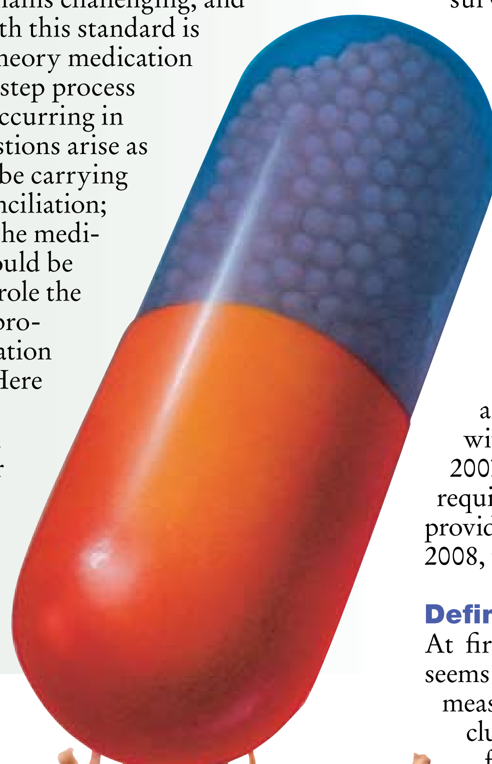
Medication Reconciliation

Meeting the Challenge

by Thomas W. Ross, MS, RPh

In Brief

Medication reconciliation is endorsed by leading organizations, such as The Joint Commission and the Institute for Healthcare Improvement, as a proven methodology to reduce adverse events and is perceived by healthcare providers to be of great value to patient safety.[1] For hospitals and practices, however, medication reconciliation remains challenging, and attaining compliance with this standard is still difficult. While in theory medication reconciliation is a three-step process that should already be occurring in quality cancer care, questions arise as to 1) which staff should be carrying out the medication reconciliation; 2) when and how often the medication reconciliation should be performed; and 3) what role the patient and family care providers play in the medication reconciliation process. Here is an explanation of this complex process, as well as practical strategies for improving medication reconciliation at your program.



ILLUSTRATIONS/NEIL BRENNAN

The Joint Commission's Role in Medication Reconciliation

The Joint Commission's overall philosophy is that accreditation is a risk-reduction activity and that compliance with Joint Commission goals and standards will, in turn, reduce the risk of adverse outcomes.[2] To that effect, The Joint Commission began issuing National Patient Safety Goals (NPSGs) annually beginning in 2002, and began surveying its accredited organizations to assess their implementation of these goals the following year. Compliance or non-compliance with NPSGs is posted, viewable to the public, as a part of each organization's Quality Report (*www.qualitycheck.org/consumer/searchQCR.aspx*).

In 2005, The Joint Commission addressed medication reconciliation with the establishment of NSPG 8: "To accurately and completely reconcile medications across the continuum of care." In seeming deference to the complexities associated with medication reconciliation, The Joint Commission's expectation in 2005 was that organizations would use that year to develop, test, and implement the medication reconciliation process with full implementation expected by January 2006. In 2007, the medication reconciliation goal had an added requirement that: "The complete list of medications is also provided to the patient on discharge from the facility." For 2008, this goal remains unchanged (see Table 1 on page 19).

Defining Medication Reconciliation

At first glance, the NPSG on medication reconciliation seems straightforward: one goal with two requirements, measured by five Implementation Expectations. One clue to the complexities surrounding NPSG 8 is the fact that, as of January 2007, The Joint Commission's website had 17 pages of Frequently Asked Questions (FAQs) about the medication reconciliation NPSG.[3] Programs that require extensive guidance and clarification should consider reading the FAQs related to Medication Reconciliation on The Joint Commission's website.[3]

While some have called medication reconciliation a "glorified medication history," it is much more than that. At its heart, medication reconciliation attempts to optimize drug therapy while reducing adverse drug events at transition points across the continuum of care. This reconciliation is a three-step process to:

1. Obtain and document a complete list of the patient's medications upon entry into the system.
2. Compare this list with any new medication orders to detect and avoid omissions, duplications, interactions, and other errors.
3. Communicate the complete list of the patient's medications to the next provider of service (inside or outside of your organization) and to the patient.

While the process sounds simple enough, Figure 1 on page 25 illustrates the complexity of the medication reconciliation process.

Step 1: Complete the Patient's Home Medication Profile.

Medication reconciliation begins with obtaining a complete list of the medications that the patient is taking upon entry into the healthcare system. This process is referred to as the "Home Medications" list in this article and in Figure 1. For cancer programs, the patient's point of entry is often the initial clinic or office visit, but this applies to all other venues as well.

Who should obtain this list? The only specification is that the person should have "sufficient expertise." The Joint Commission's expectation is that this process will involve patients and their families, which is in line with the patient safety movement's focus on patient- and family-centered care. Interaction with patients and their families can also help prove evidence of compliance with NPSG 13: To "encourage patients' active involvement of their own care as a patient safety strategy."

Table 1. 2008 Joint Commission National Patient Safety Goal on Medication Reconciliation[4]

Goal 8	**Accurately and Completely Reconcile Medications Across the Continuum of Care.**
Requirement 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.
Implementation Expectations for 8A	The organization, with the patient's involvement, creates a complete list of the patient's current medications at admission/entry. The medications ordered for the patient while under the care of the organization are compared to those on the list and any discrepancies (e.g., omissions, duplications, potential interactions) are resolved.
Requirement 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.
Implementation Expectations for 8B	The patient's accurate medication reconciliation list (complete with medications prescribed by the first provider of service) is communicated to the next provider of service, whether it be within or outside the organization. The next provider of service should check over the medication reconciliation list again to make sure it is accurate and in concert with any new medications to be ordered/prescribed. The complete list of medications is also provided to the patient on discharge from the facility.

Who does NPSG 8 Affect?

The NPSG on medication reconciliation is applicable in the following types of programs accredited by The Joint Commission:

- Ambulatory Care and Office-Based Surgery
- Assisted Living
- Behavioral Health Care
- Critical Access Hospital
- Hospital
- Disease-Specific Care
- Home Care
- Long-Term Care.

In the outpatient setting, The Joint Commission does not specify a time frame for obtaining the patient's Home Medications list; however, to optimally prevent adverse events, The Joint Commission advises obtaining the Home Medications list *prior to* ordering or administration of medications. In the inpatient setting, The Joint Commission requires that this activity occur within 24 hours of admission as part of the required initial assessments. In urgent situations, when a delay in therapy would compromise patient care, the needs of the patient take precedence and medication reconciliation should then occur as soon as possible.

While NPSG 8 does not define the contents of "a complete list of medications," the FAQs clarify that it is *not* a full medication history, but rather those medications that the patient is taking upon presentation to your program. The Joint Commission's definition of "medication" includes:

- Prescription and sample medications
- Herbal remedies, vitamins, and nutraceuticals
- Over-the-counter drugs
- Vaccines
- Diagnostic and contrast agents
- Radioactive materials
- Respiratory therapy treatments
- Parenteral nutrition
- Blood derivatives
- Intravenous solutions
- Any product designated by the Food and Drug Administration as a drug.

The Joint Commission acknowledges that all patients may not know this entire list. The expectation is that clinicians at minimum ask about prescription and sample medications, over-the-counter drugs, herbals, vitamins, nutraceuticals, drug patches, and respiratory medications, such as inhalers. While NPSG 8 does not specify that any information other than the name of the drug be listed, common sense dictates that clinicians should also gather additional information such as dose, route, frequency, and other pertinent data.

A common frustration for many cancer programs is getting a complete and accurate Home Medications list from patients who are poor historians. When patients themselves cannot provide this information, clinicians must investigate other sources of information such as family and/or primary care providers and pharmacies. When obtaining a complete and accurate list is impossible, cancer programs should be ready to provide a reasonable explanation for each specific occurrence.

The list of Home Medications is one of three pieces of documentation The Joint Commission will look for when assessing compliance with NPSG 8. The expectation is that this document will be accessible while the patient is in the healthcare system so that it can be used in the medication reconciliation process when the patient is transferred and, in all cases, when the patient is discharged from the health system.

Making the Case for Medication Reconciliation

While the core purpose of medication reconciliation is the reduction of transition-related adverse drug events, reconciliation provides additional benefits, including decreasing initial work and rework at the time of both admission and discharge.[1] In other words, medication reconciliation requires staff to gather medication information in a standard and centralized manner, which, in turn, reduces the amount of clarification and rework needed in relation to incomplete or potentially problematic orders. Another significant benefit is the potential to reduce the number of times patients are asked about their home medications. Lastly, having up-to-date and accessible patient home and current medication profiles should decrease the amount of time prescribers require to access needed information.

The Joint Commission is not the only organization that has advocated for medication reconciliation. In 2002 the Massachusetts Coalition for the Prevention of Medical Errors and the Massachusetts Hospital Association jointly selected medication reconciliation as a statewide initiative.[1] In December 2004, the Institute for Healthcare Improvement (IHI), launched its *100,000 Lives Campaign* with the goal of avoiding 100,000 preventable deaths in an 18-month period. Preventing adverse drug events by implementing medication reconciliation was one of six interventions that IHI employed in its campaign strategy. IHI's current *5 Million Lives Campaign* continues this effort, with the goal of helping hospitals eliminate 5 million incidents of medical harm in a two-year period. (For more information, visit *www.ihi.org.*)

The Joint Commission provides the following rationale for medication reconciliation as a National Patient Safety Goal: "*Patients are most at risk during*

Step 2: Reconcile the Home Medications List with New Medications

When a patient enters the healthcare system, he or she is assessed and treatment and/or diagnostic decisions are provided. So the next step in the "reconciliation" process is for clinicians to compare the patient's Home Medications list with any new medication orders. The purpose of this "reconciliation" is three-fold: 1) to help avoid omissions and duplications of home medications; 2) to evaluate for the potential of drug:drug or drug:food interactions; and

transitions in care (hand-offs) across settings, services, providers, or levels of care. The development, reconciliation and communication of an accurate medication list throughout the continuum of care is essential in the reduction of transition-related adverse drug events."[2]

A simple way to understand the potential impact of medication reconciliation is to consider the preventable harm that occurs when medication reconciliation is *not* properly performed. In adopting medication reconciliation as a statewide initiative, the Massachusetts Coalition for the Prevention of Medical Errors cited studies that found the majority of medication errors occur at transitions, that 30-70 percent of patients had variances between what they were taking prior to admission and their admission orders, and that 12 percent of discharged patients experience an adverse drug event within 2 weeks of discharge. Furthermore, other studies cited found that these events are largely preventable (up to 70 percent).[1]

The Institute for Healthcare Improvement, referenced some of the same studies as evidence of the need for medication reconciliation and also cited additional examples from their participating organizations:[3]

- Poor communication at handoffs is responsible for up to 50 percent of medication errors and up to 20 percent of adverse drug events.
- A participating hospital reported that compliance with discharge medications was only 50 percent at 48-72 hours post-discharge, and dropped to 30 percent at 30 days post-discharge.
- In one study of pediatric cancer patients 42 percent of medication orders had to be changed after multidisciplinary review.
- In another study of pediatric oncology patients, discrepancies existed between the patient's medication orders and the information obtained in the medication history process 30 percent of the time.

A *"Medication Safety Alert"* published April 21, 2005, by the Institute for Safe Medication Practices cited specific errors that could have been prevented with medication reconciliation.[4] These included:

- A patient being transferred from one hospital to another received a duplicate dose of insulin as the receiving hospital did not know that the patient's daily dose had been received prior to transfer.
- A patient receiving vancomycin pre-operatively continued to receive the medication for several days post-operatively despite the drug not being re-ordered.
- Prior to discharge, a patient's Lexapro® dose was increased from 5 mg to 10 mg. Although the prescription was correctly filled with 10 mg tablets, the patient was cutting tablets in half and taking 5 mg, as directed by the incorrect discharge instructions the patient had been given.

The *Alert* included additional examples of adverse medication events as a result of patient transfer in the system without effective medication reconciliation.

References

[1]Massachusetts Coalition for the Prevention of Medical Errors. *Reconciling Medications*. 2005. Available online at: *www.macoalition.org/Initiatives/RecMeds/ProjectOverview.pdf.* Last accessed Sept. 19, 2007.

[2]The Joint Commission. *2008 National Patient Safety Goals: Hospitals*. 2007. Available online at: *www.jointcommission.org/NR/rdonlyres/82B717D8-B16A-4442-AD00-CE3188C2F00A/0/08_HAP_NPSGs_Master.pdf*. Last accessed Sept. 19, 2007.

[3]Institute for Healthcare Improvement. *Getting Started Kit: Prevent Adverse Drug Events (Medication Reconciliation): How-to Guide*. Institute for Healthcare Improvement. 2007. Available online at: *www.ihi.org/NR/rdonlyres/98096387-C903-4252-8276-5BFC181C0C7F/0/ADEHowtoGuide.doc*. Last accessed Sept. 19, 2007.

[4]Institute for Safe Medication Practices. *Building a Case for Medication Reconciliation*. April 21, 2005. Available online at: *www.ismp.org/Newsletters/acutecare/articles/20050421.asp*. Last accessed Sept. 19, 2007.

3) to compare the patient's admission orders and timing of administration against what the patient may have already received at home or at a prior facility.

Note that The Joint Commission does not *require* documentation that this reconciliation has occurred. Still, some programs have developed forms to help with this process and, by their own policy, require a signature to indicate that this step was performed. While these programs now have proof that medication reconciliation occurred, noncompliance with their own policy has been a major reason for programs receiving a "Requirements for Improvement" by surveyors. If an organization does not require documentation, surveyors will assess compliance by direct observation and clinician interviews. Surveyors will also ensure that the patient's Home Medications list is available and used by those performing the medication reconciliation.

When a patient is admitted to the hospital, the medication reconciliation process occurs at multiple points along the continuum of care, beginning with the admission orders. Throughout an inpatient's stay, two lists need to be routinely available to practitioners: 1) the patient's Home Medications list and 2) the current medication profile or Medication Administration Record (MAR). Whenever the patient transfers within the system and this transfer requires that orders be re-written, the reconciliation process occurs again. In other words, The Joint Commission already requires that whenever a patient moves to another level of care that orders be rewritten and thus re-evaluated. With medication reconciliation the requirement is a bit more complex. While not often surveyed, the intent is that the medication profile (or MAR) be re-evaluated not only in terms of the inpatient orders, but also against the patient's Home Medications list. The rationale is that as a patient moves within the system, it is possible that certain home medications that had been held may once again be appropriate. As a rule, receiving physicians (the clinician writing the new orders) or their associated staff are responsible for reconciling the patient's medications on receipt of a transfer patient.

The operating room offers its own unique challenges. Certainly numerous medications, some with significant

drug interaction potential and many with significant therapeutic consequence, are administered perioperatively. In this scenario, medication reconciliation means that the patient's medication list is available to the physicians and is used as part of the decision-making process when administering medications perioperatively. Because of the increased difficulties involved in the operating room, programs that choose to develop medical reconciliation documentation requirements should do so carefully.

Another subtle requirement that has received less scrutiny is medication reconciliation when a patient transfers to another service or another provider. If the patient is not changing level of care, the rationale for medication reconciliation may not be readily apparent. However, the change in service or provider indicates that something significant has changed with the patient and/or how his or her care is to be coordinated. Given that communication has been identified as one of the root causes in most significant adverse events and that handoff communication is significant enough to warrant its own National Patient Safety Goal (NPSG 2E: Hand-off Communications), medication reconciliation upon transfer to another service or provider makes good clinical sense.

In the outpatient setting, medication reconciliation may appear to be an easier task. Most practices obtain a Home Medications list upon the initial patient assessment, and at subsequent visits this information is confirmed and updated if necessary. This information is also routinely available to the practitioner while performing assessment and making therapy decisions. However, the difficult challenge for most programs is getting the new medication information into patients' medication lists *prior* to their leaving the practice or outpatient clinic. This updated list must be given to the patient upon exit from the practice or cancer center and also sent to the patient's next care provider. While The Joint Commission recognizes that this is a major undertaking, it does not compromise on this principle. Certainly electronic health records that allow real-time entry of new orders and prescriptions will facilitate this process, but in the meantime this step is a challenge to implement and maintain.

Step 3: Communicate Complete Medication List to Patient and New Provider

NPSG 8 has two additional requirements. First, the complete list of medications should always be provided to the patient upon discharge, at the conclusion of an office visit or outpatient clinic encounter, and/or before transfer to another healthcare system. Second, a complete list of the cancer patient's medications should always be communicated to the next provider of service—inside or outside of the healthcare organization.

Practical Tips for Successful Medication Reconciliation

The Institute for Safe Medication Practices and the Institute for Healthcare Improvement have identified some key strategies for successfully implementing medication reconciliation. While an exhaustive review is beyond the scope of this article, the following suggestions may help:

- Put the patient first. Using literature and real-world examples, educate your cancer team about the harm that can be prevented.
- Understand the processes in your cancer program first, and then understand how medication reconciliation fits in.
- Don't let the quest for a "perfect" system keep you from doing the right thing for the majority of your cancer patients.
- Secure support for this goal from senior leadership—both administration and medical.
- Acknowledge that some cancer patients are unreliable historians. Don't let the quest for perfection stop you.
- Spread the word: teamwork among nurses, pharmacists, and physicians is essential. Medication reconciliation is everyone's responsibility.
- Acknowledge that there will be additional work on the front end for staff and physicians; however, also acknowledge that this will be partially offset by a reduction in rework and management of adverse events later in the process.
- Identify all points in your system where medications are prescribed or administered.

At this point, medication reconciliation involves comparing the patient's discharge medication orders with *both* the Home Medications list and the current medication profile (or MAR). The purpose is two-fold: to assess the medications prescribed at the time of discharge and to reevaluate the appropriateness of the medications that the patient was taking prior to entry into the system. After reconciliation, the goal is to provide a complete and accurate discharge medication list to both the patient and the next provider of care. This list is not a summary of what the patient took while under your care, but rather a summary list of what the patient should be taking upon exit from your healthcare system—essentially this becomes the patient's new Home Medication list. This list is also an excellent tool for educating cancer patients and their family.

Again, while this step sounds simple enough, it poses some challenges to and questions for cancer programs. For example, many physicians do not feel comfortable or responsible for "ordering medications" that the patient was taking prior to coming under their care—especially herbals, OTCs, and medications prescribed by other physicians. In oncology especially this is a sensitive area as oncologists are often highly dependent upon referring physicians. To clarify, the discharging physician is not expected to order or reorder medications the patient was taking prior to admission. For example, a consulting oncologist is not expected to

Compliance with NPSG 8 at-a-Glance

Tables 2 and 3 illustrate how The Joint Commission reports compliance rates with NPSG 8.[1] The initial high rates of compliance in 2005 are explained by the fact that, during this period, the expectation was only that organizations develop, test, and implement the process. In 2006, The Joint Commission was evaluating for full implementation, and compliance dropped to between 66.1 to 75.6 percent. The first quarter 2007 data (last available) show an increase in compliance for both requirements in hospitals. In the ambulatory care setting there was an increase in compliance for gathering the histories, but a decrease in compliance for providing the list to patients (new for 2007) and the next provider of care. A few observations can be drawn from these results:

- Ambulatory care has consistently done better than hospitals in gathering the current medication list, which is not surprising given that this was already a common practice in this setting.
- The challenges of the new expectation in 2007 (updating the medication list and giving it to the patient at the end of an ambulatory visit) probably explain the decrease in compliance with Goal 8B in the ambulatory care setting.
- The increase in compliance, in general, from 2006 to 2007 may be attributable to either a relaxation in what The Joint Commission surveyors are expecting and/or increasing compliance with the actual process in the organizations.
- For both hospitals and ambulatory care, medication reconciliation remains among the most problematic National Patient Safety Goals.

References

[1]The Joint Commission. *National Patient Safety Goal Compliance Data*. 2007. Available online at: *www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/NPSG_Compliance_Data.htm*. Last accessed Sept. 19, 2007.

Table 2. Hospital Compliance with NPSG 8

Goal	2005	2006	1st Qtr 2007
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.	99.9%	66.1%	81.8%
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.	99.7%	72.5%	81.5%

Table 3: Ambulatory Care Compliance with NPSG 8

Goal	2005	2006	1st Qtr 2007
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.	99.0%	75.6%	87.1%
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.	99.3%	74.2%	71.5%

prescribe for the patient's hypertension that is being managed by the patient's primary care physician. The discharge medication list is *not* a physician's order—it is simply a list of all the medications the patient is expected to take upon exiting from the healthcare system.

Another point of controversy is a "blanket" discharge order such as "*resume home medications.*" Before we clarify this issue, we must first understand three related, often confusing, terms:

1. *Discharge orders* are orders directed to other caregivers that are subject to the requirements of The Joint Commission's Medication Management standards. Therefore

> If the patient is unable to understand the medication list, it should be given to the appropriate family member or care provider.

use of this type of blanket order for medications (e.g., "resume home medications") is prohibited.

2. *Discharge instructions* are directions geared toward patients themselves and, therefore, are not "orders." Still, The Joint Commission finds such non-specific patient instruction as "resume home medications"—while technically not an order—to be an unacceptable practice and a violation of PC.6.10, which requires patients to be educated in the use of their medications.
3. *A discharge medication list* is a complete list of medications the patient is to be taking upon exiting the system—required by NPSG 8. This list is also not an "order." A list that contains "resume home medications" is not complete, and does not contain the information necessary for the patient and the next care provider. In other words, while not specifically addressed in the NPSG 8, the use of a blanket phrase such as "resume previous orders" or "resume patient's home medications," in any context, will be deemed as a non-compliant practice.

Providing discharge medication lists to patients is fairly straightforward. In the inpatient setting, many organizations are making this required document a component of the patient's discharge instructions. In the outpatient setting, this activity can be more challenging. As required by The Joint Commission standard PC.15.20, (EP 9), this list must be provided in writing and in a format (language, readability, lack of medical abbreviations) that patients can understand. If the patient is unable to understand the medication list, it should be given to the appropriate family member or care provider. In cases where the patient is being discharged to another acute or long-term care facility, the list must still be given to the patient or designee because involving patients and family in the patient's care has been identified as a significant way to improve patient safety. Note that in situations with minimal medication use (see page 26) and for those recurrent visits where the patient's medication list is not changed, there is no need to provide the list to the patient.

The format of the discharge medication list for communication to the patient's next care provider—whether it's within the same admission or in a community outpatient or practice setting—has been the subject of much discussion. The Joint Commission does not specify the type of document or the format of this communication—only that it is a required document. The document may be part of the discharge summary, as long as it is available to the next provider when he or she sees the patient. For inpatient transfers, the document is often a list of the current medication orders (or MAR) that is printed for review by the receiving practitioner. This list can be in electronic format only, as a long as the receiving practitioner has access to it. When the discharging physician will be responsible for the patient's follow-up care, "sending" this information to the provider's ambulatory practice is not necessary as long as the provider will have access to the list when seeing the patient for follow-up. For oncology patients, the existing system for providing feedback to referring physician(s) would likely be the communication process/methodology used to furnish the discharge medication list.

Whose Job Is It and When Should It Be Done?

The Joint Commission reports two common models for who performs medication reconciliation. In some cases, prescribing practitioners do medication reconciliation when writing their orders and/or prescriptions for patients. When licensed practitioners perform this task, the overall process is streamlined and more efficient. This model also has its disadvantages. For example, it uses more of the medical staff's already scarce resources. In addition, programs may have more difficulty getting medical staff to comply with regulatory issues than other staff.

A second common model is for nurses and/or pharmacists to perform the medication reconciliation. This model, however, creates a more complex reconciliation process. For example, when discrepancies are found, the ordering practitioner must be contacted to clarify the orders. A modified model is to "target" the use of pharmacists and clinical dietitians in the medication reconciliation process. "Trigger lists" are developed that leverage the expertise of these healthcare professionals and involve them in the reconciliation process when appropriate. For example, a "trigger list" for a pharmacist might include polypharmacy, suspected drug interactions or adverse events, and unfamiliar medications. A "trigger list" for a dietitian might include nutraceuticals or herbal medications and therapies with know high-risk food:drug interactions such as warfarin or procarbazine.

Once a cancer program decides on the model it will use to reconcile medication, the next question is often: "*When must medication reconciliation occur*?" The simple answer is: "*Whenever medications are prescribed or administered to the patient.*" In situations where medication will be administered, there is the potential for drug interactions and adverse events. Therefore, as already required by The Joint Commission standard (MM.1.10), a review of the patient's current medications and allergies/sensitivities must occur.

The Joint Commission has received numerous questions about exemptions for circumstances such as radiology with contrast media, nuclear diagnostic agents, administration of eye drops for ophthalmic exams, and so forth. The consistent message from The Joint Commission is that due to the

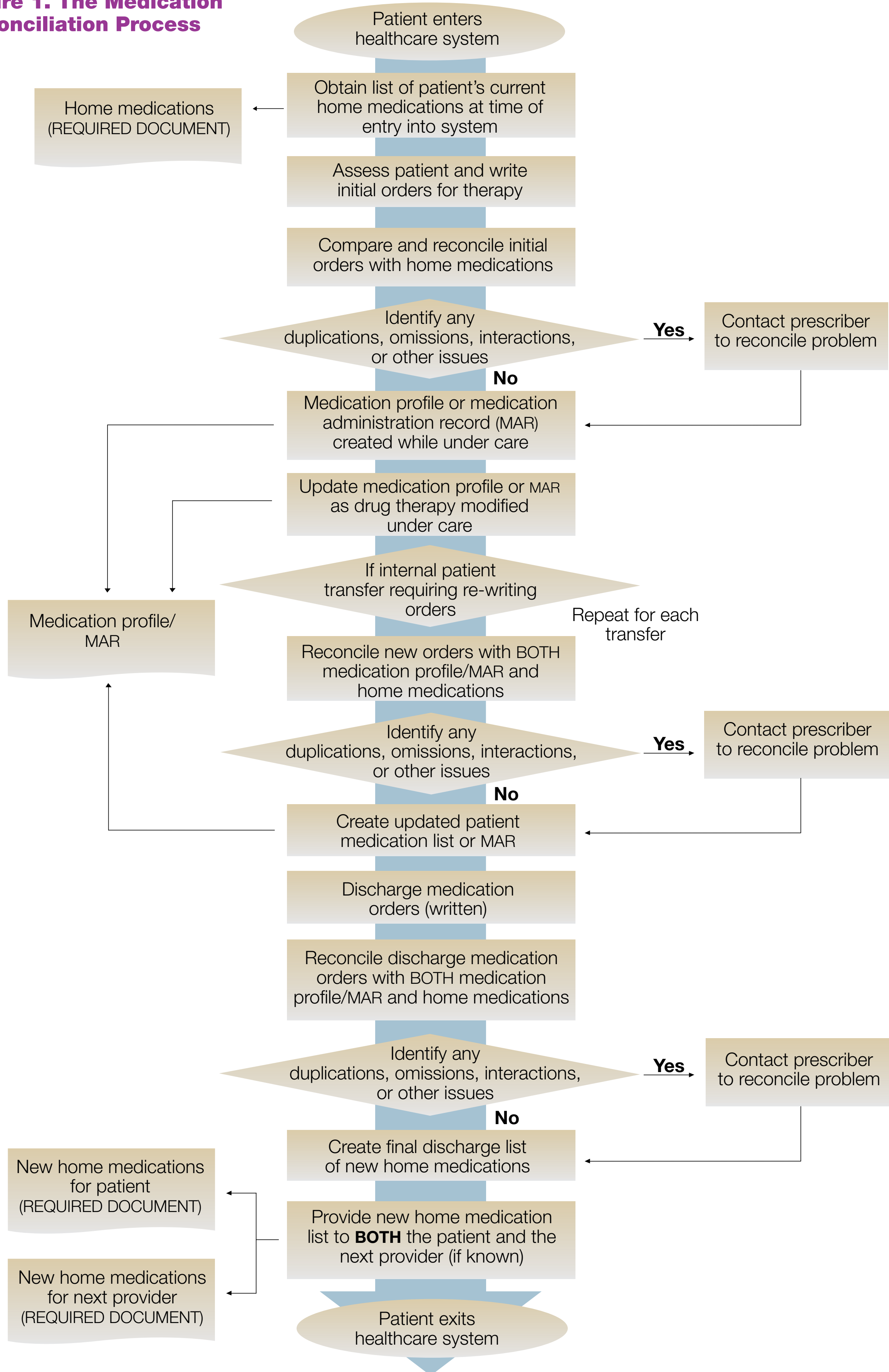


Figure 1. The Medication Reconciliation Process
Patient enters healthcare system
Obtain list of patient's current home medications at time of entry into system
Home medications (REQUIRED DOCUMENT)
Assess patient and write initial orders for therapy
Compare and reconcile initial orders with home medications
Identify any duplications, omissions, interactions, or other issues
Yes
Contact prescriber to reconcile problem
No
Medication profile or medication administration record (MAR) created while under care
Update medication profile or MAR as drug therapy modified under care
Medication profile/ MAR
If internal patient transfer requiring re-writing orders
Repeat for each transfer
Reconcile new orders with BOTH medication profile/MAR and home medications
Identify any duplications, omissions, interactions, or other issues
Yes
Contact prescriber to reconcile problem
No
Create updated patient medication list or MAR
Discharge medication orders (written)
Reconcile discharge medication orders with BOTH medication profile/MAR and home medications
Identify any duplications, omissions, interactions, or other issues
Yes
Contact prescriber to reconcile problem
No
Create final discharge list of new home medications
New home medications for patient (REQUIRED DOCUMENT)
Provide new home medication list to BOTH the patient and the next provider (if known)
New home medications for next provider (REQUIRED DOCUMENT)
Patient exits healthcare system

"...medication reconciliation...is the right thing to do to ensure safer patient care."

possibility of interactions and associated adverse events, medication reconciliation must occur prior to the administration of medication in *all* scenarios. It is worth noting that a significant source of non-compliance is failure to reconcile medications in the types of circumstances listed above.

The exception to this safety goal is referred to as "minimal medication use." Examples include procedures with medication use such as local anesthesia for dental work or sutures and oral contrast media. To satisfy the requirements for "minimal medication use" the following criteria must be met:

- The "minimal medication use" is in the context of a brief outpatient encounter.
- The medications in question act locally with negligible systemic effect (for example, minimally absorbed topical agents; low-volume local infiltration anesthetics; nonabsorbable enteric contrast agents).
- No other medications are used during the encounter.
- No new medications are prescribed for or provided to the patient for use after discharge.
- There are no changes to the patient's "current medications."
- Any provider of care to whom the patient is being referred, already has the patient's current medication information.

In other words, if all of the above criteria are met, requirement NSPG 8B (communication of the list to the patient and next provider of care) is not required as there are no changes to the patient's medication profiles. Note that this is *not* an exception to the requirement to perform medication reconciliation whenever medications are prescribed or administered, but rather it is relaxation of the second part of the standard, i.e., communication of the updated medication list.

And Still More Challenges...

Sometimes identifying the patient's next provider of care is problematic. For oncologists this scenario may occur in emergency rooms with migrant patient populations, or with patients for whom primary care is not readily available. The Joint Commission defines next provider of care as "that individual (or individuals) with whom the patient has an established relationship for receiving healthcare services or, if there is not yet an established relationship, has accepted a scheduled appointment for follow-up care."[3] If the patient will be receiving follow-up care from multiple caregivers, the discharge medication list must be communicated to *all* of the providers.

Additional clarification on sending the medication list to the next provider includes the following:

- For recurring patients, such as radiation therapy and outpatient chemotherapy, the list must be sent only when the list of medications has actually changed.
- When patients undergo outpatient procedures and receive only one-time medications during the encounter, there is no change to their ongoing medication list so any one-time medications do not have to be communicated.
- Patients may refuse authorization to send the list to their next provider of care if that provider is not part of the treating organization. However, when the patient refuses to send the medication list, clinicians should explain the potential risks of not sharing this information.
- This list should be given to the next provider in a reasonable time frame, as determined by the program and no later than the next follow-up visit.
- The expectation is for clinicians to communicate directly with the next provider of care. The patient cannot be used as an intermediary or messenger.

No matter what the challenges, medication reconciliation provides an opportunity to significantly decrease adverse events associated with medication use. Timely, efficient reconciliation provides tangible clinical benefit to not only the patients, but also to the healthcare system and staff as this vital information becomes more accessible. Lastly, involving and educating patients is a known way to improve the safety and quality of care. While the process of medication reconciliation has many intricacies and operational challenges, it is the right thing to do to ensure safer patient care.

Thomas W. Ross, MS, RPh, is director of Quality and Safety at the H. Lee Moffitt Cancer Center and Research Institute in Tampa, Fla.

References

[1]Institute for Safe Medication Practices. Practitioners Agree on Medication Reconciliation Value, but Frustration and Difficulties Abound. 2006. Available online at: www.ismp.org/Newsletters/acutecare/articles/20060713.asp. Last accessed Sept. 19, 2007.

[2]The Joint Commission. *Facts about Patient Safety*. 2007. Available online at: *www.jointcommission.org/PatientSafety/facts_patient_safety.htm*. Last accessed Sept. 19, 2007.

[3]The Joint Commission. *FAQs for The Joint Commission's 2007 National Patient Safety Goals* (Updated 1/07). Available online at: *www.jointcommission.org/NR/rdonlyres/9ECF1ED6-E04E-41DE-B7BC-174590CEDF33/0/07_NPSG_FAQs_8.pdf*. Last accessed Sept. 19, 2007.

[4]The Joint Commission. *2008 National Patient Safety Goals Hospitals*. Available online at: *www.jointcommission.org/NR/rdonlyres/82B717D8-B16A-4442-AD00-CE3188C2F00A/0/08_HAP_NPSGs_Master.pdf*. Last accessed Sept. 19, 2007.