Cutting Through the Foggy Myths Using Best Practice Guidelines in Long Term Care

Volume 2, Issue 9

October 2007

BP Blogger

Myth Busting: The Medication Issue

Myth 1: Medications are always helpful

In the last 30 years, the number of medications has grown tremendously with more opportunities to help older adults. Older adults use more medications than other age groups and those residing in LTC homes receive the most medications. Older people usually have multiple medical problems requiring prescription medications. While making a significant contribution to the treatment and prevention of disease and complications, increasing life expectancy, improving the quality of life, and being able to treat acute illnesses in LTC; medications do have the potential to cause harm. Older people can be particularly sensitive to the effects of medication due to physiological changes (the way medications are absorbed, distributed and excreted from the body). The increased use of medications has brought more side effects, adverse drug reactions and problematic drug interactions. Adverse drug reactions occur in approximately 14-35% of older adults. Some studies have revealed 12-40% inappropriate medication prescribing in LTC and up to 46% of all LTC residents have had at least one inappropriate medication. Studies also found a strong link between inappropriate medication use and the occurrence of hospitalizations and emergency visits. Those receiving inappropriate medications were 134% more likely to have an adverse event than those receiving appropriate medications.

Myth 2: New symptom is a new disease

When you notice that a resident is experiencing new symptoms, you may need to consider that the new symptoms are possibly as a result of medication changes or side effects, but not due to a new medical condition/disease. If a new symptom is mistaken for a new medical condition, this could lead to the prescrip-tion of yet another medication, putting the older person at risk for additional adverse drug reactions, possibly requiring more treat-ments. Staff need to monitor symptoms closely.

New symptoms related to medications could occur when a medication:

- Is newly started
- Dosage is changed (higher or lower amounts)
- Is substituted for another in the same family of medications
- Duplication
- Interacts with another medication
- Is used with no apparent indication
- Is used to treat adverse symptoms/side effects
- Is used too long
- Is abruptly discontinued
- And when a resident is admitted to or transferred from hospital to return to a LTC home.

Inside this issue:

Myth 1: Medications are always helpful	1
Myth 2: New symptom is a new disease	1
Myth 3: Abbreviations are safe	2
Myth 4: All medications are appropriate	2
BPGs and Resources	2
Contacts for Information	1 & 2

More information on This and Other Best Practices

- **Contact** your **Regional LTC Best Practices Coordinator.** They can help you with Best Practices Info for LTC. Find them at:
- **www.rgpc.ca** Click on Long Term Care
- **www.shrtn.on.ca** Click on Seniors Health
- Check out the **Hamilton Long Term Care Resource Centre www.rgpc.ca**
- Surf the Web for BPGs Some sites and resources are listed on pg 2.

©MLvanderHorst

Cutting Through the Foggy Myths Using Best Practice Guidelines in

Editor
Mary-Lou van der Horst
Best Practice Coordinator
Long-Term Care-Central South
Village of Wentworth Heights
1620 Upper Wentworth Street
Hamilton ON L9B 2W3
mvanderhorst@
oakwoodretirement.com

Library Support Services
Shannon Buckley
SHRTN Library Services-Hamilton
Long Term Care Resource Centre
88 Maplewood Ave
Hamilton ON L8M 1W9
SBuckley@stpetes.ca

Myth 3: Abbreviations are safe

The elimination of known error-prone abbreviations, symbols and dose designations is an example of safe medication practice. LTC homes should avoid the use of abbreviations particularly those known to be problematic, in all hand written communications (write instructions in full instead. and ensure legibility) and pharmacy-generated labels and forms. Review preprinted orders. The Institute for Safe Medication Practices Canada has recommended that you DO NOT USE these Dangerous Abbreviations, Symbols and Dose Designations when communicating medical and medication information.

Abbreviation	Intended Meaning	Problem	Correction
U	unit	Mistaken for "0" (zero), "4" (four), or cc.	Use "unit".
IU	international unit	Mistaken for "IV" (intravenous) or "10" (ten).	Use "unit".
Abbreviations for drug names		Misinterpreted because of similar abbreviations for multiple drugs; e.g., MS, MSO_4 (morphine sulphate), $MgSO_4$ (magnesium sulphate) may be confused for one another.	Do not abbreviate drug names.
QD QOD	Every day Every other day	QD and QOD have been mistaken for each other, or as 'qid'. The Q has also been misinterpreted as "2" (two).	Use "daily" and "every other day".
OD	Every day	Mistaken for "right eye" (OD = oculus dexter).	Use "daily".
OS, OD, OU	Left eye, right eye, both eyes	May be confused with one another.	Use "left eye", "right eye" or "both eyes".
D/C	Discharge	Interpreted as "discontinue whatever medications follow" (typically discharge medications).	Use "discharge".
cc	cubic centimetre	Mistaken for "u" (units).	Use "mL" or "millilitre".
µg	microgram	Mistaken for "mg" (milligram) resulting in one thousand-fold overdose.	Use "mcg".
Symbol	**Intended Meaning**	**Potential Problem**	**Correction**
@	at	Mistaken for "2" (two) or "5" (five).	Use "at".
> <	Greater than Less than	Mistaken for "7"(seven) or the letter "L". Confused with each other.	Use "greater than"/"more than" or "less than"/"lower than".
Dose Designation	**Intended Meaning**	**Potential Problem**	**Correction**
Trailing zero	X.0 mg	Decimal point is overlooked resulting in 10-fold dose error.	Never use a zero by itself after a decimal point. Use "**X mg**".
Lack of leading zero	.X mg	Decimal point is overlooked resulting in 10-fold dose error.	Always use a zero before a decimal point. Use "**0.X** mg".

Adapted from ISMP's List of *Error-Prone Abbreviations, Symbols, and Dose Designations 2006*

ISMP Canada July 2006

Find it on the Web at
www.rgpc.ca or www.shrtn.on.ca

Myth 4: All medications are appropriate

Medication side effects, adverse events and their related problems can have

Top 10 Drugs Reported as Causing Harm Through Medication Error *(ISMP Canada 2006)*	
1. Insulin	6. Warfarin
2. Morphine	7. Furosemide
3. Hydromorphone	8. Dalteparin
4. Heparin	9. Metoprolol
5. Fentanyl	10. Ramipril

significant medical and safety outcomes for older adults. Studies have shown that up to 30% of hospital admissions for older adults may be linked to adverse drug reactions/events. In LTC homes over a 4 year period, up to 2/3 of residents had adverse drug reactions/ events and 1 in 7 of these resulted in hospitalization. Research on inappropriate medication use in older adults since the early 1990s has resulted in the development of the **Beers Criteria for Potentially Inappropriate Medication Use List**. Most recently revised in 2003, the Beers Criteria provides a list of 48 individual medications or classes of medications to avoid in older adults. It also provides a list of 20 diseases and/or

conditions and medications to be avoided in older adults with these conditions. Several medication guidelines recommend that medications found to be in conflict with the Beer's Criteria list or are being used without compelling evidence should be discontinued. The Beer's Criteria list can be used when planning medication initiation, reviewing established medication regimes, or when making changes. It's important to remember that not every resident who takes these medications combinations of these medications will experience an adverse reaction. Staff need to be alert and monitor for the possibility that adverse reactions may occur so that appropriate steps may be taken before they occur.

Dangerous Medication Interactions in LTC	
Warfarin / NSAIDs	Warfarin / Sulfa Drugs
Warfarin / Macrolides	Warfarin / Quinolones
Warfarin / Phenytoin	Ace Inhibitors / Potassium Supplements
Ace Inhibitors / Spironolactone	Digoxin / Amiodarone
Digoxin / Verapamil	Theophylline / Quinolones

HCANJ(2007) [www.amda.com/www.ismp.org]

The goal of doing this is to:

1) eliminate unnecessary medications,
2) improve medication management and
3) promote the highest quality of life and/or well-being.

Check out these Best Practices & Guidelines. Answers to the Myths came from them. Find out more!

Canadian:

Institute for Safe Mediation Practices Canada (February 24, 2006). *ISMP Canada Safety Bulletin: Top 10 drugs reported as causing harm through medication error.* (July, 2006). *ISMP Canada Safety Bulletin: Eliminate use of dangerous abbreviation, symbols and dose designations* and *ISMP Medication Safety Self-Assessment for Long Term Care.* www.ismp-canada.org

Others:

Australian Pharmaceutical Advisory Council (November 2002). *Guidelines for medication management in residential aged care facilities* (3rd Edition). Canberra, Australia: Commonwealth of Australia. www.health.gov.au/internet/wcms/publishing.nsf/Content/nmp-pdf-resguide-cnt.htm

University of Iowa Gerontological Nursing Interventions Research Center (2004). *Evidence-based practice guideline. Improving medication management for older adult clients.* Iowa City, Iowa: Author www.nursing.uiowa.edu

Best Practice Committee of the Health Care Association of NewJersey (03/ 2007). *Medication management guideline.* Hamilton, NJ: HCANJ www.hcanj.org

Fick, DM, Cooper, JW, Wade, WE, Waller, JL, Maclean, JR, & Beers, MH. (2003). Consensus Panel: Updating the **Beers Criteria** for potentially inappropriate medication use in older adults. *Archives of Internal Medicine, 163*, 2716-2724.

Betsy Lehman Center for Patient Safety and Medical Error Reduction and the Massachusetts Department of Public Health (2007). *A systems approach to quality management in long-term care. Safe medica-tion practices workbook.* Boston, Massachusetts: Commonwealth of Massachusetts. www.masspro.org/toolkits.php

©MLvanderHorst

Special thanks in Central Ontario St. Peter's Hospital Pharmacy, Regional Geriatric Program-Central, Seniors Health Research Transfer Network, The Village of Wentworth Heights LTC Home - Hamilton