Medication Reconciliation
The Care Transitions Network

National Council for Behavioral Health
Montefiore Medical Center
Northwell Health
New York State Office of Mental Health
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Today’s Agenda

• Mediation reconciliation overview
  • Defining medication reconciliation and how it can enhance your organization’s goals

• Medication reconciliation with an individual patient
  • What data needs to be collected and how to obtain the data

• Operationalizing medication reconciliation
  • How to get medication reconciliation done at your organization
Medication Reconciliation Defined

• The process to reconcile discrepancies between the medications prescribed for a patient (as understood by the prescribing physician or nurse practitioner and documented in the medical record) and the actual medications taken by the patient.

• For our discussion today, “medications taken” includes both whether a medication is taken at all and, if taken, whether the medication is taken at the prescribed dose and frequency.
Poor Outcomes From Medication Discrepancies

• It has been estimated that if all patients took their medications exactly as prescribed there would be $290 billion dollars of avoidable medical cost savings in the US alone.
Causes of Medication Discrepancies

• Patients may intentionally not take prescribed medications (e.g., out of a belief that the medications are not needed, or to minimize side effects)

• Patients may intentionally take medications only intermittently even though continuous use is prescribed/evidence-based

• Patients may intentionally take medications that are not prescribed (e.g., continue to use a discontinued medication, or covertly use over-the-counter medications)
Causes of Medication Discrepancies

• Patients may be trying to follow the prescribed medication regime but be unable to do so (symptoms or cognitive deficits may compromise the ability to follow medication regimes)

• Patients may not be able to afford their prescribed medications or be able to pick them up at the pharmacy

• Patients may not be able to follow medication regimes if providers and other staff do not communicate these clearly or deliver regimes effectively
Causes of Medication Discrepancies

• The medical record may be inaccurate due to process of care issues, such as:
  • Prescribers not documenting correctly medication changes they make in the medical record
  • Inadequate communication between different prescribers making independent medication changes
Risk Groups For Medication Discrepancies

• Patients who are prescribed a number of different medications
• Patients who report poor emotional well-being
Transitions of Care and Medication Discrepancies

• Transitions of care often occur at times when prescribed medications are changed and vice versa. The severity of symptoms necessitating inpatient admission may require medication changes and efforts to insure that these changes are effectively communicated to patients and to all treating clinicians are required.

• However, it is important to emphasize that medication discrepancies are frequent in long-term ambulatory care and are not confined to transitions of care.
Information You Need to Gather

- Prescription medications
- Over-the-counter (OTC) drugs
- Vitamins
- Herbals
- Nutraceuticals/Health supplements
- Respiratory therapy-related medications (e.g., inhalers)
For Each Medication, You Need

- Name of the medication
- Strength
- Formulations (e.g., extended release, controlled delivery, etc.)
- Dose
- Route
- Frequency
- Last dose taken
Sources of Information

• Patient
• Family/caregiver
• Patient’s medication bottles
• Patient’s pharmacy
• Patient’s physicians and their offices or clinics
• Past medical records
• Patient’s own medication list
Some Points to Consider #1

• Patients
  • Often identify medications by color or shape
  • If there are multiple suppliers for a medication, there will be different colors and shapes for the same medication
  • The “blue pill” they usually get from the pharmacy may not be blue with the last filled prescription

• Family/Caregiver
  • Their level of information may vary over time
Some Points to Consider #2

• Patients’ medication bottles
  • Labels can be deceptive as patients may not be following the label directions
  • Tablets may be cut into different dose strengths than the label dose
  • May help identify medications not known to the prescriber
  • Patients may not identify over-the-counter, vitamins or other non-prescription medications as among their “medication bottles”
Medication History Taking Tips

• Ask about routes of administration other than oral medicines (e.g., “Do you put any medications on your skin?”)
  • Patients often forget to mention creams, ointments, lotions, patches, eye drops, ear drops, nebulizers, and inhalers

• Ask about what medications are taken for medical conditions (e.g., “What do you take for your diabetes?”)

• Ask about the types of physicians that prescribe medications for the patient (e.g., “Does your ‘diabetes doctor’ prescribe any medications for you?”)
Medication History Taking Tips

• Ask about when medications are taken (e.g., time of day, week, month, as needed, etc.)
  • Patients often forget to mention infrequent dosing regimens, such as monthly

• Ask if their doctor recently started them on any new medicines, stopped medications they were taking, or made any changes to their medications

• If the patient does not have their medications at the interview for review, ask them to describe their medication by color, size, shape, etc., may help to determine the dosage strength and formulation

• Calling the patient’s caregiver or their community pharmacist may be helpful to determine an exact medication, dosage strength, and/or directions for use
Medication History Taking Tips

• For inquiring about non-prescription medications, additional questions may include:
  • What do you take when you get a headache?
  • What do you take for allergies?
  • Do you take anything to help you fall asleep?
  • What do you take when you get a cold?
  • Do you take anything for heartburn?
As discussed, medication reconciliation is a complex process and can involve integrating different data sources.

Accuracy requires effort and resources.

In the next sections, we discuss how to obtain organizational support and what to do once you get organizational support.

White House Medicine Cabinet during the Madison administration
Operationalizing Medication Reconciliation

• **STEP 1:** Get Organizational Support
• **STEP 2:** Assemble Your Project Teams
• **STEP 3:** Create a Flowchart of Current Practices
• **STEP 4:** Develop a Work Plan
• **STEP 5:** Establish a Measurement Strategy
• **STEP 6:** Design the Medication Reconciliation Process
• **STEP 7:** Pilot Testing
• **STEP 8:** Develop an Education and Training Strategy
• **STEP 9:** Assessment and Process Evaluation
STEP 1: Get Organizational Support

Important issues include:

• Medication reconciliation as a patient safety issue
• Resource justification
• Linking medication reconciliation with other initiatives
Medication reconciliation as a Patient Safety Issue

• Reported variances between medications patients were taking prior to hospital admission and their admission orders range from 30% to 70% depending upon the study

• In one study, 36% of patients had errors in their admission medication orders
Financial Justification

• Chose an outcome that can be evaluated from a financial perspective
• For example, medication discrepancies may cause adverse drug events (ADEs)
• Cost estimates for an ADE vary from $4,800 to as high as $10,375
• Calculate the costs of ADEs per year that could be prevented by medication reconciliation
• Calculate the costs of performing the medication reconciliation
• This allows calculation of the annual net savings
Financial Justification Example for a Hospital

Number of discrepancies per patient
X Number of patients per year that one person can reconcile
X Percent of patients with discrepancies that would result in an ADE
X Percent effectiveness of process
X Cost of an average ADE

= Annual gross cost savings
- Salary of Employee

= Annual Net Savings
Financial Justification Example for a Hospital

• 1.5 (discrepancies per patient admitted to hospital)
• X 6000 patients (average of 20 minutes/patient to complete medication reconciliation)
• X 0.01 (1% of discrepancies would result in an ADE)
• X 0.85 (85% of discrepancies avoided through medication reconciliation process)
• X $2500 (conservative cost of an ADE)
• = $191,250 annual gross savings
• - $45,000 (salary and benefits of an incremental pharmacy technician)
• = $146,250 annual net savings (325% return on investment in a new staff member)
Linking Medication Reconciliation With Other Initiatives-Examples

• The Joint Commission (TJC) National Patient Safety Goals (NPSGs)
• Centers for Medicare and Medicaid Services (CMS) process of care (core) measures
• Survey of Patients Hospital Experience
• Hospital readmissions
• Care Transitions Network
• Other national quality improvement activities
STEP 2: Assemble Your Project Teams

• Leadership team: provides oversight for the medication reconciliation project
  • Typically senior management
• Design team: develops the medication reconciliation process or modifies/improves existing procedures
• Additional stakeholders: stakeholders who will be directly or indirectly affected by new policies or who will be involved in implementing the new policies
STEP 3: Create a Flowchart of Current Practices

• Map the flow of medication information and procedures as patients move between care settings
• Identify staff involved at each step
• For each step, identify gaps and/or inconsistent procedures
STEP 4: Develop a Work Plan

- Set goals and objectives
- Fulfill regulatory requirements
- Determine project scope
- System capabilities/deliverables
- Resources needed for a successful project
- Project milestones (achievements throughout the project) and timeline
STEP 5: Establish a Measurement Strategy

• Choose what to measure and how to measure
• Are there existing medication reconciliation measures?
• Are there measures from your EHR?
• Does your organization collect data on Adverse Drug Events? Hospitalizations associated with medication discrepancies?
STEP 6: Design the Medication Reconciliation Process

• Develop a single medication list (“One Source of Truth”), shared by all disciplines for documenting the patient’s current medications
• Clearly define roles and responsibilities for each discipline involved in medication reconciliation
• Standardize and simplify the medication reconciliation process throughout your organization
• Make the right thing to do the easiest thing to do within the patterns of normal practice
• Develop effective prompts or reminders for consistent performance
• Educate patients and their families or caregivers on medication reconciliation and the important role they play in the process
• Ensure process design meets all pertinent local laws or regulatory requirements
STEP 7: Pilot Testing

• Identify areas in need of improvement
• Identify training needs
STEP 8: Develop an Education and Training Strategy

• Training and education for the organization’s staff about medication reconciliation and the specific project’s goals and procedures
• Training for staff directly involved in medication reconciliation procedures
STEP 9: Assessment and Process Evaluation

• Manual vs. electronic audits
• Compliance metrics defined
• Compliance goals vs. obtained
Summary

• Discrepancies between what medications patients take and what the treatment team believes are being taken are frequent and often contribute to poor outcomes

• Medication reconciliation projects can reduce these discrepancies and provide better patient outcomes

• The adverse outcomes associated with medication discrepancies can be costly and reduction of these costs can offset the costs of medication reconciliation procedures

• An organizational effort is often needed to support medication reconciliation initiatives
Next Steps

• Determine how a medication reconciliation initiative would further your organization’s goals

• Explore with senior leadership the possibility of a medication reconciliation initiative at your organization

• If your organization already has a medication reconciliation process, explore how this process could be enhanced
The project described was supported by Funding Opportunity Number CMS-1L1-15-003 from the U.S. Department of Health & Human Services, Centers for Medicare & Medicaid Services.

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