



# Medication Reconciliation

---

Preventing Medication Mis-Adventures

Linda K. McCoy, Pharm.D.  
Director of Clinical Patient Safety  
Banner Good Samaritan Medical Center  
E-mail: [linda.mccoy@bannerhealth.com](mailto:linda.mccoy@bannerhealth.com)  
Phone: 602 239-2256



## It's all about "SAFETY"

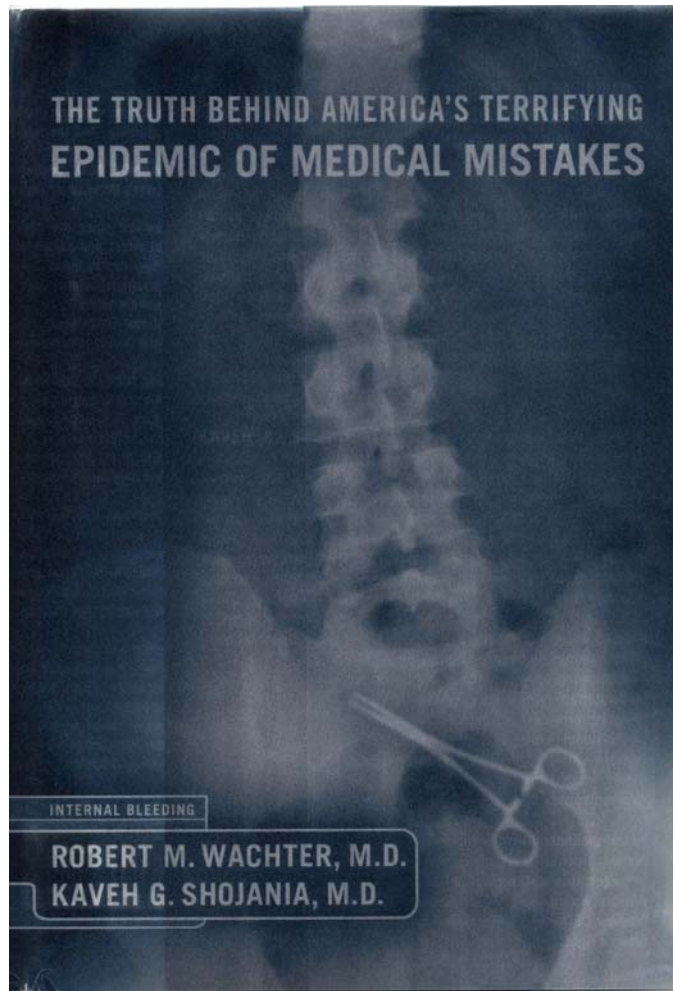
---

"Despite the widespread publicity of the 1999 IOM report.....the nation lacks a firm commitment to patient safety" --- Lucian Leape, MD

"I would give our efforts an overall grade of C+ ...." ---- R. Wachter, MD

# Physician's Perspective - 2004

---



- Recent publication
- Front Jacket Cover:  
*"Each year doctors and nurses kill one hundred thousand Americans. By mistake."*



# Are we doing some equally stupid things in healthcare?

---

- Is treating a patient in the hospital without knowing their previous drug regimen risky?
- Shouldn't we know what medications the patient is taking before we add additional drugs to their treatment regimens?
- Is discharging a patient with a handful of prescriptions without knowing what medications they have at home risky?



# So why medication reconciliation?

---

- Whose idea was this?
- Why should we do it?
- What difference will it make?



# Background Information

---

- Concept promoted by Institute for Healthcare Improvement (IHI)  
([www.ihl.org](http://www.ihl.org))
- Roger Resar, MD – Mayo
- Massachusetts Coalition for Prevention of Medical Errors  
([www.maocoalition.org](http://www.maocoalition.org))



# Definition

---

- 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.
- Reconciliation involves comparing the patient's current list of medications against the physician's admission, transfer and/or discharge orders.



# Medication Misadventures

---

- IOM Report (1999)
  - 7000 deaths per year due to medication errors
- ADEs
  - Estimated cost = \$2,595 for all ADEs
  - Estimated cost = \$4,685 for preventable ADE



# Why do this?

---

- Chart review data:
  - Over 50% of medication errors occur at interfaces of care:
    - Patient admission to hospital
    - Patient transfer out of specialty units to other nursing units
    - Patient transfer to step-down care (SNF, LTC)
    - Patient discharge from hospital



## IHI Initiative – 100,000 Lives

---

- Starting January 2005 – Implement key improvements – includes medication reconciliation
- Prevent “needless” deaths
- Report the results – June 14, 2006

[www. ihi.org](http://www.ihl.org)



# JCAHO National Patient Safety Goal

---

- Accurately and completely reconcile medications across the continuum of care.
  - During 2005, for full implementation by January 2006, develop a process for obtaining and documenting a complete list of the patient's current medications upon the patient's admission to the organization and with the involvement of the patient. This process includes a comparison of the medications the organization provides to those on the list.



## JCAHO National Patient Safety Goal

---

- A complete list of the patient's medications is communicated to the next provider of service when it refers or transfers a patient to another setting, service, practitioner, or level of care within or outside the organization.



# Patient Safety

---

It's the right  
thing to do...

Potential to detect medication errors before they  
happen....

Improve continuity of care for the patient.....



# Medication Reconciliation

---

- Errors that may be prevented
  - Failure to continue home medication
  - Failure to discontinue contraindicated home medication
  - Failure to clarify dosage, frequency, or route
  - Failure to recognize duplicate or missed doses when change in level of care
  - Failure to discontinue unnecessary medications when change in level of care



## What is the problem?

---

- Interfaces of care lack a process for comparing the patient's most current list of medications against new physician orders for admission, transfer, or discharge.
  - Continue "home meds"
  - Discharge on "home meds"
  - Patient transfer orders listing critical care infusions on medication records



# How are medications reconciled upon admission to hospital?

---

- Patient's home medications are compared to the physician's admission medication orders.
- Medication history:
  - Obtain from patient and/or family
  - If patient or family not able:
    - Transfer form if from another facility
    - Check with physician
    - Call patient's pharmacy
    - Have patient's medication brought in
    - Search through recent records



## How are medications reconciled upon transfer within the hospital?

---

- Patient's most current medication administration record is compared to the physician's transfer orders.
- Transfer with "same medications" not acceptable order.



## How are medications reconciled upon discharge?

---

- Patient's reconciled list of admission medications is compared against the physician's discharge orders.
  - Avoidance of potential duplicate therapy
  - Verification of dosing instructions
- "Discharge on same meds" – not an acceptable order.



## How are medications reconciled?

---

- Any medications, doses, routes, and/or frequencies that do not match must be “reconciled.”
- Discrepancies are brought to the attention of the physician.
- Any resulting medication changes are documented, thus communicating the rationale for the change to the healthcare team.



# Keys to Successful Implementation

---

- Teamwork
- Commitment to the process by nurses, pharmacists, and physicians is integral to achieving success
- Decentralization of pharmacy staff
- Structural support
  - Policies & procedures
  - Standardization
- Documentation tools
- Computerization and automation
- Staff training
- Patient education



## How are we going to do this?

---

- Most hospitals have developed a special form for the admission medication history....
- Form is completed by nurse who admits the patient or in some cases...
  - Pharmacist
  - Pharmacy technician
  - Other?



<b>PHYSICIAN ADMISSION &amp; DISCHARGE RECONCILIATION FORM</b>				<i>PLACE STICKER HERE</i>			
--	--	--	--	---------------------------	--	--	--

**P I L O T F O R M**

**KEEP THIS FORM WITH  
WITH PHYSICIAN ORDERS**

"Home" Prescription & Over the Counter Medications							Discharge Medications		
Order			Product Name <small>(List only those meds currently being taken)</small>	Dose <small>(mg, ml, gms number)</small>	How Often?	Route or Topical Site	Date & Time of Last Dose	Resume at same dose	Do Not Resume at Discharge to Home
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Already ordered						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Already ordered						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Already ordered						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Already ordered						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Already ordered						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Already ordered						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Already ordered						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Already ordered						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Already ordered						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Already ordered						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Already ordered						<input type="checkbox"/>	<input type="checkbox"/>
<b>Herbal Products NOT TO BE TAKEN IN HOSPITAL (Herbals will not be dispensed by Pharmacy.)</b>									
Date/Time			Signature of RN Obtaining Medication History						



## This is not about perfection!

---

- There is no perfect form...
- There is no perfect medication list...

**START WITH SOMETHING!**



## Operational Pitfalls

---

This is not going  
to be easy!



# Operational Pitfalls

---

- Staffing issues
  - RN shortage
  - Sick calls, vacations
- High number of admissions, discharges, transfers
- Accessibility to pharmacists
- Non-computerization of documents
- Availability of MD to do timely reconciliation
- Availability of inpatient & outpatient records
- Non-compliance with the process
- Uninformed patient populations



# Can we do it together?

---

- Follow the Massachusetts example
- Form an Arizona Coalition
- Combine improvement efforts
  - Professional organizations – Medicine, Pharmacy, Nursing, Quality, Healthcare Improvement
- Share success stories – tools – forms - ideas
- Provide consistent patient education and encouragement to use a medication list





## UNIVERSAL MEDICATION FORM

\*Fold this form and keep it in your wallet.

<b>Name:</b>	<b>Address:</b>
<b>Phone Number:</b>	<b>Street:</b>
<b>Birth Date:</b>	<b>City/State/Zip:</b>

<b>Allergic To/Describe Reaction:</b>	<b>Allergic To/Describe Reaction:</b>

List all prescription and over-the-counter (non-prescription) medications such as Vitamins, aspirin, Tylenol, and herbals (i.e.: Ginseng, Gingko Biloba, St. John's Wort). Include prescription meds taken as needed, (i.e.: Viagra, Nitroglycerin).

<b>DATE</b>	<b>NAME OF MEDICATION/DOSE</b>	<b>DIRECTIONS: USE PATIENT FRIENDLY DIRECTION. DO NOT USE MEDICAL ABBREVIATIONS</b>	<b>DATE STOPPED</b>	<b>Reason for taking/ MD Name</b>



---

## **Patients:**

- 1. Always keep this form with you.**
2. Take this form to **ALL** doctor visits and **ALL** medical testing (lab, x-ray, MRI, CT, etc.). Take this form to **ALL** pre-assessment visits for admission or surgery and **ALL** hospital visits (ER, in-patient admission, and out-patient visits).
3. Update this form as changes are made to your medications. If a medication is stopped, draw a line through it and record the date it was stopped. If help is needed, ask Physician, Nurse or Pharmacist to help you fill out this form.
4. In the COMMENTS column, record things like the name of doctor who told you to take this medication. You may also add the reason for taking the medication (high blood pressure, high blood sugar, and high cholesterol). Always keep this form with you.
5. Tell your family, friends and neighbors about the benefits of using this form.
6. When you are charged from the hospital, you will get an updated form. This will be reviewed with you and you will be given a copy. When you return to your doctor, take your updated form with you. Always keep this form with you. This will keep everyone up-to-date on your medications.

## **HOW DOES THIS FORM HELP YOU?**

### **By using this form, it**

- 1. Reduces confusion and saves time.** You do not have to remember all the medications you are taking, the form does this for you.
- 2. Improves communication.** Provides doctors, health care providers and institutions with a current list of ALL of your medications. Let's you or your family members know exactly what medications are to be taken and when.
- 3. Improves Medical Safety.** Medication interactions and suplications can be detected and corrected.



## Can we make a difference?

---

“The names of the patients whose lives we save can never be known. Our contribution will be what did *not* happen to them. And, though they are unknown, we will know that mothers and fathers are at graduations and weddings they would have missed, and that grandchildren will know grandparents they might never have known, and holidays will be taken, and work completed, and books read, and symphonies heard, and gardens tended that, without our work, would never have been.”

***Donald M. Berwick, MD, MPP  
President and CEO  
Institute for Healthcare Improvement***