

Patients presenting medication lists reduce the risk of error during hospital admission

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A recent study conducted at Northwestern Memorial Hospital found that almost 50 percent of medication discrepancies were related to a failure to understand all of the prescription medications patients were taking at the time of hospital admission. While it's common for patients not to recall all of their medications, especially when they are not feeling well or being unexpectedly admitted to the hospital, the results can be serious. The study, one of the largest conducted among hospitalized patients, highlighted the need for hospitals to modify processes and for healthcare providers to strongly encourage patients to keep a comprehensive and up-to-date list of all medications they are taking.

"When a patient is admitted to a hospital they typically receive new medications or have changes made to their existing prescriptions. Since the new medication regimen may conflict with drugs that patients are already taking, it is imperative that physicians and patients have an open dialogue and discuss current prescriptions and over-the-counter medications. Even common pain killers like Tylenol must be reported," said Gary Noskin, MD, professor of medicine at Northwestern University Feinberg School of Medicine, associate chief medical officer at Northwestern Memorial and principal investigator for the study.

The study, designed to determine [risk factors](#) and potential harm associated with [medication errors](#) at [hospital admission](#), was published in the [Journal of General Internal Medicine](#). Results found the majority of unexplained medication discrepancies originated when obtaining patients' medication histories, a process that involves both the clinician

and the patient. The outcome suggested the need for more thorough interviews, as well as for patients to keep complete and accurate lists of all medications they are, or have recently taken.

"Obtaining medication histories from patients is really challenging and errors are all too common. For patients with language barriers, impaired mental function, and severe illness, the process is even harder. Doctors also face time constraints. But, part of the problem is that most doctors were never really taught how to take complete medication histories. If a patient can bring in a list of their usual medications, or if we can access the latest list through the electronic health record, this helps decrease discrepancies," said David Baker, MD, professor of medicine and chief of general internal medicine at Northwestern University Feinberg School of Medicine and Northwestern Memorial and a co-investigator for the study.

Researchers note that when a patient visits multiple doctors, pharmacies and hospitals they may get prescriptions from each. While electronic records have played an important role in helping to avoid conflicts, they are not perfect and may not be electronically linked to transfer information from institution to institution or between care settings.

"When you go to any ATM machine, you access your full bank records in order to complete your transaction. Unfortunately in many instances, your doctor can not electronically access your medication information from other sources as a starting point, so an efficient and effective dialogue must take place to capture complete, accurate medication information," said Kristine Gleason, RPh, BSP Pharm, a clinical quality leader at Northwestern Memorial and the lead research pharmacist for the study.

Another factor found to contribute to the potential for medication discrepancies among patients, is the complex prescription regimen that

patients with multiple medical problems require. These patients are often prescribed multiple drugs, many of which can look or sound similar and cause confusion for the patient. Errors can also occur because people may be embarrassed to disclose certain medical issues.

Over one-third of the 651 study inpatients experienced medication discrepancies resulting in order changes. If these errors went undetected, 52 percent were rated as potentially requiring intervention to preclude harm and 11 percent were rated as potentially harmful. The findings suggest clinicians must improve methods for obtaining and validating medication histories to increase accuracy and avoid patient harm, especially for older patients with a large number of medications. Primary care physicians and other clinicians ought to help patients utilize and maintain complete, accurate and understandable medication lists and encourage patients to bring their lists and prescription bottles with them at every healthcare encounter.

"This is the first study to demonstrate that presenting a medication list is a significant protective factor for avoiding medication errors if lists and prescription bottles are appropriately utilized and validated by clinicians," said Gleason.

Northwestern Memorial has employed several strategies to reduce the risk of medication discrepancies. Doctors, nurses and pharmacists collaboratively work together to reconcile medications as part of the medication management process. Pharmacists are directly involved in medication reconciliation with patients on multiple medications (e.g., HIV, transplant regimens) and on high risk therapies (e.g., anticoagulation) and for patients transferring in to and out of the Intensive Care Unit where medication regimens frequently change. The hospital has also created a nationally recognized toolkit, which includes an outline of successful practices, advice on developing or redesigning an existing medication reconciliation process and information to involve

[patients](#), families and caregivers in the medication reconciliation process. The toolkit can be found online at www.nmh.org/nm/for+physicians+match

More information: To view the full study, please visit the Journal of General Internal Medicine at www.springerlink.com/content/y123197m86431v18/

Provided by Northwestern Memorial Hospital

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