

What’s New in the Patient Safety World

February 2021

Under the Radar: Muscle Relaxant Use

We’ve done many columns on potentially inappropriate medications (PIM’s) in older adults (see list below). We’ve often focused on drugs with prominent anticholinergic actions, sedative/hypnotic drugs, benzodiazepines, gabapentinoids, and others. But there is one class of PIM’s that has largely flown “under the radar”: skeletal muscle relaxants. And there has been a disturbing trend in prescribing patterns for drugs in this class.

The 2019 Updated AGS Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults ([AGS 2019](#)) notes that most muscle relaxants are poorly tolerated by older adults because some have anticholinergic adverse effects, sedation, increased risk of fractures; and their effectiveness at dosages tolerated by older adults questionable. Examples of skeletal muscle relaxants they note are: Carisoprodol, Chlorzoxazone, Cyclobenzaprine, Metaxalone, Methocarbamol, and Orphenadrine.

A recent analysis ([Soprano 2020](#)) found that skeletal muscle relaxant (SMR) use increased rapidly between 2005 and 2016. During the study period, office visits with a prescribed SMR nearly doubled. Actually, visits for new SMR prescriptions remained stable, but office visits with continued SMR drug therapy tripled. Older adults accounted for 22.2% of visits with an SMR prescription. Concomitant use of an opioid was recorded in 67.2% of all visits with a continuing SMR prescription.

So, what’s driving this trend? SMR’s have been increasingly used in long-term pain management, despite lack of data on efficacy and safety. It’s likely that the opioid epidemic and the resultant push to reduce opioid prescribing has made clinicians look for alternatives to opioids in management of chronic pain.

The major indication for SMR use is for acute low back pain. There is little evidence of SMR efficacy in managing chronic low back pain. And the use of SMR’s for all other types of chronic pain is “off-label” and based largely on anecdotal data.

That SMR use was associated with concomitant opioid use in 67% of visits is particularly bothersome. One study identified an elevated risk of overdose with concomitant use of opioids and skeletal muscle relaxants ([Li 2020](#)).

We, personally, have never been fans of skeletal muscle relaxants, even for acute low back pain. So, we were quite taken aback to see this disturbing trend in SMR prescribing. This is probably a situation in which use of clinical decision support tools in ePrescribing applications or CPOE might be useful. Clinical decision support tools could alert clinicians about dangers prescribing them to older adults, suggest long-term use of SMR's is not appropriate, and to particularly flag issues with concomitant use of opioids.

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](#)"
- July 2015 "[Tools for Deprescribing](#)"
- November 2015 "[Medications Most Likely to Harm the Elderly Are...](#)"
- August 2, 2016 "[Drugs in the Elderly: The Goldilocks Story](#)"
- October 31, 2017 "[Target Drugs for Deprescribing](#)"
- January 2018 "[What Happens After Delirium?](#)"
- May 2018 "[Antipsychotic Use in Nursing Homes: Progress or Not?](#)"
- June 2018 "[Deprescribing Benzodiazepine Receptor Agonists](#)"
- October 2018 "[STOPP/START/STRIP](#)"
- November 27, 2018 "[Focus on Deprescribing](#)"
- March 19, 2019 "[Updated Beers Criteria](#)"
- March 10, 2020 "[Medication Harm in the Elderly](#)"
- June 2020 "[The Antipsychotics in Dementia Conundrum](#)"

References:

2019 American Geriatrics Society Beers Criteria® Update Expert Panel. American Geriatrics Society 2019 Updated AGS Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults. J Amer Geriatr Soc 2019; First published: 29 January 2019

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Li Y, Delcher C, Wei YJ, et al. Risk of opioid overdose associated with concomitant use of opioids and skeletal muscle relaxants: a population-based cohort study. Clin Pharmacol Ther 2020; Published online February 5, 2020

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