Medication Reconciliation Patient Centered Approach

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Learning Objectives

Participants should be able:

- To describe the importance of Medication Reconciliation process;
- To present the principles and strategies to spread and measure the improvements in Medication Reconciliation.
- To recognize the Physician, pharmacist and Nurses' role in this process.

Program Outlines

- ✓Outline the key steps for effective and safe Medication Reconciliation
- ✓Given Patient scenario, accurately identify the appropriate resources and skills needed to complete medication reconciliation
- ✓Developing medication reconciliation competency program for health care professionals
- ✓Sharing challenges and lessons learned from medication reconciliation

Medication Reconciliation:
The 3 Ws
What? Why? When?

What is Medication Reconciliation?

- As defined by the Institute for Healthcare Improvement (IHI):
  - Medication reconciliation is a process of identifying the most accurate list of all medications a patient is taking—including name, dosage, frequency, and route—and using this list to provide correct medications for patients anywhere within the health care system.

  - *The process whereby a prescriber or pharmacist considers previous medication therapy while formulating new orders that will be initiated following a transition in care*
  - *Many regulations require that the final approval be completed by an authorized prescriber*

What is medication reconciliation?

- **Active decision about medication requirements during a transition of care after reviewing home medications for possible drug-drug interactions, drug duplications, dosing errors, or omissions**
  - Adding a new medication
  - Stopping an existing medication
  - Changing an existing medication (dose and/or frequency)
- **Medication reconciliation should be considered at major transitions of patient care**
  - Admission to hospital/other facility
  - Transfer to a different level of care in same facility
  - Discharge from hospital/other facility
  - Ambulatory facility/ED visit

What is Medication Reconciliation?

- Process of **collecting and documenting** complete medication and allergy histories from the patient and/or family.
- Process of **comparing and deciding** which medications should be continued, held, or discontinued on admission , transfer and at discharge.
- Includes **communication** between health care providers.
- Includes a **commitment** to review all medications at time of admission, transfers, and/or discharge.

Why is Medication Reconciliation Important?

- Most frequently occurring type of medical error:
  - **Medication errors**
- Most frequently cited category of root causes for serious adverse events:
  - **Ineffective communication**
- Most vulnerable parts of a process:
  - **Links between the steps (the “hand-overs”)**

Medication errors adversely affect millions of patients every year

- An Institute of Medicine report estimates there are 1.5 million preventable Adverse Drug Events in the U.S. every year.

  (IOM Report: Preventing Medication Errors. 2007)

- Prescribing errors are a principal source of all medication errors: Incident rates between 19-58%

  (IOM Report: Preventing Medication Errors. 2007)

- Estimates suggest more than 46% of medication errors occur on admission or discharge when patient orders are placed *(JAMA, 1997)*
- Medication discrepancies, during key transition points such as hospital admission, intra-hospital transfer, and discharge.

- Variances between medications patients were taking prior to admission and their admission orders ranged from 30- 70%.
- A study of medication reconciliation errors and risk factors at hospital admission noted that 36% of patients had errors in their admission medication orders with the majority of these occurring during the medication history gathering phase.
- Patients prescribed chronic medications were at higher risk for unintentional discontinuation following hospital discharge, and intensive care unit (ICU) stay during hospitalization increased the risk of medication discontinuation even further.

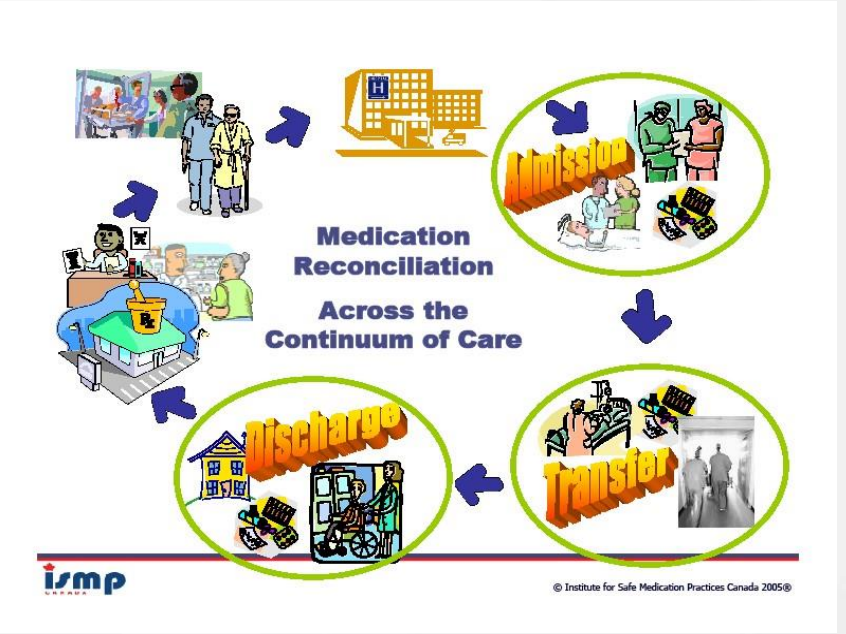
Medication reconciliation addresses all of these

Medication Reconciliation

- **A process to reduce adverse medication events by:**
  - Ensuring patients receive all intended medicines
  - Mitigating common errors of transcription, omission, commission and duplication
  - Ensuring accurate, current and comprehensive medication information follows patients on transfer and discharge

The initiatives

- The high 5 project http://www.who.int/patientsafety/implementation/solutions/high5s/h5s-guide.pdf?ua=1
  - *High 5 Guiding principles*
- *Medication Without Harm*: WHO's Third Global Patient Safety Challenge http://www.who.int/patientsafety/medication-safety/en/
- The Saudi Center for patient Safety https://twitter.com/spsc_sa; https://spsc.gov.sa/
- The Joint Commission
- American Society of Health-System Pharmacists



- ISMP CANADA

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PATIENT SAFETY ALERT
Medication Errors

DESCRIPTION:
Medication Errors represent a major problem affecting many patients. According to a study conducted in four hospitals in Riyadh, Adverse Drug Events (ADEs) occur in 6.1 (95% CI 5.4 to 6.9) per 100 admissions and 7.9 (95% CI 6.9 to 8.9) per 1000 patient-days. ADEs occur most commonly (84%) in the prescribing stage by physicians. Generally medication errors occur in the flowing five stages of medication use process:

- Prescribing (The most common),
- Transcription
- Dispensing
- Administration
- Monitoring.

DEFINITIONS:

MEDICATION ERRORS:
A medication error is defined as any error that occurs in the medication use process (ordering, transcribing, dispensing, administering, and monitoring)

ADVERSE DRUG EVENTSS (ADEs):
Adverse drug events (ADEs) are defined as injuries due to medications, which include both ADRs and injuries caused by medication errors.

ADVERSE DRUG REACTIONS (ADRs)
According to the World Health Organization ADRs is defined as ("a response to a drug which is noxious and unintended, and which occurs at doses used in man for prophylaxis, diagnosis, or therapy of disease, or for the modifications of physiological function").
The most common causes of medication errors are as follow:

- Illegible Handwriting.
- Incomplete Prescription.
- Using of Unapproved Abbreviations.
- Lacking of Medication Reconciliation.
- Improper use of verbal and telephone orders
- Lacking of Look Alike Sound Alike (LASA) error preventive Strategies.
- Lacking of High Alert Medications Error Preventive Strategies.
- No effective Pharmacy & Therapeutics (P&T) Committee.

CATEGORY:
Leadership – Clinical Pharmacists, hospital and community pharmacists, Medical – Nursing – Provision of Care - IPC – Medication Management.

TARGET AUDIENCE:
Hospitals, Primary Healthcare Centers, Ambulatory Care Centers, Medical Laboratories, Community Pharmacies, Radiology and Diagnostic Imaging Centers.

RECOMMENDATIONS ACTION ITEMS

The following recommendations must be implemented in all healthcare facilities:

1. Establish a Medication Safety Program.
2. Designate a Medication Safety Officer.
3. Establish an effective Pharmacy & Therapeutics (P&T) Committee.
4. Create a "Just Culture".
5. Enhance reporting of Adverse Drug Events (ADEs) (Medication Error + Adverse Drug Reaction).
6. Implement a Look Alike & Sound Alike (LASA) and High Alert Medications Policies.
7. Implement Medication Reconciliation policy.
8. Use Electronic Health Records (EHR) with Computerized Provider Order Entry (CPOE).
9. Empower and Engage patient in their treatment plan.
10. Emphasize proper Patient Counselling.
11. Develop a Medication Safety Course for all healthcare professionals involved in medication use process.

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SAUDI PATIENT SAFETY CENTER

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

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

Medication errors occur most commonly at transitions. Medication reconciliation is a process designed to prevent medication errors at patient transition points. The recommendations address creation of the most complete and accurate list of all medications the patient is currently taking—also called the “home” medication list; comparison of the list against the admission, transfer and/or discharge orders when writing medication orders; and communication of the list to the next provider of care whenever the patient is transferred or discharged.

How do We Justify the Need for a Medication Process that Addresses Transitions of Care?

- Prescribing errors known to occur when there is incomplete information about the patient
- 27% of hospital prescribing errors attributed to incomplete medication history on admission
- Medication discrepancies can lead to harm:
  - 27% - in hospital
  - 59% - after discharge

Reference: Northwestern Memorial Hospital Medication Reconciliation Grant, 2007

Supported Evidence

- Rate of medication errors in a 6 month period decreased by 70% after implementation of a medication reconciliation process at all phases of hospitalization

  -Rozich J.D. & Resar R. JCOM. 2001; 8: 27-34

- One study found 94% of patients had orders changed after ICU stay. By reconciling all pre-hospital, ICU, and discharge medication orders, nearly all medication errors in discharge prescribing were avoided

  -Provonost P, et al. Journal of Critical Care. 2003; 18:201-205.

CBAHI
المركز السعودي لاعتماد المنشآت الصحية
Saudi Central Board for Accreditation of Healthcare Institutions

- **MM.20** Safe prescribing, ordering, and transcribing of medication orders are guided by a clear policy and procedure.

MM.20.3

Medication reconciliation is conducted at the time of admission and discharge.

TJCRequirements at Admission

- MMU.4 Prescribing, ordering and transcribing are guided by policies and procedures.

MEs for MMU.4

5.Patient records contain a list of current medications taken prior to admission and this information is made available to the pharmacy and the patient's care providers.

6.Initial medication orders are compared to the list of medications taken prior to admission, according to the organization's established process.

TJCRequirements at Discharge

ACC.4.3 The complete discharge summary is prepared for all patients

ME's

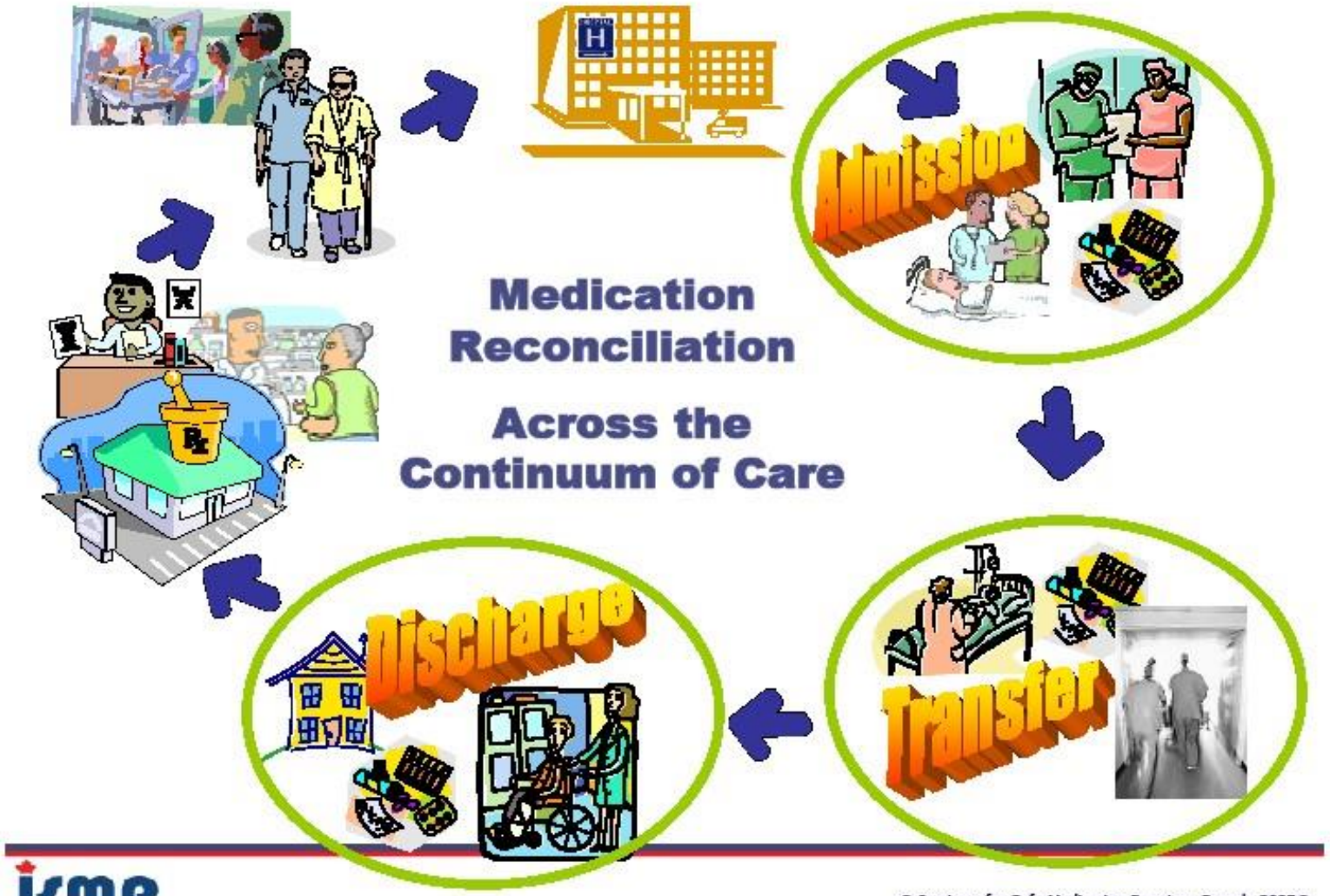
4. The discharge summary contains significant medications, including discharge medications

ACC.4.3.1 Patient education and follow up instructions are given in a form and language the patient can understand

ME's

1. Follow up instructions are provided in writing and in a form and language the patient can understand

MEDICATION RECONCILIATION



Required Steps in the Reconciliation Process

- Develop accurate list of patient's medications
- Reconcile listed medications with new orders
  - Omission
  - Duplication
  - Additions
  - Adjustments
- Update list as orders change during episode of care
- Communicate updated list to next provider(s) and patient, as required.

Identifying and Resolving Discrepancies

- Discrepancies found between admission medication orders and the BPMH can be divided into three main categories:
  - ✓Intentional
  - ✓Undocumented intentional
  - ✓Unintentional

Documented Intentional discrepancies

- Are clinically understandable and appropriate discrepancies between the BPMH and the admission orders based on the patient's plan of care.
- The prescriber has made an **intentional choice** to add, change or discontinue a medication and their choice is clearly documented.
- Intentional discrepancies include **new medication** orders prescribed for the first time based on the patient's diagnosis or clinical status.

Examples

- A patient is admitted with pneumonia and started on IV antibiotic which they were not on at home. This is clearly documented on the chart and is an intentional discrepancy.
- A patient was on an herbal supplement and this supplement was discontinued by the prescriber due to a drug-drug interaction with a blood thinner and this was clearly documented.

An undocumented intentional discrepancy

- Is one in which the prescriber has made an intentional choice to add, change or discontinue a medication but this choice is not clearly documented.

- Any orders which need clarification with the prescriber or may be confusing to other clinicians caring for the patient but are intentional, are considered undocumented intentional discrepancies.

Example

- A *patient was on an antihypertensive medication at home, but the patient's surgeon did not order the anti-hypertensive medication upon admission due to concerns about preoperative hypotension; however the reason for not ordering the antihypertensive medication was not documented in the medication record.*

An unintentional discrepancy

- The prescriber **unintentionally changed**, added or omitted a medication the patient was taking prior to admission. Unintentional discrepancies have the potential to become medication errors that may lead to adverse events. Unintentional discrepancies fall into 2 main categories: omission *and commission.*

- *Always clarify to find out undocumented intentional or an unintentional discrepancy*

Type of unintentional discrepancy	Description	Example
Omission	Patient was not ordered a pre-admission medication. There is no clinical explanation or documentation for the omission.	A patient was on aspirin at home but it was not ordered on admission. When the clinician clarifies with the prescriber, it is evident that the prescriber was not aware that the patient was on this medication. A clarification order was written to restart the patient's aspirin 100 mg po daily.
Commission	Incorrect addition of a medication not part of the patient's pre-admission medication and there is no clinical explanation or documentation for adding the medication to the patient's therapy.	A patient was on a blood pressure medication at home but it was discontinued by the family prescriber 2 months ago. The blood pressure pill was brought in with the patient's other medications and inadvertently ordered upon admission. Clarification with the prescriber reveals that the prescriber was not aware of the recent discontinuation of the medication and an order was written to discontinue the medication.

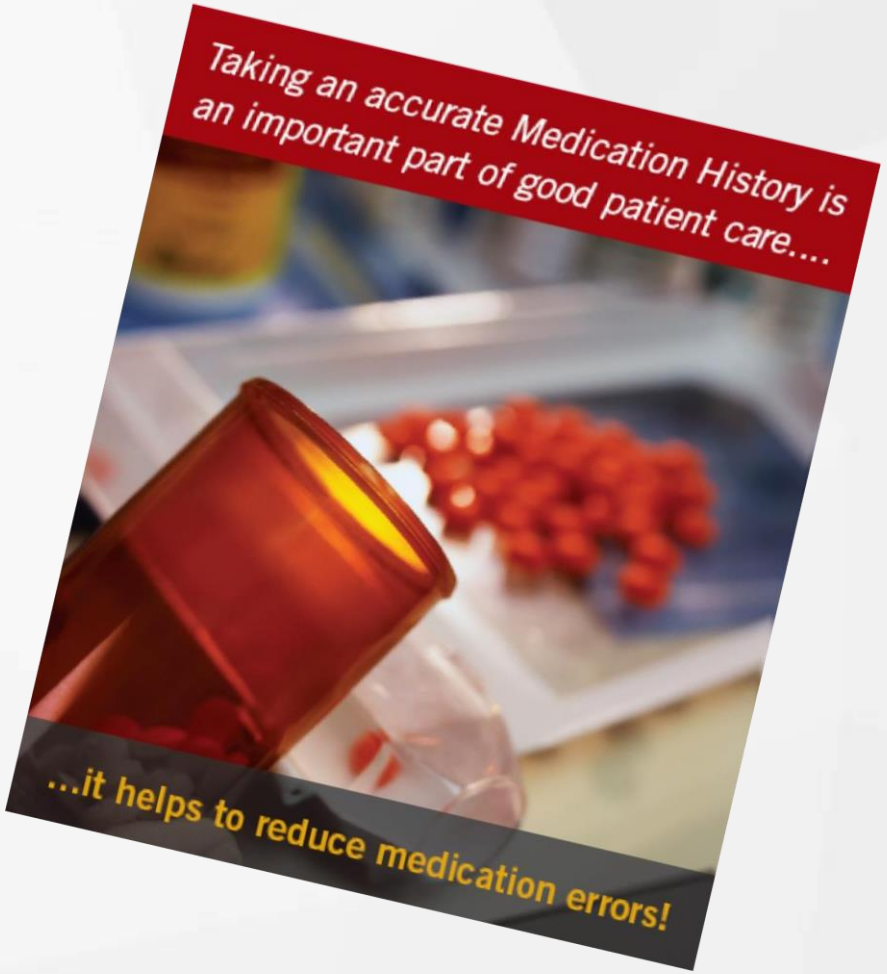
Examples of Medication Errors

Aspirin and clopidogrel ceased in ICU and not recommenced when patient transferred to ward	Patient suffered sudden cardiac arrest resulting in death	May have contributed to patient's death
Patient initiated on new cardiac medication, discharged with no summary or medicine	Patient became acutely unwell and was re-admitted	Caused temporary harm and required intervention

Medication Reconciliation:
Who's Job is it? How to get the BPMH?

Components of Inpatient Medication Reconciliation

- **Taking and documenting an accurate preadmission medication history**
- Using that history to order medications in the hospital
- Using preadmission and current inpatient medications to produce discharge medication orders
- Documenting and communicating discharge medication regimen to patient/caregiver and next provider(s) of care



Impact

- ✓ Lack of knowledge of patients' medications at transition points (admission, transfer, discharge) is believed to be a key source of adverse events

-Massachusetts Coalition for the Prevention of Medical Errors

- ✓ One study found over 70% of drug-related problems were recognized only through patient interview

-Jameson et al. *Ann Pharmacother*. 2001; 35:835-40

- ✓ Errors due to inaccurate or missing patient medication histories may not be preventable with most currently available CPOE systems
  - Bobb et al. *Arch Intern Med*. 2004; 164:785-92

The potential for medication errors and patient harm exists if medication histories are inaccurate and/or incomplete and are subsequently used to generate inpatient medication orders

A Couple More Points

- An accurate list of what was prescribed or filled is not necessarily an accurate list of what is being consumed.

- Initiating medications that the patient was not previously taking can be dangerous

The Intent and Value of Medication Reconciliation is in Having "An Accurate Medication List."

Case Example: Medication Reconciliation on Admission

- A 40 years-old patient presented with complaints of chronic left upper arm pain and swelling. Patient's past medical history included: end-stage renal disease (ESRD), multiple deep vein thromboses (DVTs), hypertension (HTN), bone fractures secondary to renal bone disease, anemia, and hypothyroidism.
- On admission, the physician interviewed the patient to obtain a history and physical.
- The patient had brought in prescription bottles to the hospital and the physician recorded all the medications and doses.
- The physician then placed the admitting medication orders.

- Following the physician-patient interview, a pharmacist interviewed the patient to obtain a medication history.
- The pharmacist also referenced the patient's medication bottles previously used by the physician.
- Below are the medication histories from the physician and pharmacist and the admitting medication orders.
- All medications were documented and ordered as oral medications.

Physician H&P	Admitting Orders	Pharmacist Interview
Prednisone 1mg Daily	***Prednisone 1mg Daily***	***Prednisone 2mg Daily***
Synthroid 0.025mg Daily	***Synthroid 0.025mg Daily***	***Synthroid 0.1mg Daily***
Sirolimus 6mg Daily	***Sirolimus 5mg Daily***	***Sirolimus 6mg Daily***
Warfarin 7.5/5 Daily, alternating schedule	Hold Warfarin	***Warfarin 7.5mg MWF, 5mg Tu/Th/S/S***
Nifedipine XL 60mg Daily	***Nifedipine XL 60mg Daily***	***Nifedipine XL 60 mg BID***
Enalapril 10mg Daily	Enalapril 10mg Daily	Enalapril 10mg PO Daily
Furosemide 40mg Daily	Furosemide 40mg Daily	Furosemide 40mg Daily
Calcitriol 0.5mcg Daily	***Calcitriol 0.5mcg Daily***	***Calcitriol 1mcg in AM and 0.5mcg in PM***

Case Analysis

- This case highlights the importance of obtaining a complete and accurate history on admission to the hospital and reconciling the home medication list with the admission orders.
- When a patient is admitted to the hospital, he or she is often overwhelmed with everything that is going on.
- Engaging the patient in a dialogue about their medication regimen may ensure a more comprehensive medication history than asking close-ended questions.

- If a patient brings in prescription bottles and/or a medication list, we have a good start to obtaining a complete and accurate medication history but it should not stop there.
- It is very important to go over the prescription bottles and/or medication list with the patient and/or patient's family.
- It is essential to remember that the bottles or medication list may not be updated to reflect how the patient is currently taking their medications.
- For example in that case , the patient's medication bottle read Nifedipine XL 60mg daily which the physician documented in the H&P and ordered on admission.

- When the pharmacist interviewed the patient, he specifically asked the patient if they were still on that same dose of Nifedipine XL and the patient responded that the dose had recently been increased to Nifedipine XL 60mg twice daily.
- A good rule of thumb is that information about a patient's medications found in previous medical records, on prescription bottles or on a patient's own medication list are a great place to start when compiling a medication history but
- you must always verify with the patient or the patient's family that the information is up to date before making any assumptions about what the patient was taking prior to admission.

What's Learned from this case

- Obtaining a complete and accurate medication history on admission is an important step in making sure patient's home medications are documented and ordered appropriately
- There can be multiple information sources to obtain a patient's medication history but it is imperative that the information is only used as a starting point and does not replace a conversation with the patient and/or patient's family to obtain the most up to date medication information
- After obtaining the complete and accurate medication history, it is important to compare that information to current inpatient orders to verify that all medications were ordered appropriately

Taking a "Best Possible Medication History"

- Single most important step to improving medication safety during transitions in care
- Also often the most difficult
- Patients and caregivers may not know what medications they take
- Sources of information are inaccurate and out of date
- No one person takes responsibility for maintaining an accurate list
- Fragmented healthcare system
- Information sources and providers don't talk to each other

Taking a "Best Possible Medication History"

- **Goal:** obtain complete information on the patient's preadmission medication regimen including
  - Name of each medication
  - Formulation (e.g., extended release)
  - Dosage
  - Route
  - Frequency
- What they are supposed to be on (Indication), what they actually take
- Other important information, including
  - Allergies and associated reactions
  - Time of last dose

Taking a "Best Possible Medication History"

- Try to use **at least two sources** of information when possible and explore discrepancies between them
  - Patient (via interview)
  - Patient-owned medication lists
  - Family members and other caregivers
  - Pill bottles
  - Pharmacy(ies) where patient fills prescriptions
  - Medication lists and/or notes from outpatient providers
  - Discharge medication orders from recent hospitalizations
  - Transfer orders from other facilities

There's still a place for medication history interviews!

- Use both electronically available medication records as well as data from direct interviews of patients and/or families.

- Virtually all hospitals who have successfully addressed admission reconciliation have created a **special form.**

Taking a "Best Possible Medication History"

- **If starting point is a medication list, review and verify each medication with the patient**
  - Assume all lists are inaccurate
  - Start by having patient tell you what they are taking (i.e., don't lead the witness)
    - More likely to learn about discrepancies with the list you have
    - Assesses their medication understanding
  - Use list to explore discrepancies, confirm missing information
  - Then probe further using list of questions for patients where you are starting from scratch

Taking a "Best Possible Medication History"

- **If starting from scratch, consider the following prompts**
  - **What medications do you take at home?**
    - Elicit dose and time(s) of day patient takes it, plus formulation and/or route as appropriate
  - **What medications do you take every day, regardless of how you feel?**
  - **Which medications do you take only sometimes?**
    - What symptoms prompt you to take them?
    - How many doses per week do you take?
    - What's the most often you are allowed to take it?
    - Do you often take something for headaches, allergies, to fall asleep, when you get a cold, for heartburn?
  - **Fill in gaps (dose, frequency, formulation, route)**

Taking a "Best Possible Medication History"

- **If starting from scratch, consider the following prompts**
  - What is that medicine for? Do you take anything else for that?
  - What medications do you take for your…?
  - Does your … doctor prescribe any medications for you?
  - Do you take any inhalers, nasal sprays, skin creams, eye drops, ear drops, patches, injections, or suppositories?
  - Do you take any medications in the evening or at night?
  - Do you take any medications once a week or once a month?
  - What medications do you take that don't require a Rx?

Taking a "Best Possible Medication History"

- **Ask about adherence**
  - When did you take the last dose of that medication?
  - Tell me about any problems that you've had taking these medications as prescribed?
  - Many patients have difficulty taking their medications exactly as they should every day. In the last week, how many days have your missed a dose of your …

Taking a "Best Possible Medication History"

- **Time-saving tips:**
  - Start with easily accessible sources
    - Outpatient medication list
    - Recent hospital discharge orders
  - If patients use a list or have pill bottles, seem reliable, and data are not dissimilar from the other sources (or the differences can be explained), you can be done
  - If patients are not sure, or are relying on memory only, or cannot "clean up" the discrepancies among lists, then go further
    - Call family
  - If still not clear, have family bring in pill bottles from home

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Top 10 Practical Tips

How to Obtain an Efficient, Comprehensive and Accurate Best Possible Medication History (BPMH)

1. **Be proactive.** Gather as much information as possible prior to seeing the patient. Include primary medication histories, provincial database information, and medications vials/ lists.
2. **Prompt questions about non-prescription categories:** over the counter drugs, vitamins, recreational drugs, herbal/traditional remedies.
3. **Prompt questions about unique dosage forms:** eye drops, inhalers, patches, and sprays.
4. **Don't assume patients are taking medications according to prescription vials** (ask about recent changes initiated by either the patient or the prescriber).
5. **Use open-ended questions:** ("Tell me how you take this medication?").
6. **Use medical conditions as a trigger** to prompt consideration of appropriate common medications.
7. **Consider patient adherence with prescribed regimens** ("Has the medication been recently filled?").
8. **Verify accuracy:** validate with at least two sources of information.
9. **Obtain community pharmacy contact information:** anticipate and inquire about multiple pharmacies.
10. **Use a BPMH trigger sheet** (or a systematic process / interview guide). Include efficient order/optimal phrasing of questions, and prompts for commonly missed medications.

Multidisciplinary approach

- **Admission**
  - Admitting physician responsible for documenting and comparing home medication list and deciding what medicines to continue
  - Nurse and pharmacist review list
- **Transfer**
  - Physicians on transferring and accepting teams review medications, dosages, and when administered
- **Discharge**
  - Physician & Pharmacist compare outpatient list and inpatient list
    - Is any medicine missing?
    - Is it intentional?
  - Review medicine instructions with patient

Professional Debate

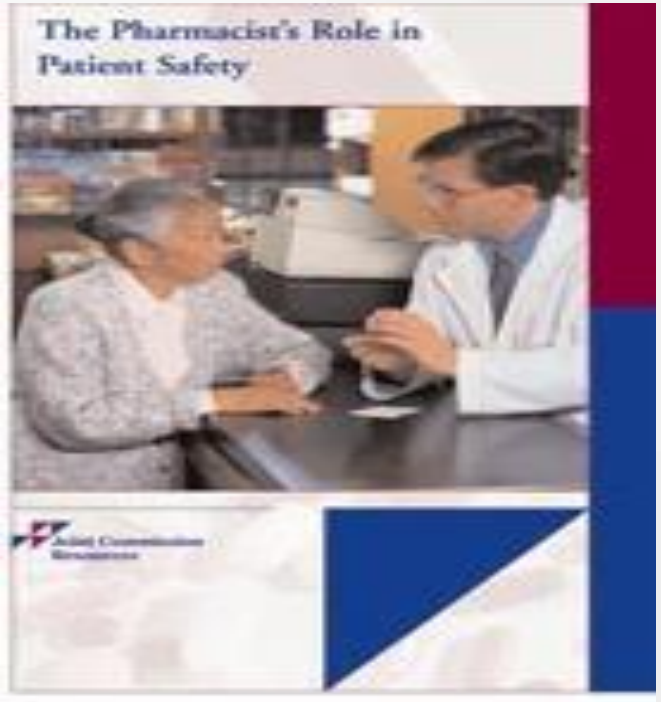
- Pharmacists have unique skills and training that enable them to take on a leadership role in medication reconciliation.

- Pharmacist admission histories associated with a reduction in mortality rate.

Best Practices

- ✓ Pharmacist participation on medical rounds and reconciliation and verification of patient medication profiles at interfaces of care greatly reduced medication errors
  - Scarsi, Ket al. *Am J Health-Syst Pharm*. 2002; 59: 2089-92
- ✓ JCIABook :The Pharmacist's Role in Patient Safety

(2007. 176 pages. PDF book. ISBN:978-1-59940-504-9)



- ✓ IHI Recommendations .
- ✓ AHRQ Recommendations

based on the September 2007 AHRQ Web M&M Spotlight Case

- ✓ ASHP Policy :

0620: PHARMACISTS' ROLE IN MEDICATION RECONCILIATION
Source: Council on Professional Affairs .

Medication History

- A **communication tool** used to provide home medication information to the authorized prescriber to facilitate medication reconciliation.
- A good faith effort to obtain reliable information from primary (patient, family, transfer facility) or secondary sources (past records, pharmacy info)
- **Includes:** prescription medications, over the counter preparations, herbals, vitamins
- **May be completed by nurse, prescriber, pharmacist, or other individual identified by the department** as soon as possible within the first 24 hours of hospitalization (students may add/delete/edit list under supervision)

- The potential for medication errors and patient harm exists if medication histories are inaccurate and/or incomplete and are subsequently used to generate medication regimens for hospitalized patients

Shared vision

- Patients and healthcare professionals will rely on pharmacists to provide leadership in designing and managing optimal patient-centered medication reconciliation systems.

- Pharmacists have distinct knowledge, skills, and position in the medication use process to facilitate and implement effective medication reconciliation tools for patient and interdisciplinary use.

- Pharmacists will lead change in achieving safer and more effective medication *use by educating patients and healthcare professionals regarding the benefits and limitations of the medication reconciliation process.*

Pharmacists

- Are frequently integral to the medication reconciliation process
- Yet, may not be the best solution: pharmacists often have other essential tasks to carry out
- Often best to target "high-risk" patients—those most at risk of an adverse drug event during transitions of care
- Determining High-Risk Patients
  - ***Research suggests the following are high risks:***
    - Older age (55–80 years)
    - Polypharmacy (4–13 medications)
    - More than 3 comorbid conditions
    - Not yet clear evidence that using these criteria to identify patients will reduce medication discrepancies
    - However, such criteria might be a useful starting point to identify highest risk patients

Getting the home medlist

What have we learned?

- Adopt standardized form
- Validate with the patient
- Don’t let perfection be the enemy of the good

Other Information To Be Aware Of

- Medication side effects.
- Special instructions for taking each medication *(i.e.,*

  special foods or times or activities which might effect the benefits of the medication).
- Which medication might be discontinued when a new medication is added.
- Medications with names that sound just alike or look alike (LASA).

Role play for Medication History case

Medication Reconciliation is a 3-step process:

1. Obtain medication history
2. Review medication charts and medical record
3. Identify and reconcile discrepancies between the medication history and medication chart

    - discuss with healthcare team
    - document in the patient's medical record

Your turn: Practice

Obtain medication history

Scenario 1:

- A 66-year-old male in Emergency Department (ED) complaining of left-sided stroke symptoms

- The ED pharmacist begins the medicine reconciliation process to find out what the patient was taking before coming into hospital

Medication History Interview

- **Activity:**
  - Discuss strategies to use if the patient is unavailable or unable to be interviewed? (5 minutes)
  - Each group can offer suggestions in turn until all ideas are exhausted
  - Group discussion – what if patient is unavailable for interview?

Medication History Interview

- **Group Activity:**

  Perform a medication history interview (15 mins)

Medication Reconciliation is a 3-step process:

1. Obtain medication history
2. Review medication charts and medical record
3. Identify and reconcile discrepancies between the medication history and medication chart
    - discuss with healthcare team
    - document in the patient's medical record

Reviewing Medication Chart

Provides information on:

- Patient's demographics including age and possibly weight
- All medicines prescribed by the hospital doctors
- Administration times of medicines by nursing staff, and their initials
- Reasons for medicine non-administration
- Allergies
- What else?

Activity: 15 mins
Review medication Chart

- You are reviewing a medication chart for Mr X on your ward.

- The nurse asks for your advice about how to give the regimen via a **nasogastric** tube.

  - Verapamil SR 240mg capsule once daily
  - (morphine SR) tablets 30 mg bid
  - Efexor XR (venlafaxine) capsules once daily
  - Omeprazole 20mg tablet once daily
  - Citalopram 20 mg tablet once daily

Break

Implementing Medication Reconciliation Strategies

Mission

Every patient will receive all medications they have been taking at home unless they are held/discontinued by their caregiver(s) and all new medications as ordered -- correct drug, dose, route, and schedule.

The goal of reconciling is to design a process that will ensure the most accurate patient home medication list available, thus reducing the number of medication events upon admission, transfer and discharge

Purpose of Medication Reconciliation

- Ensure providers have the needed information before prescribing medications or treatments
- Minimize adverse drug events including drug interactions and therapeutic duplications
- Protect the patient from unintentional changes in their medications
- Ensure correct dose and frequency of medications
- Provide the patient with an up to date list of medications

Strategies for Reconciliation

- **Refer** to the arrival list when writing medication orders for admission, transfer, and discharge.
- **Compare** the arrival list with every medication ordered at admission or discharge and look for discrepancies
- **Address** ALL discrepancies with the physician

Reconciliation in Three Steps

- **Verification**

Collection of medication history

- **Clarification**

Ensuring that the medications and doses are appropriate

- **Documentation/Reconciliation** Changes to orders or reason for differences

Approaches to Medication Reconciliation

- Performing robust, thorough, and accurate medication reconciliation during transitions in care involves:
  - Interprofessional collaboration among pharmacists, nurses, and physicians
  - Integrating medication reconciliation into discharge summaries
  - Combining reconciliation with medication counseling with patients

Best Practices in Medication Reconciliation

- Given the number of disciplines involved in the medication-use process including participation by physicians, nurses, and pharmacists.

- Process must be clearly defined by a multi-disciplinary team and responsibilities for each component of the process assigned to the parties involved

Best Practices in Medication Reconciliation (cont.)

- No single universal process will meet needs of all patients entering a hospital.
  - Limited number of different processes will likely need to be developed based on patient population and point of entry into hospital

- Successful implementation will require significant training, education, and support from clinical leaders.

  -Willingness to engage in continuous improvement and monitoring for compliance are likely success factors

Joint Commission Summary of Safe Practice Recommendations for Reconciling Medications at Admission

- **Collect complete and accurate pre-admission medication lists**
  - Collect a complete list of current medications (including dose and frequency) for each patient on admission.
  - Validate the pre-admission medication list with the patient (whenever possible).
  - Assign primary responsibility for collecting the preadmission list to someone with sufficient expertise, within a context of **shared accountability (the ordering prescriber, nurse, and pharmacist must work together to achieve accuracy).**

Joint Commission Summary of Safe Practice Recommendations for Reconciling Medications at Admission

- **Write accurate admission orders**
  - Use the pre-admission medication list when writing orders.
  - Place the reconciling form in a consistent, highly visible location within the patient chart (easily accessible by clinicians writing orders)
- **Reconcile all variances**
  - Assign responsibility for identifying and reconciling variances between the pre-admission medication list and new orders to someone with sufficient expertise.
  - Reconcile patient medications within specified time frames

Joint Commission Summary of Safe Practice Recommendations for Reconciling Medications at Admission

- **Provide continuing support and maintenance**
  - **Adopt a standardized form** to use for collecting the pre-admission medication list and reconciling the variances (includes both electronic and paper-based forms).
  - Develop clear policies and procedures for each step in the reconciling process.
  - **Provide access to drug information and pharmacist advice at each step in the reconciling process.**

Joint Commission Summary of Safe Practice Recommendations for Reconciling Medications at Admission

- Improve access to complete medication lists at admission
- Provide orientation and ongoing education on procedures for reconciling medications to all healthcare providers.
- Provide feedback and ongoing monitoring (within context of non-punitive learning from mistakes/near misses).

Patient Safety

- Medication reconciliation widely embraced as an important patient safety strategy worldwide
- The **World Health Organization** prioritized it as one of its top five patient safety goals

Implementing the WHO High5s for Medication Reconciliation

The first step is to determine what needs to be done.

- ❑ Who should be involved and what are their roles and responsibilities?
- ❑ What is the time line for implementation?
- ❑ What are the major milestones and deliverables along the road to full implementation?
- ❑ Should a pilot test be done?
- ❑ How is a full, successful, and sustainable implementation achieved?

Pre-implementation short check list

To move forward with a smooth and successful implementation. Each of the following items should be completed as soon as possible and definitely before starting the actual process of implementation:

- ❑ Secure senior leadership commitment
- ❑ Appoint a project coordinator
- ❑ Form an implementation team
- ❑ Confirm availability of team members
- ❑ Convene the team
- ❑ Define the problem and the goals
- ❑ Develop a work plan

Key steps for getting started on implementation of medication reconciliation

- ❑ Secure Senior Leadership Commitment
- ❑ Form a Team
- ❑ Develop a Work Plan
- ❑ Process map current and planned processes
- ❑ Define the Problem
  - i. Set Aims (Goals and Objectives)
  - ii. Collect Baseline Data
  - iii. Submit Baseline Data
- ❑ Start small and build expertise in reconciling medications
- ❑ Evaluate Improvements Being Made – Collect and Monitor Data
- ❑ Spread throughout the organization

1-Secure Senior Leadership Commitment

- Implementing a successful medication reconciliation process requires clear

commitment, direction and accountability for outcomes from the highest level of the organization.

- Visible senior leadership support will help to engage staff, remove obstacles and allocate resources enhancing the ability of teams to implement medication reconciliation
- Actively engage senior leadership by building a business case for medication reconciliation demonstrating the need for adverse drug event prevention and reductions in work and rework.
- Present progress to senior leadership monthly: present data on errors prevented by the medication reconciliation process; identify resources needed to be successful.
- In the case oversight leadership could be provided by a pharmacy manager with overall support from a senior leader.

2-Form a team

- A team approach is needed to ensure medication reconciliation is completed successfully. Teamwork is an integral part of the medication reconciliation process.
- Medication reconciliation is not owned by one discipline. Clinical champions can contribute significantly to successful implementation
- To lead the initiative we recommend the organization identify a multidisciplinary site coordination team to coordinate implementation of medication reconciliation and a smaller team at the patient care unit level to conduct tests of change on that unit.

2-Form a team

- **Representation on the site coordination team could include:**
  - → Senior Administrative leadership (executive sponsor)
  - → Clinical leaders representing physicians, nursing and pharmacy staff
  - → Front line caregivers from key settings of care, and from all shifts
  - → Representatives from other work units or committees whose responsibilities/mandates include:
    - the improvement of patient safety (e.g. Patient Safety Officer, representatives from Quality
    - Improvement/Risk Management, Patient Representatives, Pharmacy and Therapeutics committee)
  - → Patient and/or family member

Patient involvement, including patient interviews, is critical to the medication reconciliation process. The patient is the only constant participant across the system and is critical to the success of this major system change

3-Develop a work plan

- As in all significant quality improvement initiatives a detailed work plan outlining timelines and responsibilities should be developed and followed.

1.All the professionals disciplines involved in medication management should be involved in each step of the project work plan.

2.Engage front line staff in planning and revision of medication reconciliation processes to help avoid resistance to change.

4-Process map the current and new processes

- Create a simple process flow diagram to outline the current process in place.

Note: *keep this process simple; its purpose is to identify the sequence of events and who is doing what.*

5-Define the problem and collect current state data

- Setting an aim can assist teams to focus on what they are hoping to achieve when implementing medication reconciliation. The aim should be time-specific, measurable and define the specific population of patients who will be affected
- As teams work on different points on the continuum of care such as admission, internal transfer and discharge, the aims should be specific to what it is they are hoping to achieve at that point.

6-Start with small tests of change and build expertise in reconciling medications

- Initially implement a medication reconciliation process on a smaller scale with select groups of patients to develop forms and tools that work in your organization and to gain expertise in the medication reconciliation process.
- Involve staff in the initiative from the planning stage forward.
- Although medication reconciliation should occur at all transition points in care (e.g., admission, transfer, discharge), start at the admission process. If medication reconciliation is not done right at admission, you could be continuing your process using inaccurate information.

6-Start with small tests of change and build expertise in reconciling medications

- Adapt and test a medication reconciliation form(s). The purpose of these forms is to aid in the collection of a BPMH, to share the information with prescribers, and to facilitate reconciliation (the correction of medication orders and documentation of prescriber decisions).
- Many institutions adapt a physician's order form for this purpose and a number of forms have been developed by different organizations
- The forms will require modifications before use in your institution. As with any changes you make, our recommendation is to test the form first on a small scale and modify as needed

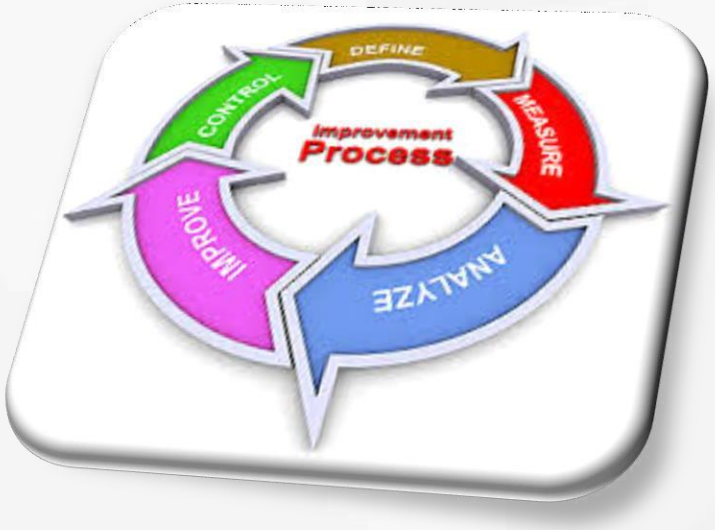
7-Spread

- As experience develops and measurement of the success of your medication reconciliation process reflects sustained improvement, the process should be implemented for more patients in more areas.
- Evaluate at each new step before adding more units to the process. Retest the pilot process on new units in order to identify any revisions that may be needed. The roll-out across an organization units in order to identify any revisions that may be needed. The roll-out across an organization requires careful planning to move through each of the major implementation phases.
- A key factor for closing the gap between best practice and common practice is the ability of health care providers and their organizations to spread innovations and new ideas.

Using Process Improvement Methodology

Established Performance Improvement Methodologies

- FOCUS PDCA
- Lean
- Six Sigma



Where are You now? Defining Your Current State

- **Creation of the Project Charter**
  - Provides the “game plan” for the performance improvement initiative
  - Selection of a single project for improvement focus
  - Defines the team members – Defines the timeline
- **SWOT Analysis**
  - High level perspective
  - Allows for reflection and strategic planning
  - Assures that changes activities include potential issues or threats in the process improvement planning

- **Mapping the Current State Process**
  - Allows analysis of each step and ownership of each step
  - Allows discussion of variation in performance of each step
  - Allows discussion of actual and potential failure points for each step in the process
  - A final step in identifying the priorities for process improvement

- **Tracing your medication reconciliation process**
  - Determine true “live” performance
  - Assess documentation
  - Involve patient feedback
  - Review process at all points of the continuum

- **Tracing your medication reconciliation process**
  - Determine true “live” performance
  - Assess documentation – Involve patient feedback
  - Review process at all points of the continuum

- **Defining metrics of performance**
  - Metrics which are important for assessment of performance of process
  - Metrics that are able to be collected
  - Allows establishment of baseline for performance
  - Allows objective evaluation of performance and success of performance improvement activities

Defining Potential Solutions to the Problem

- Involve key stakeholders involved in the process
- Brainstorm potential strategies to address the focused problem
- Design a process which incorporates the selected solution or strategy
- Which steps, who owns; what measures will reflect performance?

Implementation of Selected Solution

- Piloting in a limited setting
- Reviewing results of the pilot
- Making necessary changes to solution based on results
- Pilot number 2?
- Full implementation

Strategies for Sustainability

- Sustainability strategy begins with design of the process
  - Not an after-thought
- Continued leadership focus
- Continued monitoring of performance
- Integration with existing workflow

Performance Improvement Focus

Focus on Quality

The Quality of the Medication List

– Who should develop the list?

– What can enhance the quality of the list?

- Software
- Interviewing skills
- Training

Performance Improvement Focus

- **The Quality of the Reconciliation Process**
  - Clear delineation of accountability
    - Auditing to confirm
  - Involvement of a 2nd set of eyes to assist in problem identification
  - Clinical decision support/tools

Evaluating Your Hospital's Performance

- **Is there a home medication list on admission and discharge that has been created by the responsible person?**

  - If not, what are the barriers to developing this list?

- **What is the quality of the list?**
  - Completeness
  - Accuracy
  - Discharge list: accounts for home medication previously taken

Performance Improvement Focus

- **The Development of the Home Medication List at Discharge**
  - ➢Clear display of in-hospital and admission home medications for consideration
  - ➢Additional expertise to address home meds not prescribed in house and potential issues with continuing

Performance Improvement Focus

- **Making sure the patient understands the medications he/she will take at home**
  - ➢ Discharge teaching doesn't start 15 minutes before discharge
  - ➢ Assessment of patient needs, willingness to learn
  - ➢ Use of supplemental tools to support understanding
  - ➢ Teach-back method
  - ➢ Clear description of what medications are new, which are being changed or discontinued, and which are staying the same

Evaluating Your Hospital's Performance

- How prepared are patients on discharge to manage own medications?
- Evaluating data to identify opportunities for improvement
  - Reasons for readmissions
  - Adverse drug events
  - Medication errors

Did a failure in the medication reconciliation process contribute?

Examples of errors

- No orders for needed home meds
- Missed or duplicate doses from inadequate records of frequency
- Surgeon inadequately addressing meds for chronic conditions
- Failure to restart meds at transfers
- Doubling up (brand/generic combinations, formulary substitutions)

Sharing an Actual Performance Improvement Project

King Faisal Specialist Hospital and Research Center (Gen. Org.) - Jeddah

MEDICATION RECONCILIATION *"Because our patients are worth it!!!"*

Focus

- Inaccurate & Incomplete Medication History of patients were found.
- More than 60% of medications are not reconciled on patient admission.
- So increase in Adverse Drug Events and Medication Errors.

FOcus

- Formulate our Med Recon Team (Include Physicians, Nurses and Pharmacists) :

Dr Samar Badreddine (Physician)
Dr Seema Syed (Pharmacy)
Dr Merryland AbdelJawad (Pharmacy)
Dr Kawthar Salah (Pharmacy)
Dr Manal Sallam (Pharmacy)
Abbas Hamieh (Nursing)
Hussam Hassan (Nursing)

FoCus

- Identify transitions in care; Admission, Transfer and Discharge.
- Review current process of documenting medication history.

FocUs

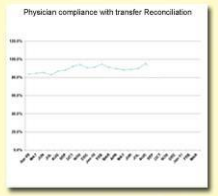
- Formulate clear process & outcome indicators.
- Data collection sources designated.
- Re-designed the current system to accommodate Med Recon at all transition points.

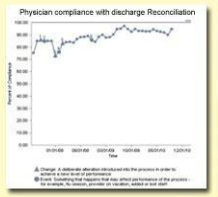
FocuS

Identified our goals and objectives to reduce the percent of Un-Reconciled Meds by 75% within one year.

P

- Choose Admission and Discharge points first.
- Revised the History & Physical form to accommodate for accurate and detailed medication history.
- Medication Reconciliation Flow Chart to be placed in all Inpatient Units.
- Identified the need for a designated Recon Pharmacist to monitor the entire process.





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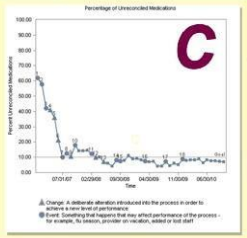
- To maintain the goal and ensure that our physicians keep obtaining the most possible accurate current medication history for the patients so that our patients get complete medication list at discharge.
- Inter Unit quarterly competition announced.
- Working on Med Recon in Cerner.
- To continue Data Collection & Analysis on a monthly basis.
- In collaboration with Medication Safety Committee mandatory training on Med Recon to be conducted for all incoming physicians on a monthly basis.

D

- Multidisciplinary Policy & Procedure for the process was implemented & delegated key roles in the recon process.
- Planned & conducted multidisciplinary education were done.
- Extensive Education & Clinicians on board & Video showing process flow to be used for education. CDs' with pocket booklet were distributed to all Inpatient units.
- Med Recon Report Form is used to report any discrepancies.
- Departmental meeting arranged to share the results with all physicians as well as Nursing Affairs.
- Reconciliation Sr. Pharmacist now on board & 100 Charts now reviewed monthly.
- Med Recon reminder stickers /labels are being used to encourage physicians & nurses compliance.

By September 2010, we reached our goal, % of Un-Recon Meds from 62% to 7.47%!!

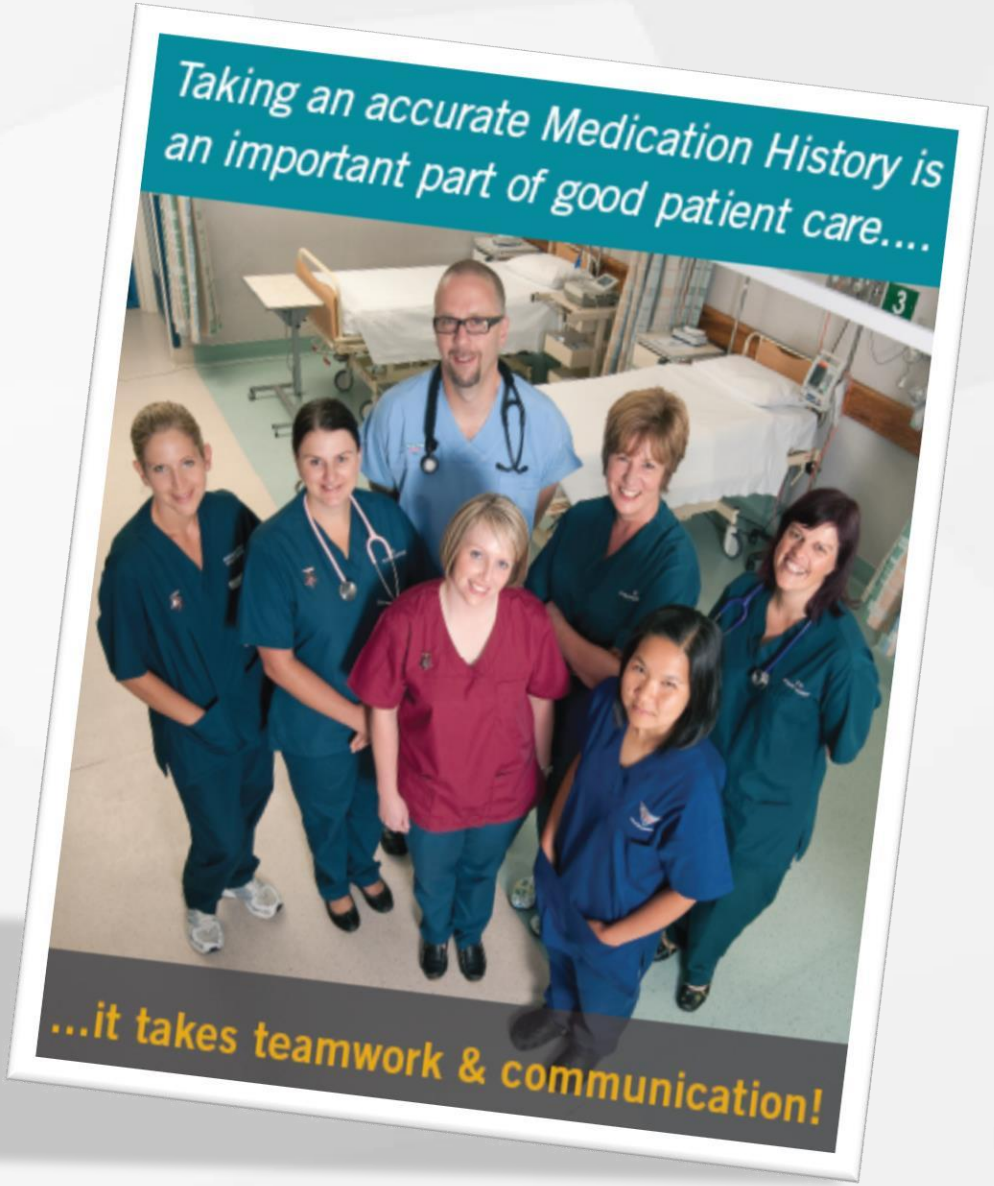
C



1-Pilot study in one unit
2-Pilot study in one unit. Multidisciplinary Education process started
3-Implemented hospital wide use of revised H&P forms.
4-Random audit of 20 charts/month
5-Hospital wide implementation for all Inpatients according to policy. Massive multidisciplinary education
6-Review of ALL hospital admissions. Continuous multidisciplinary education
7-Continuous multidisciplinary education
8-Vacation time, some non compliance issues
9-Reconciliation Pharmacist on board
10-Reconciliation Pharmacist left
11-Reconciliation Sr. Pharmacist now on board
12-Extensive Education & Clinicians on board. Inter Unit quarterly competition announced
13-Departmental meeting and re education was done
14-Summer vacation &new residents
15-Recon. pharmacist was back

Start date:1/2007 → **Ongoing**

- The process of medication reconciliation, using a formalized structured approach involving patients and conducted in an environment of shared accountability, can reduce the morbidity and mortality of medication errors that occur at interfaces of care.
- It is a cost-effective and an important element of patient safety



Process Recommendations

- Adopt a standardized form for reconciling.
- Put the patient's medication reconciliation form in a highly visible portion of their chart.
- Designate a team member to be responsible for implementing reconciliations and reporting variances to physician or physician extender.
- Ensure that patients understand the importance of medication reconciliations.

Together we can reduce potential adverse outcomes of care related to medications

Break


Medical ID
المركز السعودي
لسلامة المرضى
SAUDI PATIENT
SAFETY CENTER

Medication Reconciliation: Staff Training & Competency Program for Healthcare Professionals

Making It Happen

- Design a process for developing the list, making it available, using it, updating it and providing to patient and next provider/physician
- Develop the tools
- Develop the policies and procedures
- Train the staff
- Monitor the process- look for opportunities for improving the process

Skills, Knowledge, and Behaviors

- Skills: Navigating systems, documenting notes
- Knowledge: Drug names and common dosage forms
- Behaviors: Patience, communication, team work

Medication History Patient Interview Checklist

- Introduce yourself with name and role
- Verify armband
- Acknowledge visitors
- Inquire about preferred pharmacy
- Check and clarify allergies (including reaction)
- Review medications (*Strength ,Dose ,Frequency ,Last Dose*)
- Inquire about other Prescription Medications
- Inquire about over the counter medications, herbals, and supplements
- Engage patient regarding any concerns about their medications (cost, side effects, forget, getting to pharmacy)

Techniques for Patient Interviews

- Patient informed of importance
- Privacy, sensitivity and confidentiality
- Ask if the patient maintains a list of medications
- Ask to see containers for each
- Ask about medical conditions patient has and meds
- Open-ended questions
- Develop a script of probing questions to insure consistency in process

Competency Example

- Successful completion of medication reconciliation training series, consisting of:
  - How to contact an outside pharmacy to collect information
  - How to conduct a patient/family medication history interview
  - Where to look for medication related information in the medical record and electronic systems
  - How to document the Home Medication list in the medical record
- Successful completion of prospective preceptor review of at least one admission medication reconciliation, including the following components:
  - Patient/family interview
  - Outside pharmacy inquiry
  - Documentation of home medication list in medical record

Engaging Pharmacy Residents and Interns in Medication History Workflows

Medication History by Pharmacy Residents/Interns

Process Step 1

- Identifies patient needing medication history
- Gathers a baseline list and then interviews patient and/or caregiver
- Determines if patient or caregiver is good, fair, poor historian
- If information is missing, attempts to call pharmacy or other outside sources
- Documents a comprehensive list of medications in the form
- Notes preferred pharmacy, source of information, last fill dates (if available)
- Documents discrepancies against the home medication list

Process Step 2

- Update the documented home medication List with “intended” medications
- If discrepancies are found – communicate it with the admitting physician
  - Document in the form
- When finished, update the bottom of the form
- Status Comment → “Date, Time: Updated by Pharmacy Department”

Process Step 3

- Pharmacist/Residents reviews the Interns documentation
  - Compare the physician documented medication list with the findings of the interview to double check
  - Pharmacist compares home medications to current inpatient orders
  - Assess for clinically relevant discrepancies that should be readdressed
  - **Examples:**
    - Discovered correct mycophenolate dose is 1000 mg BID but ordered for 500 mg BID
    - Discovered patient takes clonidine in the outpatient setting, but not ordered inpatient
    - Discovered patient switched from escitalopram to duloxetine, but escitalopram still listed as active

Process Step 4

- Pharmacist documents assessment and clinically relevant discrepancies at the bottom of the interns comments
- Pharmacist contacts prescriber if clinically relevant discrepancies exist so that prescriber may reconcile if deemed appropriate

Competency Development

- To demonstrate understanding and proper performance of Medication Reconciliation at transition points in patient care.

- **Knowledge/Skills/Abilities:**
  - ✓Understanding of medication reconciliation procedures
  - ✓Ability to conduct patient medication history interview
  - ✓Ability to use all available resources to gather patient medication history information
  - ✓Ability to identify medication discrepancies
  - ✓Ability to document in the record
  - ✓Ability to troubleshoot discrepancies identified

Competency Development Cont..

- **Prerequisites(i.e. necessary) background knowledge/skills/abilities required of staff prior participation:**
  - ✓Knowledge and understanding of patient interview technique
  - ✓Foundational understanding of required components for a complete and accurate medication history.
- **Training and education that will be needed** (didactic and experiential):
- **Didactic:** Independent review of guidance documents regarding Medication Reconciliation procedures. Preceptor available for questions.
- **Experiential:**
  - Observe pharmacist complete one medication reconciliation
  - Perform medication reconciliation assessment with preceptor

How Competency will be Assessed/Measured

- **Observation:**
  - ✓Demonstrate proper method of obtaining a complete medication list utilizing all appropriate resources
  - ✓Demonstrate knowledge of how to conduct a medication history interview
  - ✓Demonstrate knowledge of how to identify medication discrepancies
  - ✓Demonstrate knowledge of who to identify to communicate and troubleshoot identified discrepancies
- **Method of assessment:** Direct observation pharmacist completing medication reconciliation
- **Performance threshold:** Successfully complete ≥ 90% of medication reconciliation competency checklist.

Assessor should be a qualified preceptor

Challenges and Lessons learned

Challenges in Medication Reconciliation

- Often, there is no clear owner of this process
- Staff do not have the time to complete each of the steps in the process (Time constraints)
- Accurate sources of information may be difficult to identify
- Patients with poor health literacy
- Often, patients don’t know or aren’t in a position to tell us what they are taking.
- The patient may not want to admit what they have been taking

Challenges in Medication Reconciliation (continued)

- Labels on bottles are often outdated or incorrect
- Patient may take medication differently than prescribed
- Medication lists are often inaccurate
- Patients often forget several types of medication such as:
  - Medications that are not taken daily. (Once weekly, once monthly, or prn meds)
  - Medications that are kept in the refrigerator such as insulin
  - Medications that require frequent dose changes such as warfarin
  - Pain medications that were recently prescribed.
  - Medications that are not taken by mouth such as creams or lung treatments

Sources of Confusion for Patients Regarding Medications

- Multiple names for a single drug
- Failing to instruct patient about medications taken at home that weren't written for at discharge
- Switches to “formulary” versions when admitted
- Changing the dosage strength or frequency without sufficient understanding by the patient as to why

Other Challenges???

- Stress of transitioning through the healthcare system
- Language barriers; cultural beliefs
- Relationship with the healthcare clinician who is obtaining the history
- Interviewer's skill level

“Don't Let “Perfect“ Get in the Way of “Good”

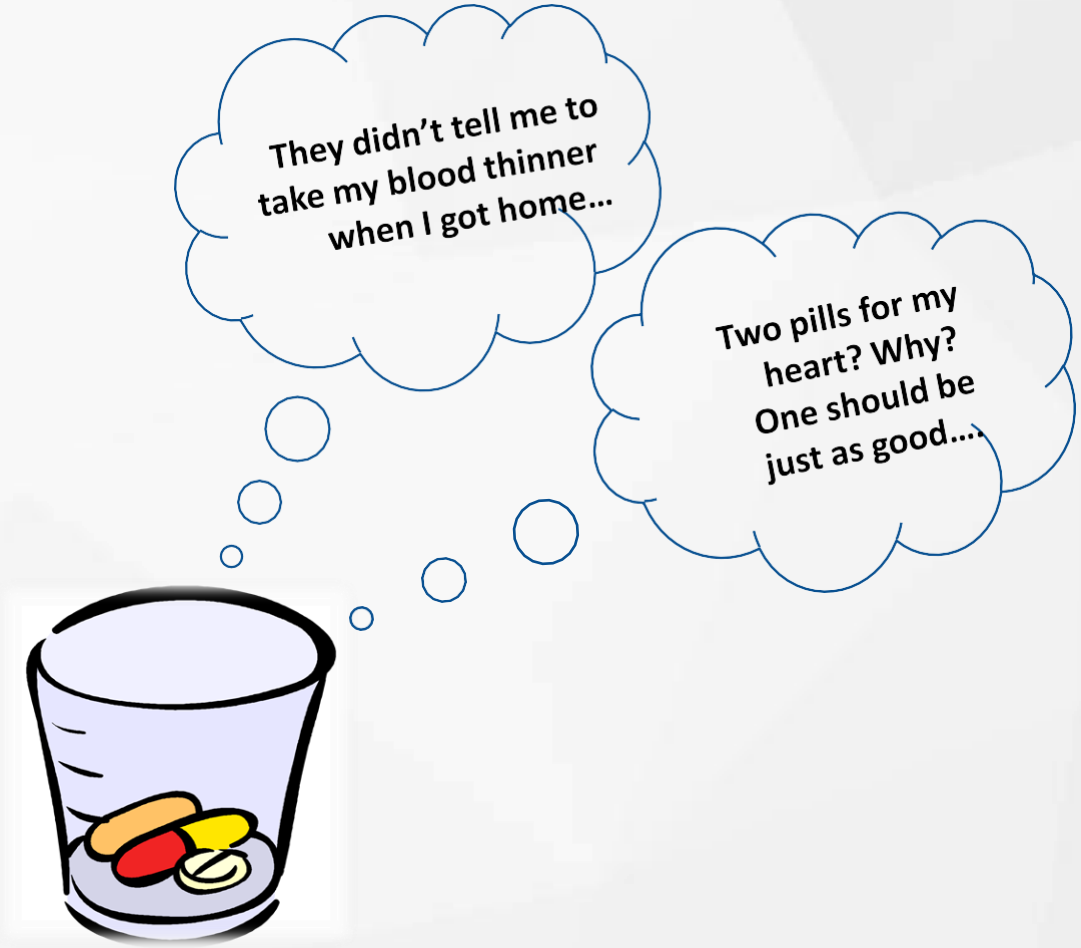
- Creating the “Best Possible Medication History” (BPMH)
  - Do one's best
  - Get as much information as possible
  - Clarify as much as possibly unclear information
  - Use this information
  - On to the next patient

Physician Awareness

- Evidence suggests physicians are aware of the need for medication reconciliation
- There are many barriers and true robust medication reconciliation often does not happen

Basey AJ, Krska J, Kennedy TD, Mackridge AJ. Prescribing errors on admission to hospital and their potential impact: a mixed-methods study. BMJ Qual Saf. 2013;23:17-25. http://www.ncbi.nlm.nih.gov/pubmed/23922405

So many doctors, so little communication...



Voice of the Provider

- "…med rec done in the ER is of poor quality or non-existent…I am admitting a patient who has multiple meds including warfarin. The patient and family have no idea of what meds are as she was recently discharged from x Hospital. Someone from the ER told them they have a full list of meds from the system and not to worry about bringing in a list. The medication reconciliation was never done in the ER in spite of having a list. By the time I logged into the system, there was a downtime…The nightmare would have been avoided if ED promptly documented the meds."

Voice of the Nurse

Medication Reconciliation is. . .

- “Time consuming”
- “Labor intensive”
- “Uncertain.

The patients rarely know what they are taking”

- “Very confusing.

Most patients do not know what they are taking so 60%-70% of the time, the Med Rec in [our EMR] does not match. Also there are meds in the med rec that the patient cannot confirm they are taking.”

Health Information Technology

- Health information technology (IT) has been lauded as a solution for challenges in medication reconciliation
- A consensus statement issued by the Society of Hospital Medicine (SHM) highlighted the power of health IT
- The consensus statement by SHM recommended:
  - An integrated and transferable personal health record
  - This record must be compatible across all settings (interoperability and accessibility for different systems)

Other Uses of Health IT

- In addition to personal health records, information technology has been utilized in many different ways to improve the medication reconciliation process:
  - Tracking medications across sites of care
  - Allowing for an active comparison of medications and clarification of discrepancies
- These IT interventions have shown variable effectiveness in improving medication reconciliation

A Note of Caution

"Hospital-based medication reconciliation at care transitions frequently identifies unintended discrepancies, but many have **no clinical significance. . . Bundling** medication reconciliation with other interventions aimed at improving care coordination at hospital discharge **holds more promise**."

Kwan JL, Lo L, Sampson M, and Shjania K. Medication reconciliation during transitions of care as a patient safety strategy. Annals of Internal Medicine. 2012;158:397-403.

Approaches to Medication Reconciliation

- Medication reconciliation can be "bundled" with other interventions:
  - Individualized counseling of patients
  - Coordination of follow-up appointments
  - Post-discharge telephone calls
  - Involvement of a care coordinator or nurse discharge advocate

Approaches to Medication Reconciliation

- Performing robust, thorough, and accurate medication reconciliation during transitions in care involves:
  - Interprofessional collaboration among pharmacists, nurses, and physicians
  - Integrating medication reconciliation into discharge summaries
  - Combining reconciliation with medication counseling with patients

Fernandes O, Shojania KG. Medication reconciliation in the hospital: what, why, where, when, who and how? Healthc Q. 2012;15:42-49. http://www.ncbi.nlm.nih.gov/pubmed/22874446

Involvement of the Patient and Family is Important to the Process

- Providing information about the medications patient is taking
- Keeping them informed about changes to the medication regimen
- Education about medications, desired effects and side effects
- Encouraging them to voice concerns they might have

Best Practices in Medication Reconciliation "Patient Education"

- Patients should participate in the medication reconciliation process
- Encourage patients to keep an up-to-date list of medications and understand why they take each
- During the discharge process, medical staff should ensure that patients are educated about any changes in medication regimen

"Medication reconciliation helps patients recognize they are responsible for their own health care and what happens to them"

عزيزي المريض:
حرصاً من إدارة الصيدلية وجميع العاملين فيها على خدمة الموظفين و ذويهم فقد تم اعتماد نظام جديد لإعادة صرف الدواء حسب الضوابط التالية:

- على المريض الذي يرغب بإعادة صرف الأدوية الاتصال على الرقم 6677777 تحويله 61775 من الساعة التاسعة صباحا وحتى الساعة الخامسة مساءا من السبت إلى الأربعاء أو إرسال رسالة نصية على الرقم 0532048000. وطلب إعادة الصرف عن طريق الهاتف. ويمكنه بعد ذلك استلام الأدوية بعد 24 ساعة ما عدا يومي الخميس والجمعة.
- بإمكان المريض الذي يحضر شخصيا للصيدلية ويرغب بإعادة صرف الأدوية , أن يترك كتيب إعادة الصرف من الساعة التاسعة صباحا وحتى الساعة الخامسة مساءا من السبت إلى الأربعاء, و استلام الأدوية بعد 24 ساعة ما عدا يومي الخميس والجمعة.
- (الرجاء إحضار أدويتك معك في كل مرة تراجع فيها الطبيب أو عند التقويم).

Dear Patient;
The pharmacy department is implementing a new refill system. This new system is designed to better serve patients and their representatives. The system works as follows:

- Patients, who want to get refills, must do so 24hour ahead of pick up time by calling 6677777 ext. 61775 between 9am and 5pm, Saturday through Wednesday EXCEPT Thursday and Friday OR send a text message using 0532048000.
- Patients, who are dropping off their refill, must do so 9am till 5pm, Saturday through Wednesday, and will pick up their refill after 24 hours EXCEPT Thursday and Friday.
- Please bring your medications with each doctor's appointment or admission.

KINGDOM OF SAUDI ARABIA
KING FAISAL SPECIALIST HOSPITAL
AND RESEARCH CENTER
JEDDAH

المملكة العربية السعودية
مستشفى الملك فيصل التخصصي
ومركز الأبحاث
جدة

ISSUED DATE: 20 SEP 2011

بطاقة موعد
APPOINTMENT SLIP

تاريخ الإصدار ٢٢ شوال ١٤٣٢

ملاحظات :

COMMENTS :

تعليمات هامة:
- نرجو منكم الحضور قبل الموعد بربع ساعة لكي نتمكن من خدمتكم بصورة أفضل
- الرجاء احضار أدويتك معك في كل مرة تراجع فيها الطبيب او عند التقويم
- في حالة عدم تمكنكم من الحضور الرجاء الاتصال قبل الموعد بـ ٢٤ ساعه على الرقم ٠٢٦٦٩٨٠٠٠ لإلغاء الموعد أو تعديله

مع تمنياتنا لكم بالشفاء العاجل

Instructions :
- To provide better services, please arrive 15 minutes prior to your appointment.
- Please bring your medications with each doctor's appointment or admission.
- Please call 026698000 , 24 hours earlier if you are unable to attend.

Thank you and we hope you will get well soon


من المهم إحضار قائمة الأدوية
الخاصة بك في كل زيارة للمستشفى
الأدوية بوصفة
الأدوية بدون وصفة
أعشاب
فيتامينات
spsc_sa
spsc_sa
spsc.sa
spsc_sa
spsc.sa
spsc.gov.sa
It is very important to bring your medication in every visit to the hospital
Prescription medicine
Non-Prescription medicine
Traditional medicine
Vitamins
spsc_sa
spsc_sa
spsc.sa
spsc_sa
spsc.sa
spsc.gov.sa
المركز السعودي لسلامة المرضى
SAUDI PATIENT SAFETY CENTER
المركز السعودي لسلامة المرضى
SAUDI PATIENT SAFETY CENTER

5 أسئلة حول أدويتك يجب طرحها عند مقابلتك الطبيب أو الممرض أو الصيدلي ؟

الاستمرارية ؟

ماهي الأدوية التى ينبغى أن أستمر في تماولها ولماذا ؟

التغييرات ؟

هل تم إضافة أو ايقاف أو تغيير أحد الأدوية ولماذا ؟

الاستخدام الصحيح ؟

كيف يجب أن استخدم أدويتي وإلى متى ؟

المتابعة ؟

هل على إجراء أى فحوصات أو تحاليل وماهو موعد الزيارة القادمة ؟

المراقبة ؟

كيف أتأكد من فعالية الأدوية التى أتناولها وماهي التأثيرات الجانبية التى يجب على الحذر منها ؟

المصدر: المعهد الكندي لسلامة المرضى

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المركز السعودي لسلامة المرضى

Lessons Learned

1. Medication reconciliation issue is not going away
2. Data drives change
3. The admission process is complex. The discharge process is twice as complex
4. No one likes to be asked the same question twice . . . . . including patients
5. Accept no list at face value and no list is perfect
6. There is no quick fix
7. Communicate, communicate, communicate
8. Be flexible-LISTEN to the concerns of staff
9. Data collection is labor intensive
10. Multidisciplinary support is essential
11. To be successful, absolutely must demonstrate the value! This is not just filling out another piece of paper…

This is Hard Work ….

What if We Called it

Asking people to change what they have been doing.

Improved Communication

Providing Optimum Care

Improved Medication Management

It is The Right Thing to Do !

Key Points

- A BPMH results in safer prescribing
- Documenting a BPMH and plan
  - Improves communication between the health care team
  - Reduces error, confusion and re-work
  - Reduces time and error at discharge
- Reconciling at admission, ward/hospital transfer and discharge reduces medication errors and patient harm
- Providing accurate information at transfer/discharge results in safe ongoing care
- The focus of medication reconciliation in the hospital has reduced medication errors; however, more emphasis should be placed on accurate medication histories and appropriate prescribing practices in ambulatory care settings.

- Transitions of care are vulnerable periods due to poor communication and inadvertent information loss. Unintentional changes to patients' medication regimens are a well-documented category of such errors
- Medication reconciliation is formal process for identifying and correcting unintentional medication discrepancies across transitions of care
- Targeting this resource-intensive intervention towards patients with high-risk features, such as older age, polypharmacy, or multimorbidity, may improve the effectiveness
- Information technology can facilitate medication reconciliation if it is devised to support a well-designed process.
- Medication reconciliation helps patients recognize they are responsible for their own health care and what happens to them.

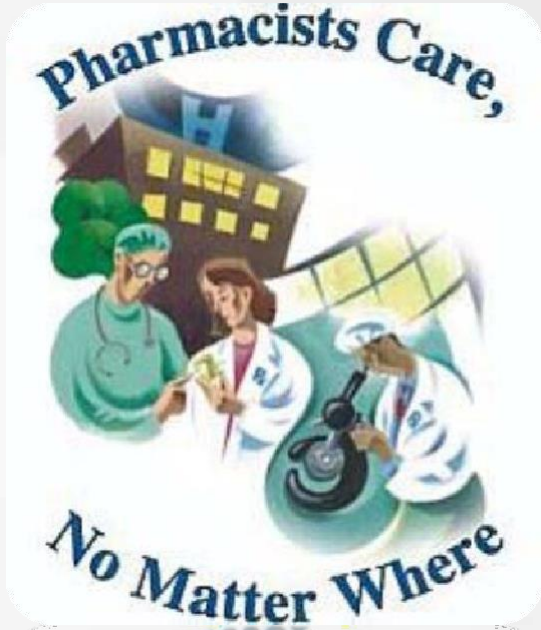
- Failure to reconcile medications during transitions of care accounts for many preventable adverse events.
- To design a robust medication reconciliation process, first define steps involved and decide who should be responsible for each step.
- A one-size-fits-all approach is unlikely to work, even for the same hospital.
- The focus of medication reconciliation in the hospital has reduced medication errors; however, more emphasis should be placed on **accurate medication histories** and **appropriate prescribing** practices in ambulatory care settings.

To Be Successful

- Understand Your Processes
  - Process flow
  - Data flow
  - Roles and responsibilities
  - Procedures

Pharmacist leading Med Recon has shown improvements in patient care by :

- ✓ Reducing medication errors
- ✓ Providing another layer of patient safety during patient's admission.
- ✓ Accurate medication history documented and proper medication reconciliation.
- ✓ More efficient patient education and consultations
- ✓ Effective collaboration of interdisciplinary health care team



Questions and Discussion

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Thank you

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