

Reconciling Medications

Lessons Learned from the MHA/MA Coalition Collaborative

Maryland Patient Safety Center

Paula Griswold

April 19 , 2007

**Massachusetts Coalition
for the
Prevention of Medical Errors**

Objectives: **Reconciling medications**

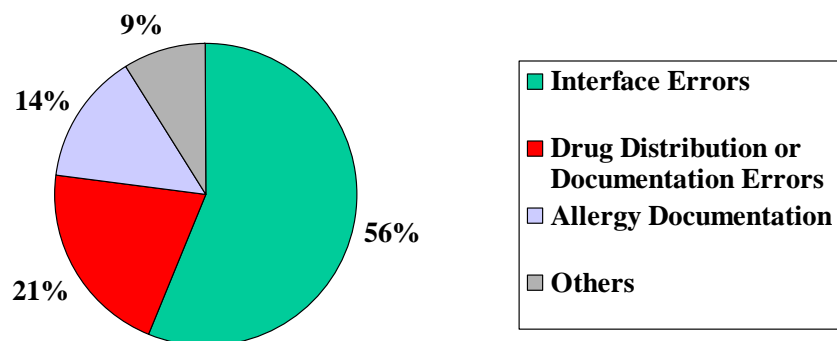
- Provide an understanding of the scope of the problem of unreconciled medications
- Provide an understanding of the safe practices for reconciling medications
- Provide lessons for successful implementation

**Massachusetts Coalition
for the
Prevention of Medical Errors**

Massachusetts Collaborative

- 50 acute care hospital teams
- Voluntary collaborative model
 - Engage leadership
 - Identify safe practices
 - Access to experts, resource toolkit
 - 5 Collaborative meetings: sharing strategies
- MA Coalition and MHA partnership, funding from AHRQ thru MA DPH

Medication Errors Based on Chart Review



Unintended medication discrepancies at admission

Studies show over half of patients have discrepancies between home medications and medications ordered at admission, many with potentially serious results

- 54% of patients; 39% potentially serious [Cornish *Arch Intern Med* 2005]
- More than half; 59% could have caused harm if the error continued after discharge [Gleason *Am Jnrl H-Sys Pharm* 2004]
- 67% of patients [Lau *Br J Clin Pharm* 2000]
- 60% of elderly patients [Beers *J Am Geriatr Soc* 1990]

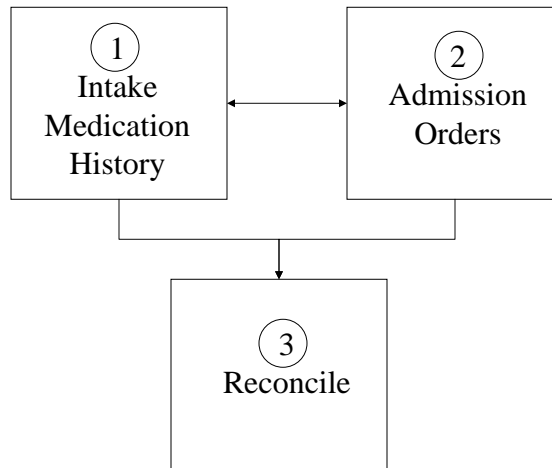
Massachusetts Coalition
for the
Prevention of Medical Errors

What is Reconciling Medications?

A process that compares a patient's best known list of current medications against the physician's admission, transfer and/or discharge orders. Discrepancies are brought to the attention of the prescriber and, if appropriate, changes are made to the orders.

Massachusetts Coalition
for the
Prevention of Medical Errors

Reconciling process: admission



Reconciling form

Systematic format for collecting information and identifying variances

DRUG	DOSE	ROUTE	FREQ	Admit Order Matches Exactly? (Y/N)	If NO, MD Contacted? (Y/N)	Variance Resolved? (Y/N)

JCAHO's National Patient Safety Goal 8

Accurately and completely reconcile medications across the continuum of care.

Massachusetts Coalition
for the
Prevention of Medical Errors

JCAHO NPSG on Reconciling

- 8a: There is a process for comparing the patient's current medications with those ordered for the patient while under the care of the organization.
 - *Process*; reconciling form can be centerpiece
 - Complete list, but realistic ("due diligence")
 - Involve the patient
 - Documentation: the pre-admission med list (make it part of the medical record)

Massachusetts Coalition
for the
Prevention of Medical Errors

JCAHO NPSGs on reconciling

- 8b: A complete list of the patient's medications is communicated to the next provider of service when a patient is referred or transferred to another setting, service, practitioner or level of care within or outside the organization. **The complete list of medications is also provided to the patient on discharge from the facility.**

Massachusetts Coalition
for the
Prevention of Medical Errors

Impact

- Rate of medication errors reduced 70% in short seven month period
- ADEs reduced by over 15%
- Significant efficiency gains

	<u>Time saved</u>
■ At admission (nurse):	20-25 min.
■ Transfer from CCU:	25-45 min.
■ At discharge (pharmacist):	35-50 min.

Source: Luther Midelfort
[Rozich, Resar JCOM Oct. 2001]

Massachusetts Coalition
for the
Prevention of Medical Errors

Underlying safety tenets

- Standardize processes
- Make errors more visible
- Independent redundancies
- Improve access to information
- Reduce reliance on memory

Massachusetts Coalition
for the
Prevention of Medical Errors

Collect complete and accurate pre-admission medication lists

1. Collect complete list of current medications for each patient on admission
2. Validate the pre-admission list with the patient
3. Assign primary responsibility to someone with expertise, within context of shared accountability

Massachusetts Coalition
for the
Prevention of Medical Errors

Write accurate admission orders

4. Use the pre-admission medication list when writing orders
5. Place reconciling form in consistent visible location in the chart

Massachusetts Coalition
for the
Prevention of Medical Errors

Reconcile all variances

6. Assign responsibility for reconciling variances between pre-admission medications and new orders to someone with expertise
7. Reconciling patient medications within timeframe

Massachusetts Coalition
for the
Prevention of Medical Errors

Provide continuing support and maintenance

8. Adopt a standardized form for collecting pre-admission list and reconciling variances
9. Develop clear policies and procedures for each step
10. Provide access to drug information and pharmacist advice at each step

Massachusetts Coalition
for the
Prevention of Medical Errors

Provide continuing support and maintenance (contd.)

11. Improve access to complete medication lists at admission
12. Provide orientation and ongoing education
13. Provide feedback and monitoring

Massachusetts Coalition
for the
Prevention of Medical Errors

Reconciling at Transfer

Compare most recent med record (MAR) and home med list against transfer orders. Issues:

- Access to reconciling form with home med history at point when new orders written
- Need to modify reconciling form to add columns for reconciling at transfer?
- Identifying responsibilities of both the transferring and the receiving unit
- Embedding into workflow: Who writes transfer orders? When? Where?

Massachusetts Coalition
for the
Prevention of Medical Errors

Reconciling at Discharge

- Patients especially vulnerable immediately post-discharge
 - Over 12% of patients with an ADE within 2 weeks of discharge [Forster 2003]
- Address potential for doubling up based on formulary substitutions or other brand/generic name confusions
- Prohibit “resume home meds”!!!
- Verification of dosing instructions

Massachusetts Coalition
for the
Prevention of Medical Errors

Implementation Strategies

Massachusetts Coalition
for the
Prevention of Medical Errors

Successful Implementation

Challenging & complex

- Actively engaged senior administrator
- Active physician engagement
- Active nurse involvement
- Using small tests of change
- Greater participation of team in the Collaborative

Massachusetts Coalition
for the
Prevention of Medical Errors

Resource requirements

- During testing/implementation phase
 - Make explicit allocation for those with patient care responsibilities
 - Managers need to pay attention to workloads; don't assign tests to someone overloaded
- Ongoing
 - Build into regular workflows
 - Collecting home history IS time consuming; some have added resources to support that (e.g. pharmacy techs)

Getting started

- 1) Initiate leadership dialog – resource commitment, regular reporting channels
- 2) Form a multidisciplinary team
- 3) Risk assessment/baseline measurement
- 4) Mission and Aim statement, timeline
- 5) Pick pilot unit
- 6) Begin testing

Leadership

- Committed: set the standard -- this is how we will practice
- Appoint an *executive sponsor* to the team
- Resourcing: allocate time for work on testing
- Remove barriers: e.g. forms committee review, IT support
- Regular review of RESULTS

Massachusetts Coalition
for the
Prevention of Medical Errors

Reconciling teams

- Executive sponsor
- Clinical leadership: physician, nursing, pharmacy, P&T/Patient Safety/QI/RM rep
- Front-line caregivers: nursing all shifts
- Special successes from engaging hospitalists, staff education, IT, VNA, medical records, care managers, chief resident
- Mini-teams on each implementation unit
- Huddles

Massachusetts Coalition
for the
Prevention of Medical Errors

Baseline risk assessment

- Chart review
 - Institution-wide
- Mini-FMEA, flow charting existing processes
 - Do in conjunction with initial tests of change
- Just-enough measurement/analysis
 - Don't get bogged down here!!

Massachusetts Coalition
for the
Prevention of Medical Errors

Mission and aim:

- Missions: Every patient will receive all medications they have been taking at home unless they are held/discontinued by their caregiver(s)
- Aim: Reduce the rate of unreconciled medications at admission by 75% within 9 months (target < 5% unreconciled)

Massachusetts Coalition
for the
Prevention of Medical Errors

Selecting a pilot unit: choosing where to start

- Use risk assessment process
- Look for willing volunteers
- At admission logical place
 - Pros & cons: Med vs Surg units
 - Some success starting @ transfer: ICU, CCU, telemetry units
 - Probably not ED

Massachusetts Coalition
for the
Prevention of Medical Errors

Start small, focus on one unit

- Need to TEST
 - 1 unit... 1 RN... 1 MD... 1 patient...
 - Add more staff, more shifts, refining process and form
 - Achieve consensus and educate staff, MDs before spreading to additional units

Massachusetts Coalition
for the
Prevention of Medical Errors

Begin testing: examples

- Getting the home med list
 - Who does it? What sources? When? Where do you put form?
 - Any new interview techniques, pharmacy consults, or other strategies to promote accuracy?
- Ordering prescriber uses list when writing orders
- Identifying/reconciling discrepancies
 - Who compares home med list to MD orders? When?
 - How is MD notified when there are discrepancies?
 - What time frame for resolving? What back-up plan if ordering prescriber not available in that time frame?

Project phasing

- **Pilot testing:** identify changes, measure to know if the changes are an improvement
- **Implementation:** take a successful change and build it into the way the entire pilot population/pilot unit does their work
- **Spread:** replicating a change/package of changes beyond the pilot unit into other parts of the organization
- **Maintain the gains**

Massachusetts Coalition
for the
Prevention of Medical Errors

Fundamental ingredients...

- Get support of your CEO; cannot do it without leadership at the top
- Use data (to motivate, to know if changes are leading to improvement)
- Strong representation from leadership of the 3 key stakeholder groups: MD, RN, pharmacy
- Start small

Massachusetts Coalition
for the
Prevention of Medical Errors

Culture...

- Core issues of teamwork and communication... organizational culture matters
- Attempting to change the way people work; every time you try to change behavior, it's only natural to be met with resistance
 - Recognize that this is HARD;
Difficult task: but not impossible
 - Unit briefings/pharmacy rounding

Massachusetts Coalition
for the
Prevention of Medical Errors

Challenges and barriers

- Failure to start small
- Failure to stay focused, project creep
- Implications of inaccurate information on the home med list
- Potential introduction of transcription errors
- Reconciling form: it's a tool; goal is not to fill out form, goal is to reconcile

Massachusetts Coalition
for the
Prevention of Medical Errors

What we learned

- Set in context: “isn’t safe now...”
- Efficiencies (from having complete home med list available in one place plus automation)
diffused concerns re: upfront time
- Placing form in doctor’s progress notes
- RN/MD/Pharm working together
- Involve nursing education staff members from the beginning

Partnering with patients

- Mission statement
- Integral to getting accurate intake medication history
 - Hand them list to review for completeness
 - Will be situations when they cannot participate
- Build review of reconciling list and MAR into early patient education, discharge planning
- Medication card campaigns

Staff Education

- Hands-on works best
- Engage front-line in collecting baseline data
- Have a physician champion
- Focus on the process not the form
- Identify an “expert”
- Build into standard practice

Measurement

**Data collection,
Data feedback**

Massachusetts Coalition
for the
Prevention of Medical Errors

Massachusetts Coalition
for the
Prevention of Medical Errors

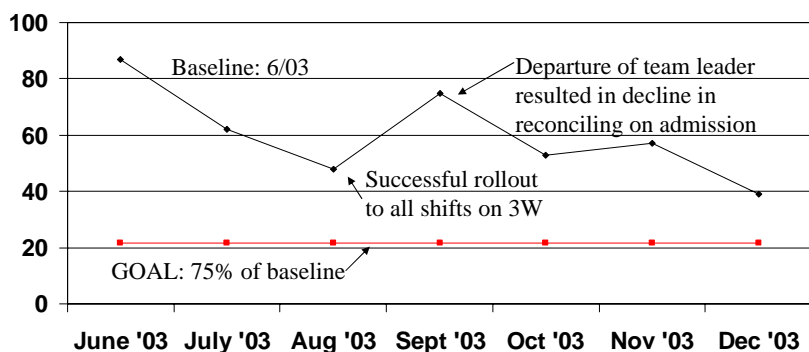
Just-enough measurement

- Core measure
 - Percent Medications Unreconciled
- Orders changed, “great catches”, stories
- Measures linked to each test, for example:
 - % patients with reconciling form in chart
 - RN/MD assessments of process
- Spread: % patients on units w/ reconciling
- Context of institution-wide **ADE reduction**

Core Measure of Success

Percent Medications Unreconciled

(Pilot Unit: 3W)



Massachusetts Coalition
for the
Prevention of Medical Errors

Baseline data collection

- **GOAL: *Identify current safety risks***
 - How complete is info on patient's pre-admission meds? How hard to find? In multiple places?
 - How often are home meds omitted from admit orders? not re-started after transfer, at discharge? duplicate therapies at discharge?

Massachusetts Coalition
for the
Prevention of Medical Errors

Ongoing data collection

- Need frequent measurement on every unit where you are testing: monthly charts to display on unit
- Process: easy for patients where the reconciling form has been completed; follow process used in baseline data collection when no reconciling form
- DON'T CHEAT:
 - Don't skip patients without a reconciling form
 - Don't just look for home med list; the question is, have the home meds been RECONCILED?

Massachusetts Coalition
for the
Prevention of Medical Errors

Conclusions

- Power of Collaborative Model
- Leadership support
- Multidisciplinary team
- Data feedback
- Start small
- Embed into existing workflow
- Don't let perfect be the enemy of the good

Massachusetts Coalition
for the
Prevention of Medical Errors

Resources

- Coalition website: www.macoalition.org/initiatives
Safe practices, tools, measurement protocols, and discussion notes (e.g. enhancing the reconciling form, choosing where to start, etc)
- IHI tools: www.ihl.org/IHI/Topics
100,000 Lives Campaign & Patient Safety Tools

Massachusetts Coalition
for the
Prevention of Medical Errors

Questions?

Thank you

pgriswold@macoalition.org

www.macoalition.org

Massachusetts Coalition
for the
Prevention of Medical Errors