Beyond Medication Reconciliation
The Correct Medication List

Medication reconciliation is a major focus of quality measurement activities, and according to The Joint Commission, primary care clinicians are expected to reconcile a patient’s medications at every visit. In principle, medication reconciliation is quite important; in practice, however, it has failed to have a demonstrable effect on patient outcomes. This may partly be because the lack of agreement about what constitutes medication reconciliation makes it difficult to decide when it has occurred and therefore difficult to study its effect.

Medication reconciliation is sometimes defined as the comparison of medication lists at admission or discharge, and is sometimes defined more broadly to include information from the patient. However, these concepts set the bar too low: What is needed is not merely a reconciled list, but the correct medication list.Achieving this list would involve multiple levels of reconciliation.

Levels of Medication Reconciliation
Clinician Agreement. All of the clinicians who provide care for the patient need to agree which medications should be on the list. It is often necessary to compare multiple lists, none of which may be completely correct or up-to-date. Due to gaps in electronic medical record (EMR) interoperability, this can be a challenging, laborious, and error-prone task.

Patient Agreement. Incorporating the patient’s perspective is fundamental. Keeping medications on the list that patients cannot obtain or do not want to take is misleading. If the patient purposefully stops a medication, the clinician must decide whether the medication is still warranted (and persuade the patient) or remove it from the list.

Deprescribe. Some of the medications on the patient’s various medication lists may no longer be appropriate or may never have been ideal. Carrying these suboptimal choices forward does not serve the patient’s interests. Prescribing should be paired with deprescribing: Inappropriate and unnecessary medications should be removed from the list.

Decrease Patient Burden. The burden of adherence can be minimized by choosing medications given fewer times per day and aligning dosing intervals to reduce the frequency that medications should be taken. Similarly, the burden of adverse effects can be minimized by choosing the lowest effective dose. This is a particularly difficult task because it may involve talking with various clinicians and the patient, as well as understanding the patient’s insurance plan, which may not cover all drugs.

Minimize Out-of-Pocket Expenses. Unnecessarily expensive medications do not belong on the list; a medication the patient cannot afford will not help. Physicians may be hampered by a lack of information about out-of-pocket costs. Electronic medical records could be improved to help play this role.

Inform Outside Entities. The correct medication list will not be effective unless all entities interacting with the patient also have the list. Other clinicians need to know about prescription changes or problems may be perpetuated. This concern extends to pharmacies because automatic refill programs prompt patients to keep taking previously prescribed medications. Even though The Joint Commission requires communication with the pharmacy, it likely occurs only rarely. The SCRIPT standard for e-prescribing, Version 10.6 (available since 2014) would accomplish much of this task. However, because many pharmacies and EMRs have not fully enabled all SCRIPT functionalities, this communication is not a reality for most clinicians.

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Reasons for Medication Reconciliation
It will likely be time-consuming to develop and maintain the correct medication list. In medicine, and especially in primary care, there is no shortage of worthwhile activities. In current clinical settings in which most practitioners already have too much to do, why should the correct medication list receive priority? There are several reasons.

1. Substantial potential to improve patient outcomes. Establishing the correct medication list has demonstrated effect on outcomes. One study, Project RED (an intervention that included most of the steps suggested above), included 749 patients and demonstrated a decrease of approximately 30% in patients returning to the hospital within 30 days, from 0.45 to 0.31 hospitalization or emergency department visits per month. Other studies have linked similar approaches with improved medication adherence. The effort invested in achieving the correct medication list could potentially improve outcomes more than other competing priorities.
2. Having the correct medication list will prevent problems that would have taken even more effort to solve. Creating a correct list will take time, but having the list could help avert crises and readmissions. For example, duplicate or interacting medications could be discovered and rectified before they lead to an adverse event. Also, having a correct list could simplify the workflow for many stakeholders.

3. Strategies are available to facilitate developing and maintaining the correct medication list. The primary clinician should ultimately be responsible for these strategies, although some of this work can be delegated. Technology can also help. Full implementation of standards, as previously mentioned, will make communication with pharmacies more reliable—and information will flow in both directions. Indication-based prescribing could prevent errors, whereas availability of cost information in the EMR could decrease cost. A system to allow patients or caregivers to offer amendments between visits will improve accuracy.

4. Establishing a correct medication list will often involve removing medications. The rate of polypharmacy (defined as taking ≥5 medications) for US individuals older than 65 years is close to 40%.6 The correct medication list will help to address polypharmacy by ensuring that medications are appropriately stopped, reducing the potential for medication error, adverse effects, interactions, and excessive costs.

5. The correct medication list, instead of a more limited conception of medication reconciliation, is what most patients would likely want.

Questions Involving Medication Reconciliation

However, creating and maintaining a correct medication list also creates some questions:

1. Who will pay for this? Some programs already pay for an enhanced version of medication reconciliation. One example is the Centers for Medicare & Medicaid Services (CMS) Enhanced Medication Therapy Management pilot, that pays Medicare Part D plans to conduct or arrange for activities similar to those described herein.7 The results of that pilot could support the idea of paying for the activity of maintaining a correct medication list.

2. How can the task of creating and maintaining the correct medication list be measured? Primary care clinicians and hospitalists currently must attest that medication reconciliation has been completed, but this does not measure accuracy. Currently, no validated measures are available to assess the quality of medication reconciliation. More meaningful measures are needed, and studies can be built upon these measures to assess the value of medication reconciliation across a gradient of how comprehensively it was performed.

3. Who should be responsible for this task? While delegating some of the responsibility is possible, systems made up of care teams, engaged patients, and helpful technology need to be developed to achieve and maintain the correct medication list with a minimum of human effort and maximum effectiveness. Developing such systems is where the ultimate responsibility should lie.

4. When should this be done and for whom? Although current practice is based on assumptions about which patients need medication reconciliation and when, additional research is needed to identify patients who would benefit most from this activity. For example, in the CMS pilot, Part D plans are encouraged to find creative ways to identify patients at the highest risk of adverse events and focus efforts on them.7

Conclusions

Creating and maintaining a correct medication list for every patient will not be a trivial task, but it represents a fulfillment of the responsibility of physicians. Properly developing and maintaining a correct medication list for all patients will require appropriate delegation, implementation of relevant information technology, creating systems to support the work to maintain a list, and developing payment mechanisms and performance measures. It is time to look beyond basic medication reconciliation. All patients should have confidence that their medication list is the correct list.