



From the Clinical Director

Recent estimates suggest that there are now over 75,000 different drug products listed on the Australian Register of Therapeutic Goods (ARTG). Of course not all of the products on the ARTG are necessarily marketed and available for prescription or sale to the public – the compounds listed include those where the sponsor company has not yet marketed the agent, as well as medicines only available through the Special Access Scheme (SAS). In addition, some complementary products (e.g. traditional Chinese medicines) are difficult to categorise and may not necessarily be immediately identifiable as medicinal products.

With so many different medicines available now, and with the list of products growing rapidly, it is not surprising that in addition to knowing and understanding the effects of the individual agents, it is also necessary to be watchful for the effects that can be seen when two or more medicines are used in combination. Research from Ward MM shows that residents in Australian Aged and Extended Care facilities (such as nursing homes) take on average more than 8 different drug products on a regular basis, in addition to products that might be used on an “as needed” basis.

For those using multiple medications it is very important that appropriate checks are made to ensure that the combinations used do not result in unintended consequences. This phenomenon is sometimes called a “drug interaction,” whereby the use of two products at the same time can produce problems that would not be seen when the medications are used alone. Sometimes the effect of a drug interaction can be a toxic reaction which is harmful. Sometimes there may not be obvious harm, but the combination increases the risk of serious adverse consequences. In other situations the addition of a new drug may render another medicine ineffective.

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It is important to have a pharmacist looking over medication combinations to make sure that the mix of products does not create a risk of a serious drug interaction. In Aged Care, an effective approach is for the pharmacy to arrange a Residential Medication Management Review (RMMR), where the pharmacists visit the facility to systematically review all medicines used by the resident. An RMMR from Ward MM can make a very positive impact, especially for people taking multiple medications.

Dr Chris Alderman, Director of Clinical Excellence, Ward MM.



Feature Article:

Key Drug Interactions

With the use of decision support software now commonplace, clinicians can find themselves on the receiving end of a constant barrage of information about potential contraindications and drug interactions.

At times, a “fatigue factor” might contribute to overlooking a truly important warning that could avert a harmful drug interaction.

In this edition of the Ward MM newsletter we highlight some relatively commonly encountered drug interactions that are potentially clinically significant: the list below is by no means exhaustive, but does draw attention to drug combinations that should always be assessed critically.



Warfarin

There are many drugs that can potentiate the effects of warfarin, increasing the INR and increasing the risk of bleeding: these agents include, but are not limited to amiodarone, cotrimoxazole,azole antifungals drugs (e.g. ketonazole, fluconazole), macrolide antibiotics (such as erythromycin), metronidazole and tramadol.

On the other hand, some drugs such as carbamazepine, phenytoin and rifampicin can diminish the effects of warfarin, creating the potential for failure of anticoagulation, which can also have catastrophic consequences such as stroke or pulmonary embolus.

Allopurinol and azathioprine

Concurrent prescription of these drugs can dramatically potentiate the effects of azathioprine, leading to potentially fatal bone marrow suppression.

ACE Inhibitor + NSAID + Diuretic

The so-called “triple whammy” creates the potential for acute renal failure and serious electrolyte disturbances such as significant hyperkalaemia. The combination should be used with extreme caution, if at all – the risk is highest for the elderly, and also during dehydration.

Digoxin

Perhaps less commonly prescribed now than in the past, digoxin remains a drug of low therapeutic index and the concurrent prescription of drugs including amiodarone, quinidine, itraconazole and verapamil can result in serious digoxin toxicity. These combinations should be used with caution and therapeutic drug monitoring is required to ensure that the serum level of digoxin remains in the therapeutic range.

Immunosuppressants

Drugs such as cyclosporin and tacrolimus have a low therapeutic index: the addition of some agents such as diltiazem, erythromycin, SSRIs orazole antifungals can result in serious toxicity that may compromise renal or hepatic function. On the other hand, enzyme inducing agents such as anticonvulsants, rifampicin and St John's wort can diminish the effects of the immunosuppressant, potentially compromising organ allografts.

The list here is certainly not a complete one, but is simply presented to raise awareness – if in doubt, consult a drug information centre or a reliable reference source.

Your Ward MM pharmacist team are also always on hand to provide recommendations through an RMMR or advice over the phone on **1800 WARDMM**.

Quick Tip

Refrigeration Misconceptions

The list below includes various items that can be stored at room temperature, but are commonly stored in the fridge. These items can be particularly sensitive to the cooler temperatures/moist environment and take up space in the fridge unnecessarily. Check your fridge and consider alternative storage arrangements for these agents.

- Vitamin B12 injections
- Glucagon Hypokit
- Maxolon (metoclopramide) Injections
- Glyceryl Trinitrate Spray
- Most Eye Drops*
- Chlorsig (chloramphenicol) Eye Ointment

**Ask your Ward MM Pharmacist for advice on the storage of eye drops, a number of helpful handouts are available.*

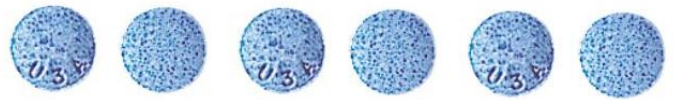
Your Questions Answered

Notes from facilities serviced by Ward MM

It is quite common for us to receive similar enquiries from more than facility in our network. In this section we summarise questions with a common basis – as a part of our “connect – network – share” ethos, we share the information with all of our facilities.

Q. Should I measure pulse before administering digoxin?

A. In most cases it is not necessary to record heart rate daily prior to digoxin administration. Monitoring for digoxin toxicity is a clinical decision to be made by the treating doctor on an individual basis, and usually involves checking blood pressure and heart rate weekly or monthly. More frequent monitoring is sometimes required, such as when first starting therapy, when introducing potentially interaction medications or when renal function is declining or is unstable.



Meet your Pharmacists

Sue Ward founded Ward Medication Management in 1997. After years of dedicated clinical pharmacy practice, Sue has grown her close-to-her-heart-one-person business to become owner, Principal Pharmacist, mentor and mother hen to a team of over 30 people. Sue shares some of her experiences:

Most Meaningful Moment: An RN came up to me after an education session and said "Thank you for that informative session. It makes me want to be a pharmacist !"

Biggest Challenge: Quality use of medicines - are we nearly there yet ?

I'd be Lost Without... Previously it was my red lipstick but now I will really be lost without the support of my team at Ward Medication Management from our CEO to Clinical Directors to our General Manager to each and every one of our clinical pharmacists, our IT and HR team and the facility managers and clinical care co-ordinators that we work so closely with.