What's New in the Patient Safety World

July 2015

Tools for Deprescribing

Among our numerous columns on potentially inappropriate medication use in the elderly, we've done a few specifically on **deprescribing** (see our Patient Safety Tips of the Week for March 4, 2014 "Evidence-Based Prescribing and Deprescribing in the Elderly" and September 30, 2014 "More on Deprescribing" and our May 2015 What's New in the Patient Safety World column "Hospitalization: Missed Opportunity to Deprescribe").

Since our last column on potentially inappropriate medications (PIM's) in the elderly there has been yet another study showing the problem may be getting worse rather than improving. Lund and colleagues found that despite intervention studies demonstrating up to 80% reduction in PIM use during acute hospitalization, a significant increase in PIM use was observed in a naturalistic setting in Medicare beneficiaries with acute MI (Lund 2015).

But two papers have proposed excellent approaches to minimize PIM use and facilitate deprescribing. As we noted in our May 2015 What's New in the Patient Safety World column "Hospitalization: Missed Opportunity to Deprescribe" a hospitalization provides a logical time to determine whether a patient is a good candidate for deprescribing. And one group did just that. They implemented a brown bag medication reconciliation process in the hospital setting to decrease medication discrepancies by encouraging evaluation of medication adherence, side effects, and monitoring at posthospitalization follow-up (Becker 2015). After implementation, a 7% decrease in reportable errors was noted.

We had discussed some of the good work of Scott and colleagues on deprescribing in several of our previous columns on deprescribing. Now that group from Australia has put together an excellent **5-step protocol to aid the deprescribing** process (Scott 2015):

1. ascertain all drugs the patient is currently taking and the reasons for each one
2. consider overall risk of drug-induced harm in individual patients in determining the required intensity of deprescribing intervention
3. assess each drug in regard to its current or future benefit potential compared with current or future harm or burden potential
4. prioritize drugs for discontinuation that have the lowest benefit-harm ratio and lowest likelihood of adverse withdrawal reactions or disease rebound syndromes
5. implement a discontinuation regimen and monitor patients closely for improvement in outcomes or onset of adverse effects

The Scott paper has an excellent discussion about identifying the reasons for each drug and determining whether the drug was prescribed for symptom or disease control or for prevention. It stresses looking at whether the condition for which the drug was originally prescribed is still present and merits continuation. And it stresses looking at the risk:benefit ratio of the drug in the context of expected lifespan. The Scott paper notes that predicting lifespan is very difficult. However, it notes that the "surprise question" (i.e. "would you be surprised if this patient were to die within the next 12 months?") is reasonably predictive. Note that this might also be one of the few potential uses of a tool recently developed that accurately predicts death in recently hospitalized patients (van Walraven 2015). While that tool seems to be quite accurate, we did not think that either physicians or patients were likely to want to use it. The Hospital patient One-year Mortality Risk (HOMR) model, using easily available administrative data and originally derived and internally validated to predict the risk of death within 1 year after admission, was recently validated externally in three medical centers in Canada and the US. The HOMR score was strongly and significantly associated with risk of death in all populations and was highly discriminative. The authors felt the HOMR model might be useful for risk adjustment in analyses of health administrative data to predict long-term survival among hospital patients. While the time window for the HOMR score is one year, one might identify patients with a high likelihood of death within one year who would not likely benefit from continued use of drugs with a longer time horizon (eg. bisphosphonates).

The Scott paper also notes that patients may no longer derive any benefits from some drugs. They note patients who no longer need antihypertensives because they are now normotensive in response to lifestyle modifications. Or they note patients who were originally prescribed nitrates for chest pain that did not turn out to be of cardiac origin.

The Scott paper has a nice **algorithm for deciding the order and mode in which each drug could be discontinued**. Their algorithm also asks whether it is likely the patient would have withdrawal symptoms or a disease recurrence if the drug were discontinued. If so, tapering the drug and monitoring for adverse effects is indicated.

The paper also has a good discussion about patient-level and physician-level barriers to deprescribing and system-level strategies that might help promote deprescribing.

Particularly as we move forward with healthcare models like accountable care organizations and population health management, it makes both clinical and financial sense to take a hard look at what we might do better to both avoid potentially inappropriate medications in the first place and to consider deprescribing in those already on them. Such programs can reduce adverse drug events and improve patient satisfaction at the same time they save money (from direct drug costs and costs associated with adverse drug events).

Some of our past columns on Deprescribing in the Elderly:

- March 4, 2014 "Evidence-Based Prescribing and Deprescribing in the Elderly"
- September 30, 2014 "More on Deprescribing").
- May 2015 "Hospitalization: Missed Opportunity to Deprescribe"

Some of our past columns on Beers' List and Inappropriate Prescribing in the Elderly:

- January 15, 2008 "Managing Dangerous Medications in the Elderly
- June 2008 "Potentially Inappropriate Medication Use in Elderly Hospitalized Patients"
- October 19, 2010 "Optimizing Medications in the Elderly"
- September 22, 2009 "Psychotropic Drugs and Falls in the SNF"
- September 2010 "Beers List and CPOE"
- June 21, 2011 "STOPP Using Beers' List?"
- December 2011 "Beers' Criteria Update in the Works"
- May 7, 2013 "Drug Errors in the Home"
- November 12, 2013 "More on Inappropriate Meds in the Elderly"
- January 28, 2014 "Is Polypharmacy Always Bad?"
- March 4, 2014 "Evidence-Based Prescribing and Deprescribing in the Elderly"
- September 30, 2014 "More on Deprescribing"
- February 10, 2015 "The Anticholinergic Burden and Dementia"
- May 2015 "Hospitalization: Missed Opportunity to Deprescribe"

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