

Medication Reconciliation – Measurement Tools

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The measurement tools presented here were developed by the Massachusetts Coalition for the Prevention of Medical Errors. Additional information from their Reconciling Medication Collaborative is available on the Massachusetts Coalition Web site, www.macoalition.org/initiatives.html.

DEFINITION

- 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.

SYSTEM REVIEW

- Getting Started:
 - Select one patient—one unit—one nurse.
 - Compare admission medications with discharge and/or transfer orders.
 - Involve all members of the team—physicians, nurses, pharmacists.
 - Develop a form.

SYSTEM REVIEW

- Determine Workflow.
 - Who is going to collect data?
 - Who is going to review data?
- Develop polices.
- Provide support for the process.

MEASUREMENT

- Measurement is a critical part of testing and implementing change.
- Measurement tells the team whether the changes that are being made actually lead to improvement.

TYPES OF MEASURES

- Outcome Measures.
 - How is the system performing?
- Process Measures.
 - Are the parts/steps in the system performing as planned?
- Balancing Measures.
 - Are changes designed to improve one part of system while negatively impacting another part of the system?

EXAMPLE

Definition: Percent of Unreconciled Medications

Numerator: Total # of unreconciled medications
on reviewed charts

Denominator: Total # of patient medications on
those charts

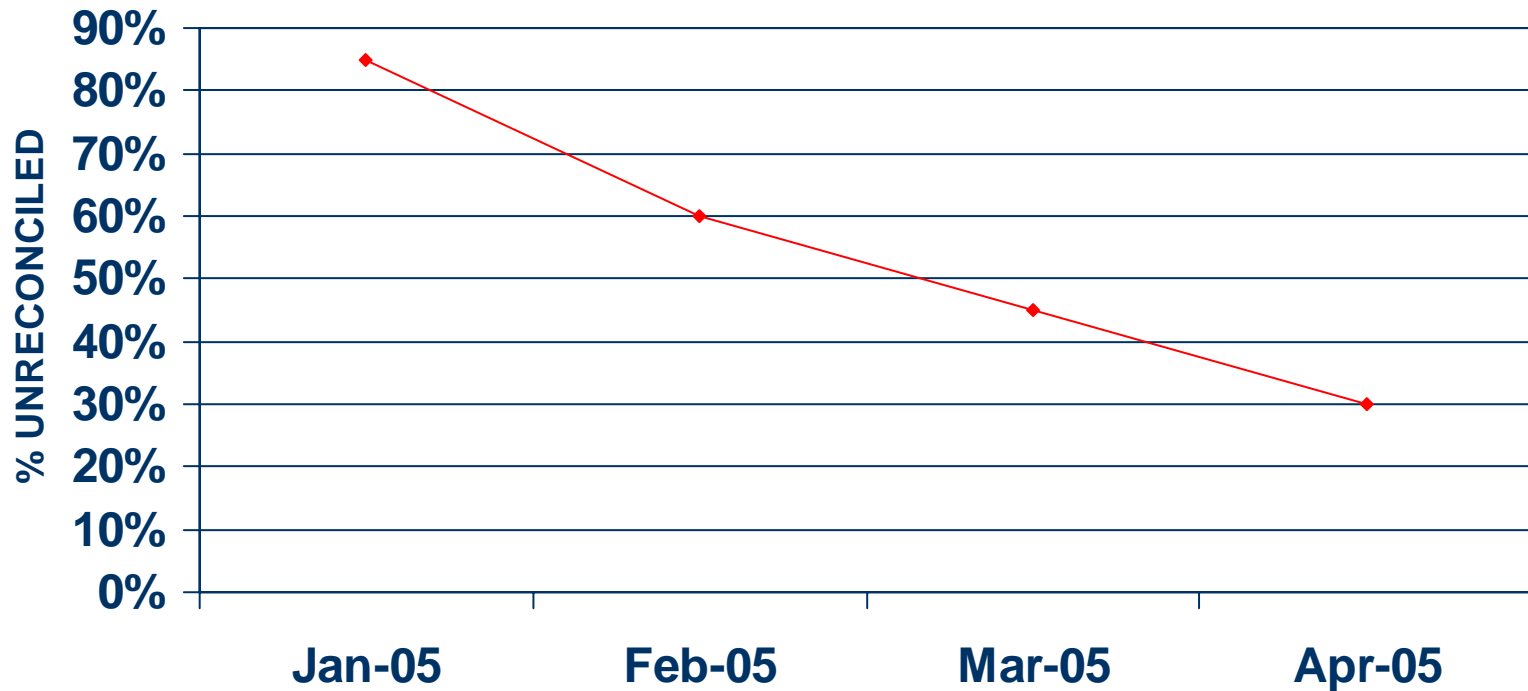
GOALS

- Decrease the number of unreconciled medication by “X”% in 1 year.
- Decrease the number of errors related to unreconciled medication by “X”% in 1 year.

PLAN

- Every month, select a random sample of closed patient records, each with a minimum stay of 3 days. The monthly review should include a minimum of 20 charts. Report out data.
- This may lead you to concrete evidence of medication errors that could have been prevented by this process.

PERCENT OF UNRECONCILED MEDICATIONS



MEASURES OF RECONCILING SUCCESS

- Number of unreconciled medications.
- Number or percentage of unreconciled medications within specific timeframe.

MEASURES OF ERRORS INTERCEPTED AND MEDICATION ERRORS

- Number or percentage of medication orders changed.
- Number of potential medication errors intercepted.
- Number of home medications not ordered on admission.
- Number of discrepancies per patient.

PROCESS MEASURES

- Percentage of patients with completed form in chart.
- Number of pharmacy consults.
- Percentage of patients arriving at hospital with medication lists.

STRATEGIES FOR CHART REVIEW

- Share workload.
 - RN, Pharmacist, Pharmacy Technician
- Utilize night-shift staff.
- Utilize incentives (i.e., career ladder credit) to encourage data collection.
- Stretch out measurement period over a longer period of time.

STRATEGIES (CONTINUED)

- Present data to leadership to justify increased resources for the success of the program.
- Complete a financial analysis or financial model showing the savings from the prevention of Adverse Drug Events (ADEs).

EXAMPLE—FINANCIAL MODEL

- Based on the financial model utilized by Steven Meisel, Director of Medication Safety at Fairview Health Services, Minneapolis, Minnesota.

FINANCIAL MODEL

defects/patient
x # patients/yr
x % defects that would have resulted in ADE
x effectiveness of reconciliation process
x cost of an ADE
= annual gross cost savings
- cost of staff
= net cost savings

EXAMPLE

- Conservative model of 1.2 defects/patient and 1% defects resulting in ADE.

Defects/patient	1.2
Patients/year	7500
% defects resulting in ADE	1.00%
Effectiveness of reconciliation	0.85
Cost of ADE	\$2,500
Gross cost savings	\$191,250

RETURN ON INVESTMENT (ROI)

- Use of Pharmacy Technician
- Gross Savings: \$191,250
- Salary/ benefits: \$40,000
- Net Savings: \$152,250
- ROI=378%

SUMMARY

- Keep it simple.
- Define parameters for data collection clearly and ensure consistent measurement over time.
- Have strategy to share results.
- Encourage reporting of errors identified through reconciling.
- Ensure engagement of leadership.

CONTACTS

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