

Medication Reconciliation

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What is it?



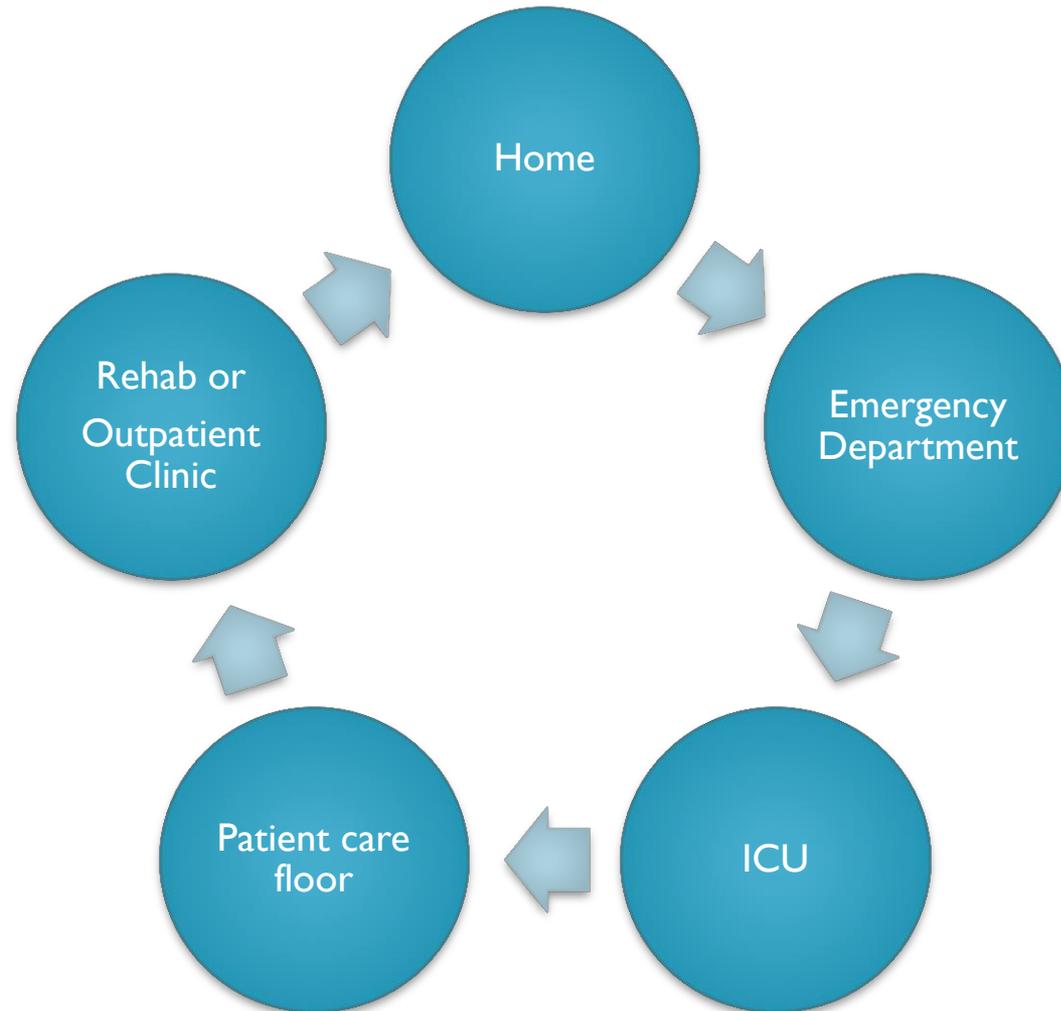
Medication reconciliation

- The process of identifying the most accurate list of all medications that a patient is taking including name, dose, route and frequency...AND

Medication Reconciliation

- Comparing that list against a physician's admission, transfer, and/or discharge orders to avoid medication errors such as omissions, dosing errors, continuation of incorrect medications, duplications
- This second point is the actual *reconciliation* part of the process

Medication reconciliation process



Why is medication reconciliation important?

- Adverse drug events (ADE) account for 4.7% of admissions to US hospitals
- Hospital costs related to ADEs = 3.8 million USD/hospital/year → 1 million USD of which are preventable
- Medication errors lead to adverse events
 - 60% of all med errors in the hospital occur at admission, intra-hospital transfer or discharge
 - 53.6% of pts have at least 1 unintended medication discrepancy

Rx Cares project

- Inpatient adult internal medicine at UIC hospital
- Comprehensive medication reconciliation provided for high risk patients
- Performed by 4th year pharmacy students during medicine rotation
- Includes admission and discharge reconciliation as well as a follow-up phone call once pt discharged home

Rx Cares project

- Module I data (5 weeks included)
 - 4 students
 - 348 pts screened → 75 pts qualified
 - Number of changes to medications prior to admission = 614
 - Number of changes to inpatient medications = 69
 - Discharge medication errors = 57

Rx Cares project

- Types of interventions made
 - Additions—medications pt on that were not included on admission list
 - Deletions—medications pt no longer taking that remain on the list
 - Duplications
 - Therapeutic duplication
 - Identical drug
 - Incorrect dosing

Medication Reconciliation

- The process begins with a thorough medication history...
- The value of having a pharmacist/pharmacy student perform a med history over another individual
- Not just obtaining the LIST of medications

Tips to interview an inpatient

- Do your homework before going into the room to conduct your interview
 - Read through admission notes to find out past medical history and what brings them to the hospital (i.e. chief complaint)
 - Could any of the patient's medications have contributed to this hospital admission?
 - Allergies on file, if any, with relevant reactions
 - Is there an existing list of medications in the chart

Tips to interview an inpatient

- Use this list as a starting point but realize it may or may not be the most accurate/up-to-date list
- The electronic medical record (EMR) can sometimes hinder an accurate list
- If there is a pre-existing list in the chart, some may assume it is current and not take the time to confirm/update the list with the patient

Tips to interview an inpatient

- Sources of information for the history
 - Patient
 - Family member
 - Caretaker
 - Pharmacy
 - Nursing home record

The interview

- Introduce yourself
- Tell them why you are meeting with them → I would like to ask you about the medications you were taking before you came to the hospital
- It is very likely that you are not the first person to ask them about their medications (although you may be the most thorough!)

The interview

- Acknowledge this → "I am sure others have asked you about your medications but my job is to insure that we have the most accurate list so that we can have you on the correct medications while in the hospital."
- Most pts will appreciate this fact, rather than be annoyed that yet another person is asking them about their medications

The interview

- Try to let the patient tell you what medications they are on and what they are for
- Ask open-ended questions → avoid yes/no questions
 - Bad → Do you take albuterol?
 - Better → Can you tell me what you take for your asthma? When/how often do you use it?

The interview

- Open-ended questions allow you to assess their knowledge of their medications
- One can certainly “help” them along if not as knowledgeable
- Be sure to ask about OTC medications, herbal supplements

The interview

- Assess their compliance in a non-threatening manner
 - What issues prevent you from being able to take your medications regularly
 - About how many times per week do you estimate you miss your doses?
 - If they do miss, find out why
 - Do you manage your own medications or is there someone that helps you do that?

The interview

- **Assessing compliance (cont)**
 - Are you able to afford your medications on a monthly basis?
 - Any troubling side effects that make you not want to take your medications?

The interview

- What if the patient is unable to tell you what medications they are on?
 - May need alternate sources of information → family members, caretakers, pharmacies, nursing home records, provider, clinic records
 - May need to use multiple sources to obtain the most complete list and assess compliance

Reconcile

- Compare the list to what is currently ordered for the patient in the hospital
- Check for omissions, dosing errors, continuation of medications that the patient may no longer be taking at home, drug interactions, drug – disease interactions

Reconcile

- Remember some dosing changes may be intentional due to something acutely occurring with the patient → Examples:
 - Blood pressure is acutely elevated and doses of their antihypertensives have been increased
 - The patient is dehydrated so their home lasix is being held and they are receiving IV fluids

Final steps

- Update the medication list in the medical record
 - Delete medications the patient is no longer taking
 - Add/correct medications that the patient is currently on
- Communicate discrepancies to the prescriber (after discussing with the preceptor)

Summary

- Step 1
 - Review pt record prior to interview
- Step 2
 - Conduct medication history
- Step 3
 - Reconcile the list obtained from history
- Step 4
 - Update the list in the medical record
- Step 5
 - Communicate discrepancies to the prescriber

Case

- A 65 y.o. male with history of CHF- EF 30%, CAD, HTN, HL recent DVT (diagnosed 2 months ago), OA admitted with SOB
- In the ED, CXR and physical exam findings suggestive of a CHF exacerbation
- Home medications from a recent discharge note in chart:
 - Carvedilol 12.5mg BID
 - Valsartan 160mg daily
 - Warfarin 5mg
 - Atorvastatin 40mg daily
 - ASA 81mg daily
 - Clonidine 0.1mg TID
 - Metoprolol 25mg BID
 - Aleve 250mg BID

No diuretic, pt probably has fluid overload

Case (cont)

Pt was given lasix 40mg IV and admitted to the floor.

Relevant laboratory values:

Na 134, K 5.7, Cl 109, HCO₃ 26, BUN 10, Cr 2.1
(baseline 0.8), glucose 109

WBC 6.2

Hgb 12/HCT 36

PLT 350

INR 1.7 (goal 2-3)

Case (cont)

Home medications	Inpatient orders
Carvedilol 12.5mg BID	--
Metoprolol 25mg BID—changed to carvedilol last admission, not taking	Metoprolol 25mg BID
Valsartan 160mg daily	Valsartan 160mg daily
Warfarin 5mg M,F; 2.5mg ROW	Warfarin 5mg daily
Atorvastatin 40mg	Atorvastatin 40mg
ASA 81mg daily	ASA 81mg daily
Clonidine 0.1mg TID—no longer taking	Clonidine 0.1mg TID
Naprosyn 250mg BID	Naprosyn 250mg BID

Hold Valsartan d/t hyperkalemia
CrCl concerns

Restart warfarin and dose based on INR

For osteo but d/c d/t warfarin , bleed risk dup
NSAID, not used in AKI