



## From the Clinical Director

This Ward MM newsletter is released in the week leading up to Christmas, a favourite time of the year for some, and for others it is an emotional time that can present its own challenges.

In a secular, multicultural society like Australia, not everyone necessarily celebrates the actual occasion of Christmas, but nevertheless many of us look forward to at least a few days off from our usual routine. This might be spent being in touch with loved ones, indulging in food and drink sometimes reserved for festive occasions, a trip away to a place much loved (or perhaps out of the ordinary), or even simply a few lazy days spent on the couch watching the progress of a cricket match, or perhaps tennis or golf?

No matter how those of us who are fortunate enough to have time off in the last few days of December or early January spend our days, many of us find this time of year to be an opportunity to connect/reconnect with those we care about, an occasion to relax, a time to eat delicious family specialty foods, and to recharge. How can this be a bad thing?

Of course, this time of year can also be a double-edged sword. As those around us celebrate the very things that make the season special, there are some amongst us for whom the holiday season can present some significant issues. At times people can find themselves estranged or disconnected from people they care about, and in the aged care industry it is quite possible some elderly people find themselves completely disconnected from those that they care the most about.

We at Ward MM recognise the enormous care and compassion that our partners in the aged care industry provide for the elderly people in their care, at a time when some have few living or contactable family members to be with. This can be especially important for those who find themselves (for one reason or another) culturally or geographically disconnected from those who mean a lot to them. These folk may not necessarily have the opportunity to be able to enjoy the festive season in the same way as the rest of us. In fact, for some people in aged care who have outlived family and friends, this time of year can actually serve as a sad reminder of the harsh realities that they can face – loneliness, loss and grief. The caring spirit of those who provide support and care in these situations does shine through, and is a quality worthy of great admiration.

### ***Ward MM recognise the enormous care and compassion that our partners in the aged care industry provide***

Although the festive season is a time of great joy for many, it is important to remember that this time of year can actually present special risks for medication-related harm. The likelihood of changes to routine may unsettle some people with cognitive deficits or pre-existing dementia. Medication-related adverse events such as falls, drug-induced renal impairment, and other iatrogenic events may be seen at an increased prevalence, but well-deserved leave arrangements can make it difficult to access services, reducing the ability to manage these situations. Leaving a potentially hazardous situation to “run its course” over public holidays or extended breaks can actually prove to be disastrous. Although some Ward MM staff do indeed take time off at this time of year, we also recognise that the need to provide a safe, uninterrupted service is paramount. For this reason, please bear in mind that it is always possible to contact a Ward MM professional staff member for advice over the coming weeks.

Happy Christmas!

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



## Feature Article:

# Father Christmas – re-examined...

There are said to be approximately two billion children (under 18) in the world today. It is thought that Father Christmas does not routinely visit children of Muslim, Hindu, Jewish or Buddhist religions, so this reduces his workload for Christmas night to 15% of the total, or 378 million. At a generous average rate of 3.5 children per household, that comes to 108 million homes (presuming there is at least one good child in each).

Santa has about 31 hours of Christmas to work with, given the different time zones and the rotation of the earth, assuming east to west. This works out to 967.7 visits per second. This is to say that for each Christian household with a good child, Santa has around 1/1000th of a second to park the sleigh, hop out, jump down the chimney, fill the stocking, distribute the remaining presents under the tree, eat whatever snacks have been left for him, get back up the chimney, jump into the sleigh and get onto the next house. It's fair to say he's moving at a clip.

Assuming that each of these 108 million stops is evenly distributed around the earth (unlikely, of course), we are now talking about 1.3 km per household -a total trip of nearly 122 million km, not counting bathroom stops or breaks. This means Santa's sleigh is moving at 1046 km per second—many times the speed of sound (about 340 m/second). For purposes of comparison, the fastest man made vehicle, the New Horizons space probe, moves at a poky 16 km per second, and a conventional reindeer can run (at best) 25 km per hour.

The payload of the sleigh adds another interesting element. Assuming that each child gets nothing more than a medium sized LEGO set (say 1 kilogram), the sleigh is carrying nearly 400 million kg, not counting Santa himself. On land, a conventional reindeer can pull no more than 135 kg. Even if we (generously) grant that a "flying" reindeer can pull 10 times the normal amount, the job can't be done with eight or even nine of them---Santa would need 360,000 of them. This increases the payload, not counting the weight of the sleigh, by millions of kg, exceeding a weight roughly seven times the weight of the Queen Elizabeth (the ship, not the monarch). This enormous weight, traveling at over 1000 km per second creates enormous air resistance - this would heat up the reindeer in the same fashion as a spacecraft re-entering the earth's atmosphere. The lead pair of reindeer would adsorb 14.3 quintillion joules of energy per second each. In short, they would burst into flames almost instantaneously, exposing the reindeer behind them and creating deafening sonic booms in their wake. The entire reindeer team would be vaporized within thousandths of a second, or about the time Santa reached the fifth house on his trip.

Not that it matters, however, since Santa, as a result of accelerating from a stationary start to over 1000km/second in .001 seconds, would be subjected to acceleration forces some 17,000 times the force of the earth's ordinary gravity. A 110 kg Santa (which seems ludicrously slim) would be pinned to the back of the sleigh by more than 2,000,000 kg of force, instantly crushing his bones and organs and reducing him to a quivering blob of pink goo. Sadly, it would seem that if Santa did ever exist, he's no longer with us.

## Quick Tip

### Global warming explained?

900 million women worldwide are in the early stages of menopause, experiencing what is commonly known as “hot flashes” according to a report by Professor of Meteorology, Dr Cyril Sanders.

He suggested a correlation between the number of women entering menopause over the past 25 years and increasing global temperatures, but concedes the contribution from each woman is minuscule (less than 0.0000000023 degrees F each year). When the Earth's population was small, the effect was barely noticeable, so the problem relates the growing numbers of perimenopausal women. Not everyone is entirely convinced.

Dr Brigitte Watson, a 49-year-old British scientist was quoted as saying "Burning of fossil fuels is the prime cause of global warning - this theory is the work of a knuckle-dragging Neanderthal."

Before anyone gets too hot under the collar, it is worth noting that the original source for this story was the US newspaper Weekly World News.

Other stories covered by this prestigious tabloid include recent sightings of Elvis Presley, discovery of a mutant “bat boy” living in a cave in New Mexico, and an incident involving an ice-skating circus bear that killed one person and injured another during rehearsals. Interpret with caution...

## Latest News

Anyone who has seen the pharmacists from Ward MM around their facilities will know that they are busy people, but do you know just how busy they are?

Ward MM continues to grow in terms of impact in the aged care industry in Australia, and this year alone have conducted over 9000 Residential Medication Management Reviews (RMMRs) in five states, in addition to the commencement of a programme providing Home Medicines Reviews (HMRs) for people living in a community based setting. Add to this a total of 1240 in-facility audits, 570 high quality educational sessions, two highly successful masterclasses, attendance at some 485 Medication Advisory Committee (MAC) meetings and a range of successful research projects that have culminated in national and international conference presentations and publications, and it is easy to see just how busy we have been.

And it is not just the pharmacists who have had their hands full – all of this is supported by the excellent executive, administrative, HR and financial support that makes it all happen. Seems like a short break to relax is in order, before we embark on an even bigger and brighter future for 2017.

# Notes from facilities serviced by Ward MM

*It is quite common for us to receive similar enquiries from more than one 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. “It has been said that medical researchers, and even pharmaceutical manufacturers can manipulate data to create falsely inflated claims of product efficacy. Surely this cannot be true?”*

A. With glossal appendage firmly implanted in the buccal mucosa, respected medical researchers have announced the formation of a new niche company: HARLOT, specialising in How to Achieve positive Results without actually Lying to Overcome the Truth. Far be it from us at Ward MM to endorse the proposed techniques (some of which are detailed below, purely for information purposes), but some of the methods have uncanny familiarity for those of us who are called upon to interpret the results of research in the area of clinical therapeutics.

Approaches advocated by Harlot include:

- Selective, non-systematic reviews - cite only reports that support your product and discredit the competitors.
- Substitute placebos for established effective treatments, rendering comparison spurious.
- Invoke fallacious "placebo effects" and "assay-sensitivity" arguments in order to avoid head to head comparisons.
- Mini-max manipulation of competitor's product - give insufficient ("mini") doses of competitor's product, + scary ("max") warnings about the competitor product's side effects and toxicity.
- Shift goal posts for "superiority" and "non-inferiority". Require trivially better outcomes for "superiority" but massively worse outcomes for "inferiority".
- Add efficacious co-interventions to (just) the product under investigation. Give (just) the experimental patients extra treatments of known efficacy, find and treat their comorbidity, etc.
- Repeated interim analyses. Scan repeated early analyses for spurious but favourable trends to justify early termination of the trial if this is favourable.
- Over interpretation of a positive trial - report only the impressive relative risk reduction while suppressing the unimpressive absolute risk reduction and number needed to treat.

Harlot do point out that there is always the danger that someone may reveal that data simply do not support the claims. They suggest that this calls for the most extreme (and costly) service, the SHARKS (Striking Horror And Retreat through Killer Solicitors) squad to seek an injunction prohibiting the release of offending recommendations or damaging reports." The objective is not to win the case, but simply to keep everybody from learning that your drug doesn't possess any real advantages until you've sold tonnes of it.

For interested readers who would like to know more, we suggest reading the very humorous and well-written original piece: Sackett DL, Oxman AD. HARLOT plc: an amalgamation of the world's two oldest professions. *BMJ* 2003; 327: 1442 – 1445.



## Meet your Ward MM Team Member

**S Claus** is known to his friends as Pharma Xmas, joined Ward MM in December 2015. Originally from Lapland, he moved to Melbourne looking for cooler weather to escape the heat. Admired by many for his ability to deliver on time, every time, his work has been an inspiration for all of us at Ward. His unconventional approach to Home Medication Reviews is said to involve entering the patient's residence via the chimney.

**Most meaningful moments...** when he arrived at Ward MM he spent many months looking for good boys and girls, but alas he found that he was out of luck. He has settled in well anyway, and seems to have struck up a special relationship with the CEO, naughty/good boy Stuart Ward.

**My biggest challenge...** has been getting to those RMMRs without eating all of the cakes, biscuits and snacks that people seem to leave out for me – if I keep going at this rate, I'll end up looking like Chris Alderman.

**I'd be lost without...** Mrs Claus – in fact all of the people behind the scenes at Ward MM who make it possible for us to work with our friends and colleagues in Aged Care – thanks!