Reviewer's report

Title: An investigation of factors predicting the type of bladder antimuscarinics initiated in Medicare nursing homes residents

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Reviewer: Adrian Wagg

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An investigation of factors predicting the type of bladder antimuscarinics initiated in Medicare nursing homes residents
The authors have made considerable revisions to the paper based upon the reviewer's comments. The abstract may benefit from a single statement which indicates that at least some of the observed factors may be modifiable.
It might be interesting, and perhaps somewhat frivolous, to examine prescribing patterns of drugs newly introduced onto the market and accepted onto formularies. I do wonder if there's not much in the way of conscious thought in prescribing these agents given the similar clinical efficacy and marginal differential in adverse events rates - apart from those associated with oxybutynin IR - which might be mandated

Introduction
Given the authors modifications - the first sentence may better be written as. Urinary incontinence (UI) is defined as the involuntary loss of urine (Abrams et al 2002). Urgency incontinence, defined as incontinence associated with a strong desire to void comprises the most common underlying type of UI in older persons...
Likewise, the sentence which deals with treatment options only resulting in various degrees of symptom management would be inherently incorrect, but would be correct for urgency incontinence.
Once again, the relevance of references 16-19 to older patients is moot - there are more relevant ones - the reviewer did not request a totally inclusive list but perhaps references relevant to older people might be more appropriate here.
References 23-25 deal with anticholinergics as a class and provide at best associative data. Bladder antimuscarinics and cognitive decline in elderly patients.
There was no assessment of frailty in any of these papers - this needs to be removed
Please could the authors refer to OAB drugs causing falls, or death? Of the references associating AMs with cognitive impairment they are exactly that - associative, thus words like "lead to" are misleading.
Could the authors refer to adverse events such as they describe in the nursing home population.
The work of Jo Ouslander, for example, would leave us to believe that there is vast underuse of OAB medications in NH, given the prevalence of he problem.
Reference 28 deals with 9 patients with dementia and UI - it makes no distinction between selective and non selective AM - in fact it mentions none by name Reference 26- the authors own paper also makes no mention of a differential effect, although it does attempt to split AM into selective and non selective forms (with the caveat that the "selective drug" was solifenacin).
The aim of the study is reasonable - it is a shame that the authors could suggest no a priori hypotheses to test, given their literature search. Please can the authors clearly define NH - do they mean long term care or are there skilled nursing facilities and shorter stay rehabilitation units included? Should there be corrections in the p value required to be achieved to assign significance given these multiple comparisons?

Results
Adding in the direction of the association for each factor within the text would be of some assistance. The tables are weighty indeed.

Discussion
The first sentence is redundant. The discussion could be a little more fulsome - e.g. women with reported fall related injuries were significantly more likely to be initiated on selective ER BAM than men - allows the reader to digest the findings more easily. There is still marked lack of "discussion" of the results here - merely a repetitive commentary. Would the authors like to try and explain their results, for example - why were pads etc predictive - there does appear to be a plausible explanation. Was the reduction in likelihood of prescription of selective BAM in those with increasing cognitive impairment policy driven? Was this more obvious in some jurisdictions rather than others? Were selective drugs even available in these jurisdictions?

There seems to be an overemphasis on the sex based analysis - the epidemiology of UUI-OAB is such that after the age of 80, the problem is more common in men (albeit from community dwelling men (there are few, if any NH data). OAB drugs may not se simply adjunctive in this group of residents - many of whom are unable to perform behavioural techniques, or where maintaining hydration is more of a concern than overdrinking or taking excessive caffeine.

Some greater attempts at explaining the associations.

The section on limitations contains some repeated phrases - these can be deleted. There are some tense disagreements and minor typographical errors.

The conclusion notes that the observed predictors are important - im not sure that the authors have yet made their case.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

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