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A Modest Proposal
A Systems Solution to Medication Reconciliation
By James L. Holly, MD

SETMA believes that a system's solution (see Peter Senge, *The Fifth Discipline*, "The more complex a problem the more systemic the solution must be.") to medication reconciliation would be a huge step forward in patient safety and in the pursuit of the Triple Aim. Whether addressing care transitions, care coordination, hospital readmissions, or patient safety, medication reconciliation is a key element of success. In preparation for a visit October 29-November 1, 2012 from a Robert Wood Johnson Foundation research team (see the following link for a description of their research project The Primary Care Team: Learning from Effective Ambulatory Practices (PCT-LEAP): Performance Measures Worksheet - Robert Wood Johnson Foundation, SETMA prepared a 57-page document describing SETMA's auditing and quality programs. The link above will guide readers to that document. The document addresses SETMA's solution to care transitions, care coordination, etc.. The AMA's monograph, *The physician's role in medication reconciliation Issues, strategies and safety principles* (*Making Strides in Safety*® program ©2007 American Medical Association), AHRQ's *Medications at Transitions and Clinical Handoffs (MATCH) Toolkit for Medication Reconciliation,* and other studies support the potential benefit for **a structured, systemic solution to medication reconciliation**.

In addition to effective care transitions (the following link is to SETMA's performance on the PCPI Care Transitions Measurement Set for 2009, 2010, 2011 and 2012 PCPI Care Transitions -- the next link is to the public reporting by provider name for 2012 Care Transition Audit (Section A), SETMA has established the following steps and principles for medication reconciliation:

Steps and Principles of Medication Reconciliation

Steps:

1. Assembling the lists of medications - notice the word is "lists," not list. In a recent meeting about a regional health information exchange (HIE) an alarm was raised by the potential need to reconcile medication lists from five to ten locations. The response was that the good news was that for the first time, all providers would know that patients were

getting medication from multiple sources and providers would have access to the "real" lists for medication reconciliation.
2. Ascertaining accuracy (review and compare prior and new lists)
3. Reconciling medications and resolving discrepancies
4. Formulating a decision, i.e., making a medical judgment, with respect to the patient's condition and medications.
5. Optimizing care to best meet the patient's needs with this information.
6. Checking the patient's (and/or caretaker's) understanding of their medications
7. Documenting changes and providing the patient with a copy of his or her current medication list.

Principles

1. Medication reconciliation is a necessary component of safe medication management. The process is ongoing and dynamic
2. The medication reconciliation process should be patient-centered.
3. Shared accountability between healthcare professionals and patients is essential to successful medication reconciliation outcomes.
4. All patients should have an accurate medication list for use across sites of care and over time.
5. The medication list should not be limited to prescription drugs.
6. Within all settings, the medication reconciliation process should happen at every medication encounter, regardless of the care location.
7. Across all setting, the medication reconciliation process must happen at every transition in the patient's care, regardless of the care transition.
8. The process of medication reconciliation is interdisciplinary and interdependent - and reliant on a team approach.
9. Physicians are ultimately responsible both ethically and legally for the medication reconciliations process.
10. Some medication information may be emotionally or legally charged, but nevertheless significant. It may be added at the discretion of the patient or prescribing health care professional by mutual consent.

We think that forming a coalition with pharmacies, clinicians, patients and IT technology could result in a solution to medication reconciliations which could:

1. Reduce the time involved in medication reconciliation to less than two minutes
2. Advance a practice closer to perfect medication lists
3. Make it easy to reconcile medications at every contact and even when the patient is not schedule for a visit.
4. Increase patient safety

If a D. Pharm consultant is involved in the process, it would even be stronger. I look forward to hearing from you.

Progress as of October 29, 2012

Progress today on our medication reconciliation. Four key parts of our solution:

1. Record of filled prescriptions from pharmacy -- SureSscripts already gets this information and it is available through our EMR vendor. This is an existing solution to a big part of the puzzle.

2. Bar coding of medication bottles from pharmacies -- Most pharmacies and all of the chains already use bar coding. The biggest hurdle is to get scanners in medical offices that read the bar coding and that deposit the information into the EMR. Each chain has its own bar coding. We can work toward harmonization and get a short term fix.

3. Have patient review their own medication list as it appears in their personal health record -- This can be done with our existing secure web portal.

4. Reconciling medications via connection between template and medication module -- this can be done. It is awkward but should be able to be improved by our EMR vendor.

Meetings this week with EMR vendor and pharmacist. Should have information on bar coding this week

Restating the Goal

1.   take 300 of SETMA's patients,
2.   all with complex medication issues,
3.   get them linked to our secure web portal.
4.   Identify ten pharmacies who do bar coding and
5.   are who are willing to work with us.
6.   Get those linked to our HIE and hopefully
7.   in 90 days be able to initiate the project which is identified in the document attached above.

October 31, 2012

A Brief Description of the Proposal

The following is a brief description of the steps in the proposal:

1. A patient makes an appointment and the following occurs automatically,
2. A select group of pharmacies agrees to deploy a "bar coding" for all prescriptions filled for a test group of patients 2-300. The bar code would include the following information:

   a. Name of patient
   b. Name of pharmacy
   c. Name and strength of medication
   d. Quantity
   e. Dosing
   f. Last refilled
   g. Refills available

3. Triggered only by the making of an appointment, a secure, HIPPA compliant request is sent to multiple pharmacies requesting a list of all medications filled in the past 90 days.
4. Triggered only by the making of an appointment, a secure, HIPPA compliant note is sent to the patient with a list of the medications (including over-the-counter medications and neuraceuticals) which the EHR says the patient is on and the patient responds with a notation of whether they are on the medications listed, or not, and/or if they are on other medications not listed.
5. When the patient arrives in the clinic with the bottles or containers for all current medications, the bar codes are scanned.

A Medication Reconciliation template is automatically populated with four columns:

1. The medications which have been filled by the pharmacies
2. The medications the patient says he/she is on
3. The medications the EHR says the patient is on
4. A list of the bar-coded meds scanned at the beginning of the visit

These listed will be organized and color codes as follows:

1. All medications which appear on all four lists and are of the same dosage and frequency will appear first and in black (but even these are reviewed by the provider during the reconciliation)
2. All medications which are in conflict for any of the following reasons will be high lighted in red:

   a. They violate a drug/drug interaction
   b. They violate a patient/drug allergy
   c. They violate a drug/condition interaction

3. Any medication which appears on less than all four lists will be high lighted in red.

The template functionality will allow for the addition or deletion of any medication by the single click of a button over that drug. Once this process is complete, a current medication list will be created with:

1. All medications which should be continued
2. All medications which have been discontinued
3. All medications where a dosage, frequency or timing of dosing will be listed with the new instructions in common language.
4. This will be available for everyone in English and Spanish and by special arrangement in other languages as well.