Unintentional Medication Discrepancies

Technical Assistance Webinar
October 16 – 17, 2017

Jeffrey L. Schnipper, MD, MPH, FHM
Director of Clinical Research, BWH Hospitalist Service
Associate Physician, Division of General Medicine,
Brigham and Women's Hospital
Associate Professor, Harvard Medical School

Presenters

- **Hattie Main**, PharmD is a Clinical Pharmacy Specialist at McLeod Regional Medical Center in Florence, SC. In addition to her patient care responsibilities on the general cardiology floors of the hospital, Hattie is also the Medication History Technician Program Coordinator, and is on the Marquis2 Quality Initiative Team.
- **Sarah A. Bajorek**, PharmD, BCACP is the pharmacy supervisor for Transitions of Care and Medication Reconciliation at University of California, Davis (UCD) Health.
- **Luigi Brunetti**, PharmD, is currently an Associate Professor at the Ernest Mario School of Pharmacy, Rutgers University and a Clinical Pharmacist at Robert Wood Johnson University Hospital Somerset. He serves as a preceptor for both Internal Medicine and Anticoagulation Advanced Pharmacy Practice Experiential (APPE) learning clerkships for Rutgers pharmacy students.

Agenda

- Measure specifications
- Overview of data collection process
- Tools to assist sites in this process
- Hospital Presentations
- Questions

Measure Specifications

- Number of unintentional medication discrepancies in admission and discharge orders
  - Per medication, per patient
  - Excludes most neutraceuticals, OTCs, and PRNs, except where clinically relevant
  - Data collection on 10 randomly selected patients per quarter (2017 survey; 2018 survey tbd)

Overview of Data Collection Process

1. Identify and randomize patients
2. Meet patients, complete basic demographic information
3. Collect Gold Standard medication history
4. Compare GS history to Admission Orders
5. Compare GS history to Discharge Orders
6. Contact providers if necessary
7. Document results in Word and then Excel Worksheets

Overview of Data Collection Process

1. **Identify and randomize patients**
2. **Meet patients, complete basic demographic information**
3. **Collect Gold Standard medication history**
4. Compare GS history to Admission Orders
5. Compare GS history to Discharge Orders
6. Contact providers if necessary
7. Document results in Word and then Excel Worksheets

Identify and Randomize Patients

- Who: measure collection lead
- When: on a regular basis
    - Goal is 10 patients per quarter (2017 survey; 2018 survey tbd)
    - Sample patients admitted from different days of the week
        - E.g., 3/10 patients per quarter admitted on the weekend
- Obtain list of admitted patients the day before on target units/services
    - How would your site obtain this list?
- Copy and paste list into an Excel worksheet
- Use daily random number table we will provide
- Select top 5 patients to approach for each patient you need to interview
- Email list of names and room numbers to pharmacist

Identify and Randomize Patients

- 4/10/17
  - First patient to approach would be the 12th patient on your admission list, then the 15th, etc.

	A	B	C	D	E	F
1	Today's Date	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5
2	4/1/2017	6	13	5	1	27
3	4/2/2017	11	3	10	9	17
4	4/3/2017	5	7	24	8	27
5	4/4/2017	9	20	23	21	26
6	4/5/2017	20	29	22	26	18
7	4/6/2017	5	19	29	26	28
8	4/7/2017	2	24	12	11	5
9	4/8/2017	22	1	9	12	21
10	4/9/2017	23	26	15	25	1
11	4/10/2017	12	15	17	13	5
12	4/11/2017	20	11	26	19	18
13	4/12/2017	30	19	14	13	11

Collect Gold Standard Medication History

- Who: pharmacist
- When: within 24 hours of admission, usually next morning
- Use best practices to take this medication history
- Exclude the following categories of medications:
  - PRNs **except** inhalers, nitroglycerin, opioids, muscle relaxants, and sedatives
  - Topical lotions/creams, normal saline nasal spray, herbals, supplements, vitamins **unless** clinically relevant (e.g., iron in a patient with iron-deficient anemia, calcium and vitamin D in a patient with osteoporosis or known vitamin D deficiency)

Pharmacist Role: GS History

- Once GS Med Hx complete, enter data into Word worksheet for each medication
  - Medication name
  - Dose, route, frequency (DRF), including units
  - Check box if PRN, OTC
  - Patient adherence
  - Sources of data used to collect history

Sample Patient #: _____

Gold Standard Medication

Name:

Dose/Route/
Frequency:

Drug Class:
☐ PRN
☐ OTC

Pt Adherence:
☐ Completely non-adherent*
☐ Sporadically non-adherent
☐ Systematically non-adherent
☐ Adherent
*if completely non-adherent, do not include

Comments:

All Sources Used:
☐ Patient
☐ Pill Bottles
☐ Outpatient EMR
☐ Transfer Records
☐ Pharmacy(s)
☐ Other:
☐ Patient's family/Caregiver
☐ Pt's Own Med List
☐ Outpatient Provider(s)
☐ Past DC Summary
☐ Pharmacy Database

Overview of Data Collection Process

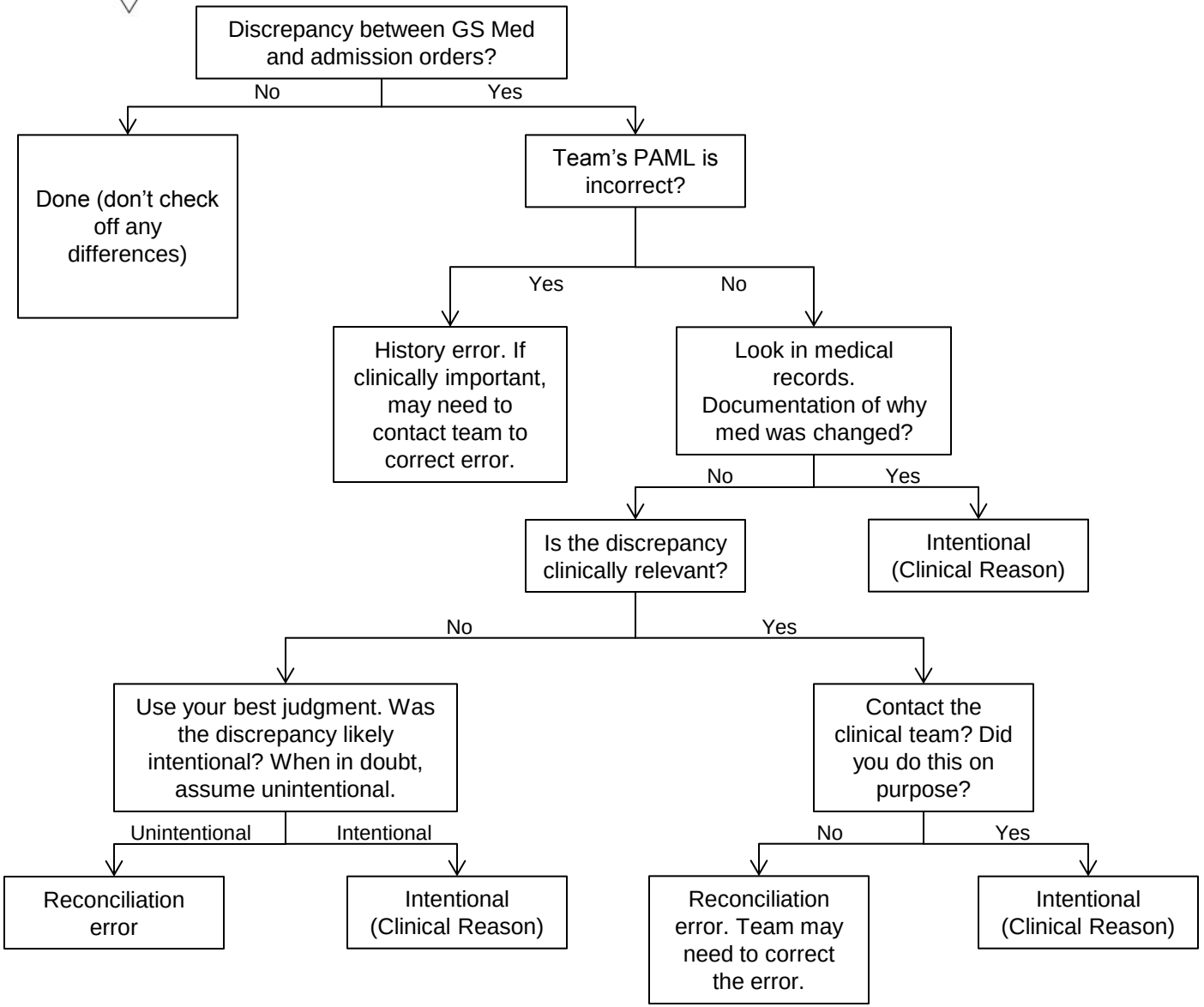
1. Identify and randomize patients
2. Meet patients, complete basic demographic information
3. Collect Gold Standard medication history
4. **Compare GS history to Admission Orders**
5. **Compare GS history to Discharge Orders**
6. **Contact providers if necessary**
7. **Document results in Word and then Excel Worksheets**

Identification of Discrepancies

- Compare GS Med Hx to Admission Orders
  - Who: pharmacist
  - When: After discharge
  - Pull up admission orders (usually in EHR)
  - For each medication in GS Med Hx, compare to admission orders and document in the paper form
    - Same
    - Omission
    - Different dose/route/freq
    - Duration
    - Substitution (i.e., different medication in class)
    - Duplication
    - Formulation
    - Additional medication
    - Other
  - Provide the medication name, dose/route/frequency, etc. under “Details”

shm MARQUIS
Multi-Center Medication Reconciliation Quality Improvement Study

Flow Diagram for Admission Discrepancies



Identification of Discrepancies

In certain situations, you may need to contact the provider

- Questions for Provider:
  - If possible, don't call the provider until the discharge orders have been written (to avoid altering measurement)
  - Call the admitting provider for questions about the admission orders and call the discharging provider for questions about the discharge orders
  - Complete reasons for discrepancies as needed (e.g., for admission discrepancy, whether reason is intentional vs. reconciliation error)
  - If there are serious unintentional discrepancies, you should contact the inpatient provider to correct them. If you do not hear back or are not satisfied with the response, then contact your Leapfrog site leader / CQO
    - Example: patient should have been discharged on a diuretic or an antiepileptic but was not

shm MARQUIS
Multi-Center Medication Reconciliation Quality Improvement Study

Document Admission Discrepancies

Admission Comparison

Note Differences:
(select all that apply)

- ☐ Dose
- ☐ Frequency
- ☐ Additional med
- ☐ Duplication
- ☐ Duration
- ☐ Omission
- ☐ Route
- ☐ Substitution
- ☐ Formulation
- ☐ Other:

Reason:

- ☐ Unintentional (History or Reconciliation Error)
- ☐ Intentional (Clinical Reason)

Were there any unintentional discrepancies between the gold standard and the admission order?

- ☐ **Yes**
- ☐ **No**

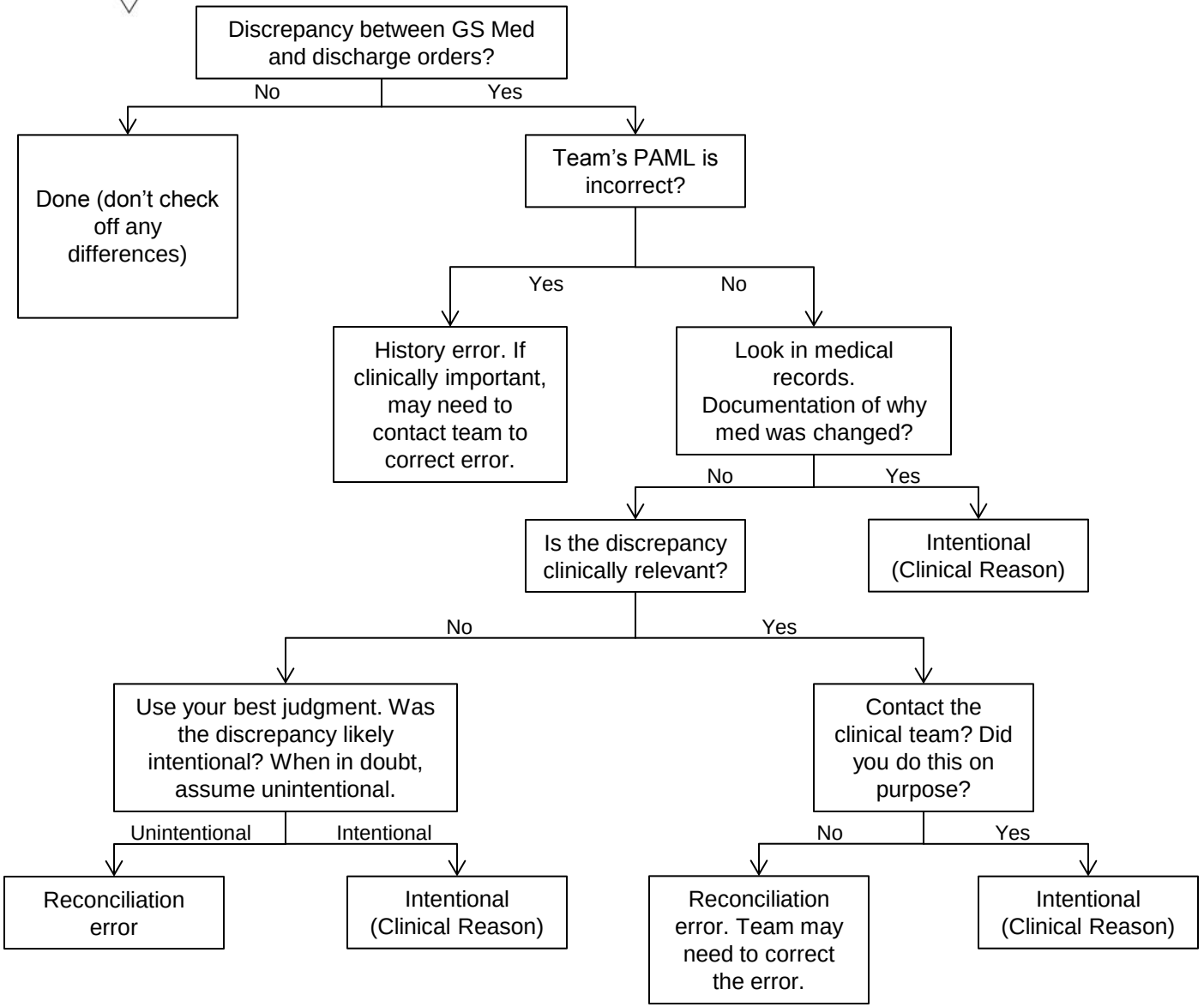
If "yes," count as 1

Identification of Discrepancies

- Compare GS Med Hx to Discharge Orders
  - Who: pharmacist
  - When: After discharge
  - Identifying who has discharge orders: site project manager will ideally do this at each site and email the pharmacists before noon each day.
    - Might need to contact case managers on the various teams/units to obtain more accurate information regarding pending discharges
  - Access discharge orders
  - For each medication in GS Med Hx, compare to discharge orders and document on the Word worksheet
    - Same
    - Omission
    - Different dose/route/freq
    - Duration
    - Substitution (i.e., different medication in class)
    - Duplication
    - Formulation
    - Additional medication
    - Other

shm MARQUIS
Multi-Center Medication Reconciliation Quality Improvement Study

Flow Diagram for Discharge Discrepancies



Tools and Resources

MARQUIS2 Toolkit

Society of Hospital Medicine
Hospitalists. Transforming Healthcare. Revolutionizing Patient Care.

MEMBERSHIP | EDUCATION | QUALITY & INNOVATION | PRACTICE MANAGEMENT | ADVOCACY

Quality & Innovation

Practical Strategies for Addressing Quality and Safety

Home | Download Manual | White Paper | Med Rec Resources

Overview | Medication Reconciliation Implementation toolkit

Unintentional medication discrepancies during transitions in care (such as hospitalization and subsequent discharge) are very common and represent a major threat to patient safety. One solution to this problem is medication reconciliation. In response to Joint Commission requirements, most hospitals have developed medication reconciliation processes, but some have been more successful than others, and there are reports of proforma compliance without substantial improvements in patient safety. There is now collective experience about effective approaches to medication reconciliation, but these have yet to be consolidated, evaluated rigorously, and disseminated effectively.

In 2010, the Agency for Healthcare Research and Quality (AHRQ) awarded the Society of Hospital Medicine (SHM) a $1.5 million grant for a three-year Multi-Center Medication Reconciliation Quality Improvement Study (MARQUIS). The goal of MARQUIS is to develop better ways for medications to be prescribed, documented, and reconciled accurately and safely at times of care transitions when patients enter and leave the hospital.

Role of the Hospitalist:

- Take responsibility for the accuracy of the medication reconciliation process for each patient under your care.
- Lead, coordinate, or participate in medication reconciliation quality improvement efforts along with other key team members on the "front lines" to inform the hospital QI team on key interventions that would lead to improved patient outcomes.
- Become trained in taking the "best possible medication history" and effective discharge medication counseling.
- Identify patients who are at high risk for a medication reconciliation error and would benefit from a more intensive medication reconciliation process.

Funded by AHRQ grant HS0195898

MARQUIS Project Team

MARQUIS Toolkit*

- A compilation of the “best practices” around medication reconciliation, with resources to support deployment of the intervention components

  - MARQUIS Implementation Manual
  - Best Possible Medication History (BPMH) Pocket Cards
  - **Taking a Good Medication History Video**
  - Good Discharge Counseling Video
  - ROI Calculator

**All available for download at www.hospitalmedicine.org/marquis*

BPMH Pocket Guide

shm MARQUIS 2
Multi-Center Medication Reconciliation
Quality Improvement Study

Best Possible Medication History (BPMH)

Quick Tips

Goal → Obtain complete information on the patient's medication regimen, including:

- Name of each medication
- Formulation (e.g., extended release)
- Dosage, Route, Frequency
- Non-prescription medications (e.g., herbals, OTCs, vitamins)

Try to use at least two sources of information and explore discrepancies between the different sources.

If your starting point is a medication list:

- Review and verify each medication with the patient.
- It is best to start by having the patient tell you what he or she is taking; do not read the list aloud asking if it is correct.

Questions to elicit a complete medication list:

- For each medication, elicit the dose and time(s) of day taken.
- When appropriate, ask about formulation and route of administration.
- Start with an open-ended question: What medications do you take at home?
- Use ***Probing Questions*** (on the back) to minimize missed medications.

Time-saving tips:

- ✓ Start with easily accessible sources (e.g., outpatient EMR med list, recent hospital discharge orders).
- ✓ If patients use a list or pill bottles and seem completely reliable (and data are not that dissimilar from the other sources, and/or the differences can be explained), then other sources are not needed.
- ✓ If patients are not sure, relying on memory only, or cannot clearly "clean up" the other sources of medication information, then use additional sources such as community pharmacy data.
- ✓ If the medication history is still not clear (e.g., suspected differences between what the patient is supposed to be taking and what they actually take) then contact outpatient physician office(s) and/or have the family bring in the pill bottles from home.

BPMH Pocket Guide

Probing Questions:

- ✓ Ask about **scheduled medications.**
- ✓ Ask about **PRN medications.**
  - Which medicines do you take only sometimes?
  - What symptoms prompt you to take them?
  - How many doses per week do you take?
  - What is the most often you are allowed to take it?
  - Do you often take something for headaches? Allergies? To help you fall asleep? When you get a cold? For heartburn? For constipation?
- ✓ **Assessing the purpose of each medication** may lead to additional prompts.
  - What is each medicine for?
  - Do you take any other medications for that?
- ✓ Ask about **medications for specific conditions** that the patient has.
  - What medicines do you take for your diabetes, high blood pressure, etc.?
- ✓ Ask about **medications prescribed by subspecialists** who follow the patient.
  - Does your [arthritis doctor] prescribe any medications for you?
- ✓ Ask about **medications that are easy to forget.**
  - Do you take any inhalers, nebulizers, nasal sprays, ointments, creams, eye drops, ear drops, patches, injections or suppositories?
  - Do you take any medications in the evening or at night?
  - Do you take any medicines once a week or once a month?
- ✓ Ask about **non-prescription products.**
  - Which medicines do you take that do not require a prescription? (Over-the-counter medicines, vitamins, herbals and minerals)
- ✓ Assess **recent medication use and adherence.**
  - When did you take the last dose of each of your medicines?
  - Tell me about any problems that you have had taking these medicines as prescribed.
  - Many patients have difficulty taking their medications exactly as they should every day. In the last week, how many days have you missed a dose of your [medication]?

The MARQUIS projects were supported by grant numbers 5R18HS019598-03 and 5R18HS023757-02 from the Agency for Healthcare Research and Quality. The content is solely the responsibility of the authors and does not necessarily represent the official views of the Agency for Healthcare Research and Quality.

shm MARQUIS 2
Multi-Center Medication Reconciliation Quality Improvement Study

Best Possible Medication History (BPMH)

Quick Tips

Additional Resources for Leapfrog Sites

- Recorded two-part webinar for pharmacists
  - How to take a gold-standard medication history
  - How to measure discrepancies
  - Comes with homework related to John Doe case
  - Covers additional optional tasks related to MARQUIS2 study