Print "PDF version"

What's New in the Patient Safety World

July 2020

Not Following Medication Changes after Hospitalization?

Medication reconciliation at any transition of care is important. But none are more critical that at the time of hospital discharge. Medication reconciliation at the time of discharge is different because the patient or his/her caregiver, rather than the hospital, is now responsible for ensuring any changes made to medications are adhered to. And we've often discussed how discharge is a very vulnerable time for patients. They are often so anxious to go home that they may not pay full attention to discharge instructions and thus may not fully understand any changes to their medication regimen.

That's why the phone call (by a pharmacist, nurse, or physician) 24-48 hours after discharge is so important in ensuring patients understand those changes and will be adherent to the new medication regimen.

A new study (Weir 2020) addressed the impact of nonadherence to medication changes made at hospital discharge. The researchers found that 44% of 2655 patients were nonadherent to at least one medication change, and 32% were readmitted to hospital, visited the emergency department, or died in the 30 days post-discharge. Patients who were not adherent to any of their medication changes had a 35% higher risk of adverse events (after adjustment for confounders) compared to those who were adherent to all medication changes. Those who were adherent to some of their medication changes at discharge had a 10% elevated risk of adverse events in 30 days post-discharge compared to those who were adherent to all medication changes.

The impact of nonadherence on adverse events was mainly **driven by not filling newly prescribed medications**. There was no increased risk for nonadherence to discontinuations or dosage changes.

These were mostly elderly patients. The mean age of study patients was 69.5 years old. The study conclusions are somewhat limited because dispensing data was used to determine nonadherence. That could lead to erroneous conclusions if patients filled their prescriptions but did not take them or did not fill them but used existing supplies. Also, it

is difficult to accurately assess doses from dispensing data (eg. patients could be pill-splitting). But, even given these limitations, the conclusions of the study are pretty compelling: we need to do a better job of not only performing accurate medication reconciliation at discharge but also ensuring adherence to changes made.

But such nonadherence should be anticipated. In our June 30, 2020 Patient Safety Tip of the Week "What Happens after Hospitalization?" we cited a study (Dharmarajan 2020) that showed disability in specific functional activities important to leaving home to access care and self-managing health conditions is common, often new, and present for prolonged time periods after hospitalization for acute medical illness. One of those activities was taking medications. The researchers found that the proportion of patients newly disabled at 1 month after hospitalization for acute medical illness was 30% for taking medications.

Many patients following hospitalization have cognitive deficits or other impairments of activities of daily living that lead to medication nonadherence. We must anticipate those deficits and, therefore, work with caregivers to help improve adherence.

Previous research by these same authors (Weir 2019) suggested that failure to follow medication changes was highest for dose increases, symptom relief medications, those that require prior authorization, and medications that had not been administered during the hospital stay. At the patient level, those with at least one preadmission hospitalization, who did not have any medications dispensed prior to admission, and were discharged from thoracic surgery or to a long-term care facility, also had a higher risk of failure to follow changes.

There were 10,068 medication changes made at hospital discharge and 24% were not followed in the 30 days post discharge. Thirty percent of dose modifications were filled at the incorrect dose, 27% of new medications were not filled, and 12% of discontinued medications were filled. Factors associated with increased the risk of failure to follow medication changes were: increasing out-of-pocket medication costs (adjusted odds ratio 1.12), discharge to long-term care facility (aOR 2.29), and not having medications dispensed prior to admission (aOR 4.67).

Both Weir studies come out of hospitals in Montreal, Quebec.

Some of our previous columns on medication reconciliation:

October 23, 2007 "Medication Reconciliation Tools"
December 30, 2008 "Unintended Consequences: Is Medication Reconciliation Next?"
May 13, 2008 "Medication Reconciliation: Topical and Compounded Medications"
September 8, 2009 "Barriers to Medication Reconciliation"
August 2011 "The Amazon.com Approach to Medication Reconciliation"
January 2012 "AHRQ's New Medication Reconciliation Tool Kit"
September 2012 "Good News on Medication Reconciliation"

October 1, 2019 "Electronic Medication Reconciliation: Glass Half Full or Half Empty?"

References:

Weir DL, Motulsky A, Abrahamowicz M, et al. Failure to follow medication changes made at hospital discharge is associated with adverse events in 30 days. Health Serv Res 2020; 00: 1-12
https://onlinelibrary.wiley.com/doi/full/10.1111/1475-6773.13292

Dharmarajan K, Han L, Gahbauer EA, Leo-Summers LS, Gill TM. Disability and Recovery After Hospitalization for Medical Illness Among Community-Living Older Persons: A Prospective Cohort Study. J Am Geriatr Soc 2020; 68: 486-495 Published online February 21, 2020
https://onlinelibrary.wiley.com/doi/10.1111/jgs.16350

Weir DL, Motulsky A, Abrahamowicz M, et al. Challenges at care transitions: failure to follow medication changes made at hospital discharge. Am J Med 2019; 132: 1216-1224.e5
https://www.amjmed.com/article/S0002-9343(19)30430-9/fulltext

The Truax Group
Healthcare Consulting
www.patientsafetysolutions.com

http://www.patientsafetysolutions.com/

Home

Tip of the Week Archive

What's New in the Patient Safety World Archive