Advancing Excellence in Health Care

Improving Medication Management Safety During Care Transitions: The MATCH Toolkit

Iowa Healthcare Collaborative
Hospital Engagement Network (HEN)
Learning Communities
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Northwestern Memorial Hospital
Chicago, Illinois

- 894-bed Academic Medical Center
- Primary Teaching Affiliate of Northwestern University Feinberg School of Medicine
- Magnet Recognition for Nursing Excellence
- Honored with the National Quality Health Care Award
- One of two national finalists in the American Hospital Association’s McKesson Quest for Quality award
- Affiliated with Northwestern Lake Forest Hospital, a community hospital serving northern Illinois, in February 2010

Feinberg and Galter Pavilions
Prentice Women’s Hospital
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- The Joint Commission

Objectives

- Understand the importance of incorporating medication reconciliation practices throughout the continuum of care utilizing a team approach

- Explore ways to achieve synergies linking medication reconciliation with other current initiatives

- Provide an overview of the MATCH Toolkit for implementing a sustainable medication reconciliation process
Medication Reconciliation Process

Goal to decrease medication errors and patient harm by:

1. **Obtaining, verifying, and documenting** patient’s current prescription and over-the-counter medications; including vitamins, supplements, eye drops, creams, ointments, and herbals

2. **Comparing** patient’s pre-admission/home medication list to ordered medicines and treatment plans to identify unintended discrepancies

3. **Discussing** unintended discrepancies (e.g., those not explained by the patient’s clinical condition or formulary status) with the physician for resolution

4. **Providing and communicating** an updated medication list to patients and to the next provider of service at discharge

*Adapted from The Joint Commission National Patient Safety Goal 03.06.01*

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**WHY MEDICATION RECONCILIATION?**
Statistics on U.S. Prescription Drug Use

- Based on 2005-2008 data, the question "in the past month, percent of persons using at least X prescription drug (s)?" revealed:
  - One prescription drug: 47.9%
  - Three or more prescription drugs: 21.4%
  - Five or more prescription drugs: 10.5%

- Based on 2009 data, statistics stratified by type of medical visit reveal:

<table>
<thead>
<tr>
<th>Types of Medical Visits</th>
<th>Number of Drugs Ordered or Provided</th>
<th>Percent of Visits Involving Drug Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician Office Visits</td>
<td>2.6 billion</td>
<td>74.4%</td>
</tr>
<tr>
<td>Hospital Outpatient Department Visits</td>
<td>255 million</td>
<td>75.5%</td>
</tr>
<tr>
<td>Hospital Emergency Department Visits</td>
<td>267.7 million</td>
<td>78%</td>
</tr>
</tbody>
</table>


Institute of Medicine
“Preventing Medication Errors”

- At least 1.5 million preventable adverse drug events (ADEs) occur in the U.S. annually in all settings, not including errors of omission.

- Errors and ADEs are a “very serious cause for concern” in hospitals. Phases with the highest errors: prescribing & administration.

- Estimated 400,000 in-hospital preventable ADEs / year.
  - Cost per ADE: $8,750 (2006 dollars)
  - Cost increases when extrapolated to 2012 dollars

Avoiding Readmissions: Preventing AEs After Hospital Discharge

- Study of 400 consecutive hospitalized general medicine patients discharged home
  - 19% had an adverse event (AE) within 3 weeks of discharge
  - 66% of AEs were adverse drug events (ADE)
  - Most ADEs were preventable or ameliorable

- System modifications recommended by study authors:
  - Evaluate patients prior to discharge to identify unresolved problems
  - Educate patients about drug therapies, side effects, and what to do if new or worsening signs/symptoms
  - Improve monitoring of therapies
  - Improve monitoring of patients’ overall condition


Does Medication Reconciliation Impact the Patient Experience?

Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Domains:
- Communication with Nurses
- Communication with Doctors
- Responsiveness of Hospital Staff
- Pain management*
- Communication about medicines*
- Discharge information*
- Cleanliness of hospital environment
- Quietness of hospital environment
- Overall rating of hospital
- Willingness to recommend hospital

*Impacted by Medication Reconciliation

During this hospital stay, staff took my preferences and those of my family or caregiver into account in deciding what my healthcare needs would be when I left.

When I left the hospital, I had a good understanding of the things I was responsible for in managing my health.

When I left the hospital, I clearly understood the purpose for taking each of my medications.

Scale: Strongly disagree, Disagree, Agree, Strongly agree

ACHIEVING SYNERGIES:
LINKING MEDICATION RECONCILIATION WITH OTHER CURRENT INITIATIVES
“Levels” of Medication Reconciliation
Are We at the Beginning or Nearing the End?

1. Obtaining and reconciling list of patient’s current medications to orders to identify/correct unintended discrepancies to prevent patient harm.
2. Reconciling medication regimen to patient’s condition(s) (e.g., purpose).
3. Reconciling medication regimen to recommended evidence-based therapies.
4. Adjusting medications based on patient characteristics (e.g., renal or liver function, age) and/or interactions (e.g., drug-drug, drug-food).
5. Optimizing medication therapy based on patient response / outcomes.

Dynamic process that involves ongoing assessment, monitoring and patient education.

“Bundling” Medication Reconciliation with Current Initiatives

Care Transitions

ED → Admission → Intra-hospital Transfer → Discharge → Post-Discharge

Phases of Medication Management

Med History, Reconcile → Order, Transcribe, Clarify → Procure, Dispense, Deliver → Administer → Monitor → Educate, Discharge

Identifying Opportunities to “Bundle” Medication-related Initiatives

- Reducing medication-related readmissions
- Process of Care (Core) Measures (e.g., AMI, HF, PN, SCIP)
- Meaningful Use of EHRs involving medication management
- Avoiding preventable ADEs
- TJC Medication Management Standards and NPSGs (e.g., high alert meds, anticoagulants)
- Patient Experience (HCAHPS)
Example of Building Synergies: Care Transitions and Medication Reconciliation

Phases of Medication Management

- ED
- Admission
- Intra-hospital Transfer
- Discharge
- Post-Discharge

Pre-Discharge Interventions
- Patient education
- Medication Reconciliation
- Discharge planning
- Scheduling follow-up appointment

Bridging Interventions
- Transition coaches
- Physician continuity across settings
- Patient-centered discharge instructions

Post-Discharge Interventions
- Follow-up telephone calls
- Patient-activated hotlines
- Timely communication with next provider of service
- Timely follow-up with ambulatory provider

Goal: Avoid Adverse Drug Events and Readmissions

MEDICATIONS AT TRANSITIONS AND CLINICAL HANDOFFS: THE MATCH TOOLKIT
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MATCH Toolkit: Step-by-Step Guide to Improving Medication Reconciliation

Contents
- Acknowledgments
- Introduction
- Chapter 1: Building the Project Foundation: Gaining Leadership Support Within the Organization
- Chapter 2: Building the Project Foundation: Project Teams and Scope
- Chapter 3: Developing Change: Designing the Medication Reconciliation Process
- Chapter 4: Developing and Pilot Testing Change: Implementing the Medication Reconciliation Process
- Chapter 5: Education and Training
- Chapter 6: Assessment and Process Evaluation
- Chapter 7: High Risk Situations for Medication Reconciliation
- Conclusion
- References

MATCH Toolkit, with customizable, actionable information, is available at: http://www.ahrq.gov/qual/match/match.pdf

Identify the problem and goal
Measure current performance
Validate key drivers of error
Fix the drivers of poor performance
Use mechanisms to sustain improvement

Systematic Approach to Improvement: MATCH Toolkit Framework
DMAIC is a step by step process improvement methodology used to solve problems by identifying and addressing root causes

For more DMAIC information, including free access to a toolkit and project templates, visit the Society for Healthcare Improvement Professionals website at www.shipus.org
MATCH Toolkit Structure
Using the DMAIC Framework

DEFINE
Build the Project Foundation
Identify Team Members
Process Map
Develop a Charter

MEASURE
Establish a Measurement Strategy
Data Collection Plan
Collect Data
Identify Key Drivers

ANALYZE
Design/ Redesign the Process
Flow Chart
Gap Analysis
Process Design

IMPROVE
Implement the Process
Implementation Plan
Pilot Test
Education / Training

CONTROL
Assess and Evaluate
Monitor Performance
Address low compliance
Sustainability

Guiding Principles

- Clearly define roles and responsibilities
- Standardize, simplify, and eliminate unnecessary redundancies
- Make the right thing to do the easiest thing to do
- Develop effective forcing functions, prompts, and reminders
- Educate clinicians, patients, families, and caregivers
- Ensure process design meets all pertinent local laws or regulatory requirements
Strategies to Overcome Lack of Resources and Time

1. Get Leadership Buy-In
   • Let them know why they should care: Patient Safety, Public Reporting, Financial Incentives

2. Bundle the Work
   • Identify similarities among projects – get 2 things accomplished for the price of 1

3. Identify Opportunities for “Quick Wins”
   • Prioritize changes that may be easily developed and implemented

Determining the Project Scope

Begin by identifying all areas within your facility where patients receive medication
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Developing a Medication Reconciliation Project Charter (Work Plan)

DMAIC Project Charter Template

PROJECT NAME:
Overview:
• Linkage to Hospital’s Strategic Plan or Regulatory Requirements:
• Problem Statement:
• Goal/Benefit:
• Scope:
• System Capabilities/Deliverables:
• Resources Required:

KEY METRIC(S):
MILESTONES:
Description Date (m/dd/yr)
#1
#2
#3
#4
#5

Executive Sponsor: Sponsor: Process Owner: Quality Improvement Leader:

Collecting Data: Sample Customizable Template

- Work with the team and staff to identify potential drivers and build a data collection form
- Seek assistance from the team and staff in collecting the data to increase buy-in
- Graph the data you collect to (1) confirm how you plan to use the data and (2) identify any missing data elements
- Identify & address problematic issues that drive outcomes
Flow Charting the Process

A flowchart outlines current workflow and helps identify:
- Successful medication reconciliation practices
- Current roles and responsibilities for each discipline at admission, transfer, and discharge
- Potential failures and gaps in the process
- Unnecessary redundancies

Designing a Successful Med Rec Process

Best Practice: A single medication list, "One Source of Truth"
Improvement Planning
To implement solutions successfully, five areas must be carefully considered and planned for:

1. Interventions
2. IT
3. Communication
4. Training
5. Measurement

Be sure to always include…
- Detailed actions
- Team member assignments
- Completion dates

Pilot Testing
Piloting solutions ensures they work on a small scale and allows the team to identify and resolve issues prior to a house wide roll out.

A Pilot Should Be Used When
- Change covers a large scope
- Change is costly
- Change is difficult to reverse
- People are sensitive to the change
- Unintended consequences may result as part of the change

When Piloting, ensure the scope of the pilot is represented, it can be reproduced on a larger scale, and it is measurable
Sustainability

Post-Implementation Strategies to Increase and Sustain Compliance:

- Address barriers that result in low compliance
- Conduct focus groups
- Take medication reconciliation on the road
- Reassess, at a minimum, annually

ACCESSING AVAILABLE TOOLS AND RESOURCES FROM AHRQ
AHRQ Tools and Resources available at: http://www.ahrq.gov/qual/
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THANK YOU!

If you want to learn more about Northwestern Memorial Hospital, please visit our website at http://www.nmh.org