

RGH Pharmacy E-Bulletin

Volume 41 (9): March 28, 2011

A joint initiative of the Patient Services Section and the Drug and Therapeutics Information Service of the Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia. The RGH Pharmacy E-Bulletin is distributed in electronic format on a weekly basis, and aims to present concise, factual information on issues of current interest in therapeutics, drug safety and cost-effective use of medications.

Editor: Assoc. Prof. Chris Alderman, University of South Australia – Director of Pharmacy, RGH

© Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia 5041

Addressing polypharmacy in older people

Polypharmacy has been defined as the use of ≥ 5 medications per person. A more appropriate definition would be the administration of more medications than clinically indicated, resulting in inappropriate medication use. The latter definition fits well with Quality Use of Medicines principles. The 11th biennial health report of Australia in 2008 revealed that the proportion of the Australian population who are elderly is rising. Older people often have a propensity to be prescribed more medications. People aged over 65 years account for 20-33% of Australian national drug expenditure and this is expected to reach 40% in 2030. Approximately 18% of community dwelling older people have at least 26 prescriptions dispensed in a period of six months. A report published in the Medical Journal of Australia in 1998 found that the mean number of prescriptions per nursing home resident was 6.75. Around 2.4-3% of all hospital admissions are drug related and the risk for these admissions has consistently been shown to be increased with increased medication use. It is evident that there is an increased need for an expanded evidence base that will guide medication withdrawal in older people. There are few, if any, published systematic reviews of evidence from clinical studies focusing on medication withdrawal in the elderly. The Beers criteria highlight potentially inappropriate medications to be wary in the elderly, but do not provide guidance on medication withdrawal. Moreover, being on ≥ 5 non-Beers listed medications does not necessarily constitute appropriate prescribing.

A good systematic review of the evidence from clinical trials for withdrawal of specific classes of medications can be found in *Drug Ageing* 2008;25(12):1021-31. This review included 31 published studies (n=8972). Some salient features are summarised below:

- Four randomised, placebo-controlled studies (n=448) of diuretic withdrawal found a successful withdrawal rate of 51 -100%. Unsuccessful withdrawal occurred where heart failure was present. The type of diuretic(s) withdrawn is not specified. At the time of most of these studies, it was not common practice to prescribe beta-blockers or angiotensin enzyme converting inhibitors or receptor blockers.
- Nine open label and prospective observational studies (n=7188) of withdrawal of antihypertensives (including diuretics) found that 20 -85% of subjects remained normotensive or did not require re-initiation of original therapy for between 6 months and 5 years. Those older than 75 were more likely to become hypertensive over 12 months.
- Studies assessing withdrawal of psychotropics and benzodiazepines consistently show a reduction in falls and improved cognition, but other studies assessing nitrate, digoxin, carbamazepine and donepezil withdrawal are too small to form any conclusions.

Various studies have focused on developing a “de-prescribing” model. The Good Palliative-Geriatric Practice algorithm (*Arch Intern Med* 2010; 170(18):1648-54) as well as a guide published in the *J Pharm Pract Res* 2003; 33:323-8 address this issue. The principle of de-prescribing is to use a planned team approach involving doctors, pharmacists, nursing staff, patients & their carers. All drugs that a person is taking are identified, then drugs to be *sequentially* ceased, substituted or have their dose reduced are prioritised according to the current evidence, indication, adverse effects, superiority of existing drug relative to others, dosing & balancing these against quality of life and current disability level of the patient.

Polypharmacy will continue to become an increasing issue in our society with the ageing population. There is a need for an increased evidence base to guide withdrawal of medications in older people. Evidence demonstrating medication withdrawal and its associated benefits has only been shown in a few trials and mostly with those involving psychotropic withdrawal. Randomised controlled trials are obviously needed to assess the long term effects of medication withdrawal yet funding for such a study is a barrier. Prescribers must judiciously balance the risk of ceasing any medications against the risk of remaining on any unnecessary medication(s).

Acknowledgment – This E-Bulletin is based on work by Joanna Hogan, Senior Pharmacist, RGH

FOR FURTHER INFORMATION – CONTACT THE PHARMACY DEPARTMENT ON 82751763 or email: chris.alderman@rgh.sa.gov.au
Information in this E-Bulletin is derived from critical analysis of available evidence – individual clinical circumstances should be considered when making treatment decisions. You are welcome to forward this E-bulletin by email to others you might feel would be interested, or to print the E-Bulletin for wider distribution. Reproduction of this material is permissible for purposes of individual study or research.