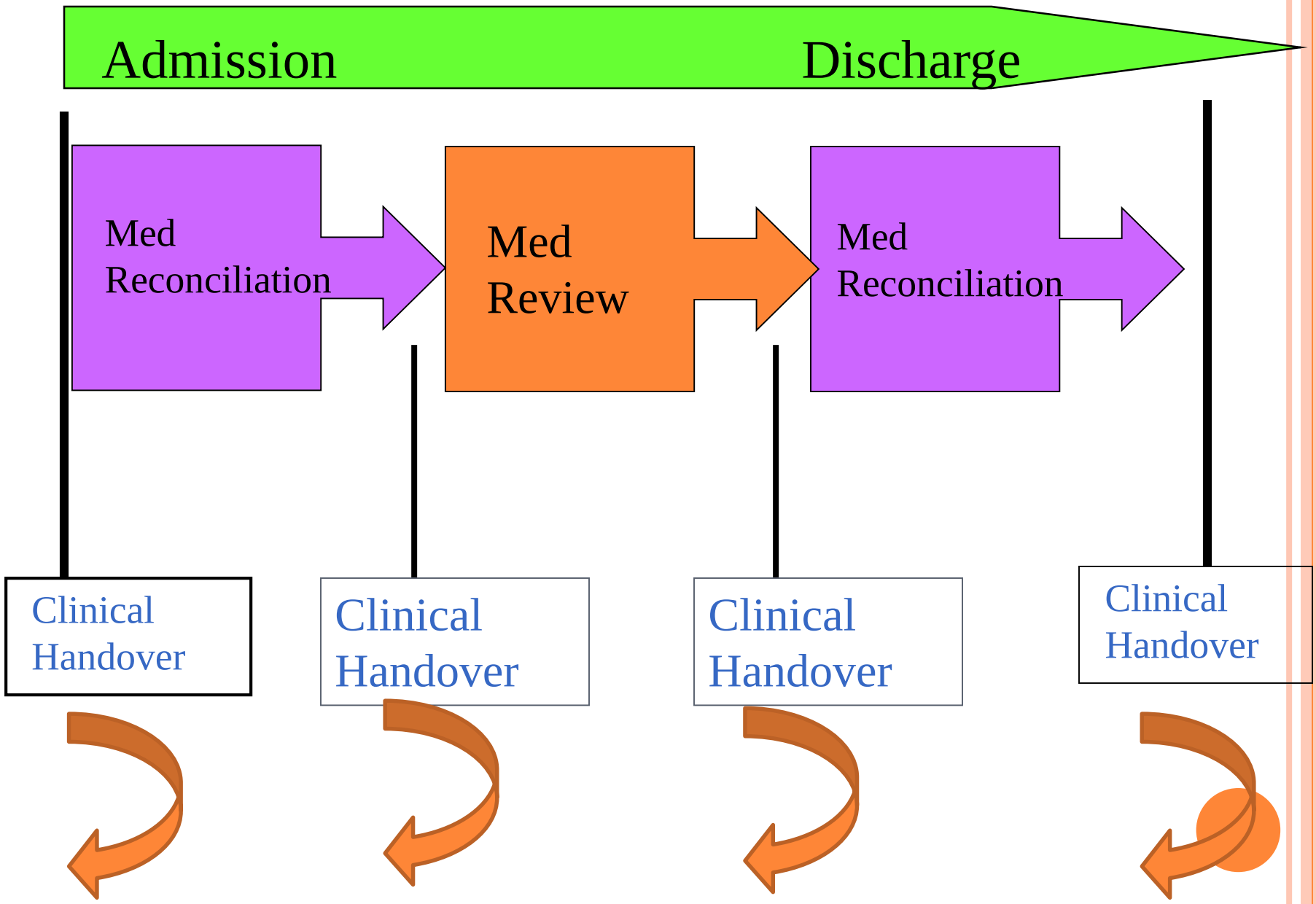
- **Renal function**: may need to adjust doses
- **Liver function**: may need to adjust doses
- **DVT prophylaxis:** is there a risk ?
- **Fluid status**: may need to cease diuretics or start IV fluids
- **Low blood pressure** : may need to cease anti-hypertensives and administer fluids
- **High blood pressure**: may need to increase doses of anti-hypertensives
- **Fast heart rate**: may need to treat
- **Low heart rate**: may need to adjust doses of digoxin or beta blockers

Consider

- **High temperature**: ?infection, need for anti-biotic and anti-pyretics
- **Pain**: ?cause and appropriate treatment
- **Polypharmacy:** compliance issues

Can you think of other things to check?

When should we reconcile


Admission
Discharge
Med Reconciliation
Med Review
Med Reconciliation
Clinical Handover
Clinical Handover
Clinical Handover
Clinical Handover

When – On Admission

When – On Admission

Check:

- Are all the medications from the history charted?
- If not, identify the reasons as to why the medicines were not charted
  - omission by error
  - appropriate omission in context of treatment plan(eg withholding diuretic when dehydrated)
- Check medication history with past medical history and identify
  - treatment gaps
  - compliance issues
- Check if or when medications withheld on admission can be restarted.

When – change in patient status

- Surgery
- Deterioration
- Evolving symptoms

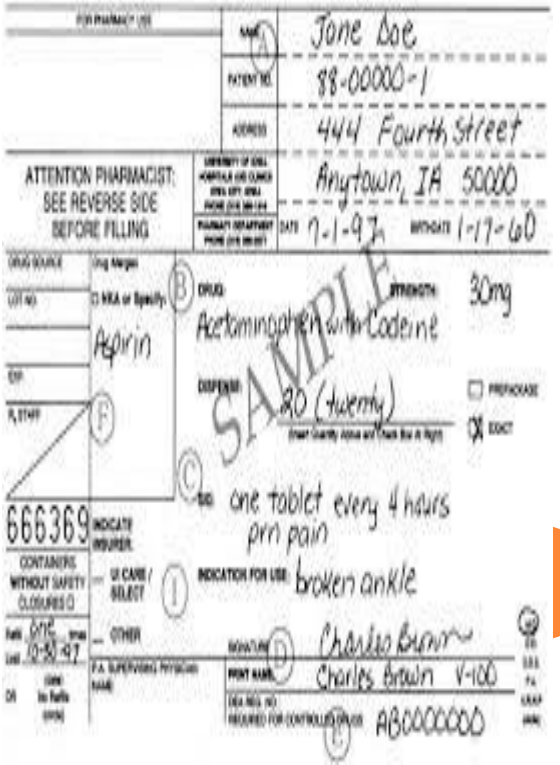
When – on Transfer

- Check medicine chart at every transition from one setting to another and when a new medication chart is written.

When – at Discharge

When – at Discharge

- Check medication chart to reflect intended discharge regimen
- Check discharge prescription for all medications that are to be continued by the patient on discharge.
- Reconcile by assembling the:
  - Medication chart(s)
  - Discharge script(s)
  - Admission medication history
  - Patient's own medicines
  - Doctor's medication plan



When – at Discharge

- Investigate any problems
- Cross check the intended discharge medication regimen against the patient's own medicines, relabelling and reissuing as appropriate –Dispense or supply any necessary items
- Prepare medicine list to reflect medicine name, strength, form, quantity, directions reason for use, and specific instructions
- Counsel patient

When – at outpatient clinics

MRS. RW

- 75 y.o female admitted to the hospital with an exacerbation of heart failure

- PMHx:
  - Heart Failure
  - Asthma
  - Hypertension
  - Dyslipidaemia
  - Type II Diabetes
  - IHD

  - What is the role of the ward pharmacist in the reconciliation process?

Mrs. RW's meds charted in ward

- PMHx:
  - Heart Failure
  - IHD
  - Asthma
  - Hypertension
  - Dyslipidaemia
  - Type II Diabetes

- Perindopril 5mg daily
- Frusemide 40mg daily
- Metoprolol XL 23.75mg daily
- Atorvastatin 40mg daily
- Metformin 500mg TDS
- GTN 600mcg s/l prn
- GTN patch 5 mg/24 hours On mane and off eve
- Temazepam 10mg nocte prn
- Seretide 250/25 2 puffs BD
- Salbutamol 100mcg 2 puffs q4h prn
- Meloxicam 7.5mg prn

Mrs. RW

- PMHx:
  - Heart Failure
  - IHD
  - Asthma
  - Hypertension
  - Dyslipidaemia
  - Type II Diabetes

- Perindopril 5mg daily
- Frusemide 40mg daily
- Metoprolol XL 23.75mg daily
- Atorvastatin 40mg daily
- Metformin 500mg TDS
- GTN 600mcg s/l prn
- GTN patch 5 mg/24 hours
  - On mane and off eve
  - **Temazepam 10mg nocte prn**
- Seretide 250/25 2 puffs BD
- Salbutamol 100mcg 2 puffs q4h prn
  - **Meloxicam 7.5mg prn**

Are there any problems

What is missing for her IHD

Aspirin

For what medicines do we have no indications

Meloxicam

Temazepam

Are there any problems with any of these medications

Meloxicam in heart failure?????

- Concurrent use of NSAIDs and diuretics is associated with a twofold increase in the risk of hospitalisation for heart failure compared with diuretics alone.[8]

Does Mrs RW need the Temazepam?

8. Heerdink ER, Leufkens HG, Herings RMC et al. NSAIDs associated with increased risk of congestive heart failure in elderly patients taking diuretics. Arch Intern Med 1998;158:1108-12

Triple Whammy

- ACE inhibitors, NSAIDs and diuretics, individually or in combination, are involved in over 50% of cases of iatrogenic acute renal failure reported to ADRAC. [9]

- Effect is also seen with COX-2 inhibitors and angiotensin receptor antagonists ("sartans").[10]

.

9. ADRAC, Thomas M. Diuretics, ACE inhibitors and NSAIDs - the triple whammy. MJA 2000; 172: 184-5

10. Boyd IW, Mathew TH, Thomas MC. COX-2 inhibitors and renal failure: the triple whammy revisited. MJA 2000; 173: 274

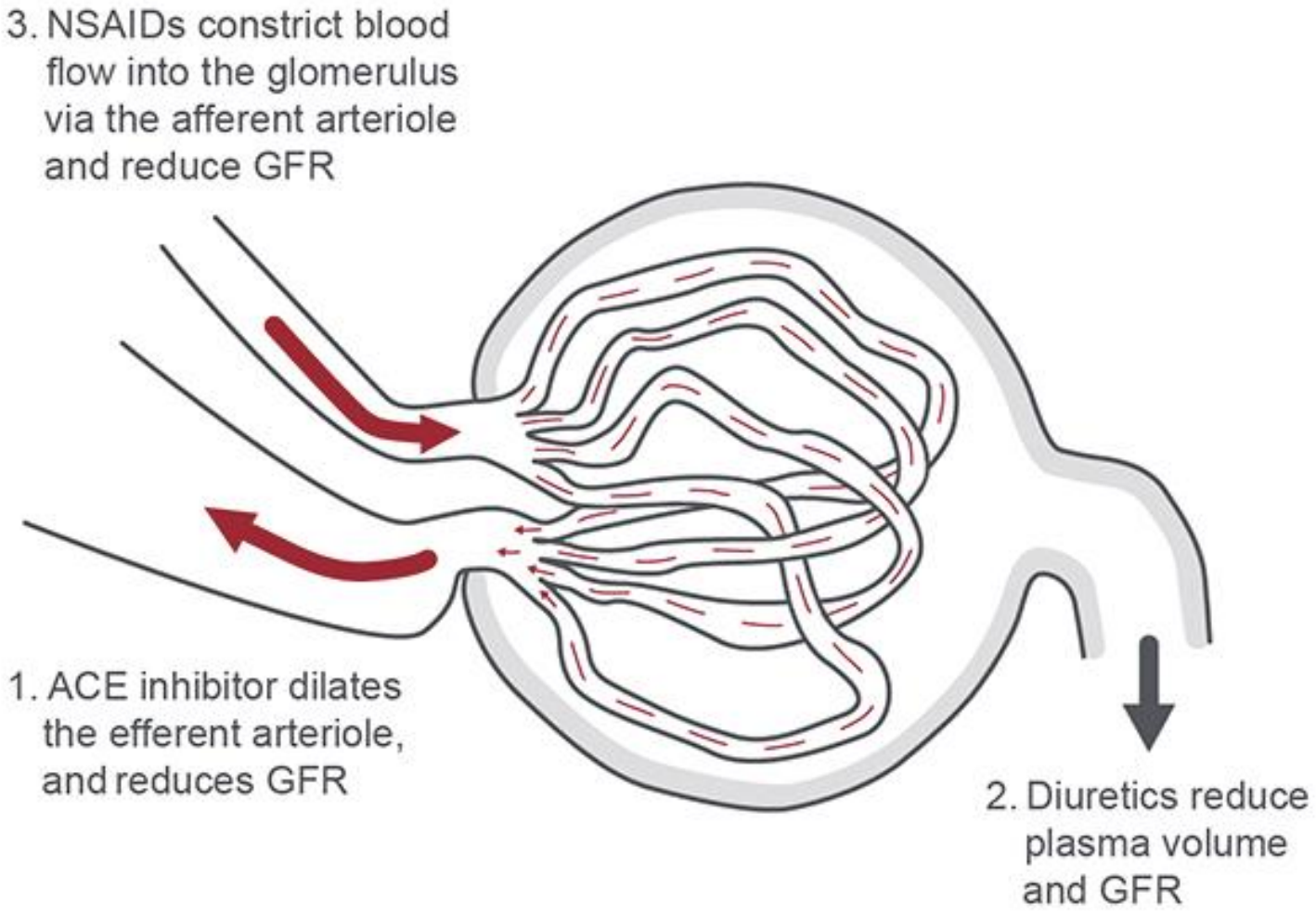


Figure 1. The 'triple whammy' effect to reduce glomerular filtration rate.