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COMMUNICATION

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Therapeutic Options Focus on Gout

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The map of mortality: for long life, choose places where people eat too well

Feature

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Two years have gone by already…

As my two year term on the Board of Directors comes to a close I am left wondering what my last editorial will be about. Firstly, I want to thank the other members of the Board and staff of MSP for their dedication and commitment to the practice of pharmacy in Manitoba. I have seen a transformation in the way MSP operates and I can say with certain it is for the best.

We have a great staff and a rock solid foundation to help pave the way for the inevitable changes we will all be faced with in our day to day professional lives. We have great leadership from the top down and I hope that the new board members will be a factor in driving not only progressive but profitable pharmacy practice as well. There is still much work to be done but the necessary changes that have occurred in our operational structure will be very helpful in the future.

ALAN LAWLESS
Chair, Communication

Secondly, new regulations and expanded scope of practice will impact all pharmacists in all areas of practice. We must work together to ensure we make the most of the opportunities these changes will present. Just because we will have a new *Pharmaceutical Act* or some newly legislated responsibilities doesn't mean we will be getting handouts from government or third parties for these extra duties and responsibilities. Reimbursement will have to be planned, targeted and negotiated. In order to achieve true professional health care delivery status, we must decide what areas we want to target and have our initiatives recognized. We can start by demonstrating to the public of Manitoba our true value on a day in, day out basis. We need to win over both third party payers and the public for our piece of the ever eroding health care dollar. We have lagged far behind both doctors and nurses in this arena.

Thirdly, we cannot become discouraged with the regulatory process. It has been long and trying but many people with pharmacy's best interest at heart have dedicated countless hours to get us to where we are now. The end is near.

Fourthly, we need innovative and collaborative ideas to come together for the progression of the profession. Please get involved with MSP, MPhA, CSHP or the various committees they have if you believe you can make a difference. The profession needs outside of the box thinking to truly succeed in health care delivery. The status quo will not do.

Finally we need unification. We need every pharmacist in Manitoba to support their advocacy bodies. Both MSP and CSHP need your support. We need to challenge government, our employers and ourselves to strive ahead. We cannot allow our profession to become a "loss leader". This will benefit none of us in the long run. Again, thanks for your support as members and thanks to my fellow board members and staff of MSP for your continual support.

"Go away! Let me Sleep!"

The Importance of Sleep for the Intensive Care Unit (ICU) Patient

Introduction

Sleep in the intensive care unit (ICU) is a very hot topic. We often neglect the importance of sleep and its restorative and healing capabilities, especially for patients who require the most involved care. Unfortunately, this cohort of patients has the most difficulty communicating with staff due to mechanical ventilation (intubation), deep sedation and/or severe illness. Accurate assessment of pain, sedation, anxiety and quality of sleep is incredibly challenging. Almost two-thirds of patients who have had an ICU experience report having limited or poor sleep during their stay (1,2). Disruption of sleep in the ICU is multifactorial and incompletely understood. As pharmacists, we should be aware that pharmacological therapies frequently used in the ICU contribute to disruption of normal sleep architecture despite their sedative properties.

The following article will touch on normal sleep structure, the physiological effects of sleep deprivation as well as pharmacological agents used in the ICU and how they affect sleep. Finally, the role of melatonin and non-pharmacological strategies to promote sleep in the ICU will be discussed.

GRACE FRANKEL
B.Sc.(Pharm.)
(PharmD Student)

Normal sleep architecture

The sleep cycle consists of both non-rapid eye movement (NREM) and rapid eye movement (REM) sleep. NREM sleep contains Stages N1, N2 and N3 sleep. N1 sleep is a light sleep associated with awakening and accounts for 2-5% of total sleep time. N2 sleep (intermediate sleep) accounts for 40-50% of total sleep time. Stage N3 or slow-wave sleep (SWS) follows Stages N1 and N2 sleep and is the most important for physiological restoration and anabolic repair. N3 sleep accounts for approximately 20% of total sleep time. REM sleep is the deepest stage of sleep and is associated with catabolic effects, dreaming and consolidation of memory. REM accounts for 20-25% of the total sleep time. The sleep cycle lasts 90-120 minutes and repeats itself 4-5 times per night. The stages of sleep lengthen or shorten depending on the number of sleep cycle (i.e. Stage N1 sleep is omitted in the middle of the night and lengthens prior to awakening) (3,4).

Sleep architecture is complicated and can be influenced by several endogenous substances such as neurotransmitters and cytokines. Interference or imbalance of these can result in disrupted sleep patterns. Table 1 lists important physiological substances involved in sleep/wake mechanisms which are important to acknowledge when considering pharmacologic interventions that either disrupt or promote sleep.

Table 1 – Physiological substances influencing sleep

Endogenous substances promoting sleep	Endogenous substances interrupting sleep
Melatonin	Catecholamines (norepinephrine, dopamine)
Acetylcholine (promotes REM sleep but also plays a role in wakefulness)	Glutamate
Serotonin (promotes SWS)	Histamine
GABA (promotes SWS)	Glucocorticoids
Interleukins I and 6	
Tumor necrosis factor (TNF) – α	
Adenosine	

Negative Effects of Sleep Deprivation

Acute sleep deprivation is defined as the complete loss of sleep for 24-48 hours. Chronic sleep deprivation (or sleep restriction) occurs when the individual routinely sleeps less than required for normal functioning. (5) It has been shown that even partial sleep deprivation (4-5 hours of sleep per night over 6-7 nights) can result in physiologic abnormalities (4). Decreased sleep can lead to decreased glucose tolerance, increased insulin resistance, increased heart rate, increased blood pressure, increased cortisol level (stress response), disruption in thermoregulation, increased gastric acid secretion as well as increased activity of inflammatory cytokines (4,6). In addition, sleep deprivation causes hallucinations, decreased mental functioning and delirium. It is inferred that sleep deprivation in the critically ill may result in impaired immunologic function, slower healing capabilities, longer recovery times and an increased risk of mortality, but these hypotheses are yet to be proven by definitive clinical studies.

Measuring sleep deprivation in ICU patients is difficult as it has been found that these patients already have underlying sleep abnormalities that may be associated with critical illness. In addition, studying sleep patterns by polysomnography (PSG) can be uncomfortable for the patient and accurate readings of the PSG can be difficult due to electrical interferences from ICU medical equipment (7).

Sleep Disruption in the ICU: Environmental Factors and Mechanical Ventilation

As mentioned previously, sleep disruption in the ICU is multi-faceted. The ICU environment itself involving ambient noise, alarms from medical equipment, patient examination/vital signs, blood work and continuous light can contribute to sleep deprivation or disruption. However, the degree to which these factors disrupt sleep is difficult to establish. One study involving 7 mechanically ventilated patients and 6 healthy participants in an ICU setting found that ICU noise and patient-care activities together account for less than 30% of observed sleep disruption (8). This challenges current perceptions of the disruptive nature of the ICU. However, the other 70% of awakenings were labelled as "unidentifiable" and the authors did not comment on potential causes for these awakenings. The Environmental Protection Agency recommends a noise level for hospitals to be <45 dB during

the day and <35 dB at night (comparable to a library noise-level). Several studies have demonstrated ICU noise levels to be between 60-85 dB with peak noise levels occasionally reaching 100 dB (10). As a comparison, a vacuum cleaner operates at 70 dB and your average rock concert is approximately 110 dB!

Mechanical ventilation is particularly disruptive to sleep and has been proven by clinical studies (11). However, the mechanism of how mechanical ventilation disrupts sleep is poorly understood. One hypothesis is that the level of respiratory support required during normal waking hours is higher than that required to promote sleep. Therefore if ventilator settings are not changed during sleep, the patient is hyperventilated leading to frequent arousals and fragmented sleep. Also, having an endotracheal tube in place is extremely uncomfortable and stressful for the patient.

Table 2: Common ICU drugs and their effects on sleep
(4,7-9,12-16)

Drug or Drug Class	Total Sleep Time (TST)	Slow-wave sleep (SWS)	Rapid eye movement (REM) sleep
Pressors (NE, Dop, EPI)	↓	↓	↓
Benzodiazepines	↑	↓	↓
Propofol	↔	↔ to ↑	↔
Ketamine	↔	↔	↓
Haloperidol*	↔	↔	↔
Olanzapine*	↑	↑	↑
Quetiapine	↔ to ↑	↑	↔ to ↓
Risperidone*	↔	↔	↓
Gabapentin	↑	↑	↓
Opiate analgesics	↓	↓	↓
NSAIDs	↓	---	---
TCAs	↑ (amitriptyline, nortriptyline doxepin) ↓ (desipramine)	↑ (amitriptyline, nortriptyline doxepin) ↓ (desipramine)	↓
SSRIs	↓ (fluoxetine, sertraline, citalopram) ↑ (paroxetine, fluvoxamine)	↓	↓
Trazodone	↑	↑	↑ or ↓
Beta blockers	↓	↓	↓
Clonidine	↑	↔	↓
Phenobarbital	↔	↔	↓
Phenytoin	↔	↓	↓
Carbamazepine	↑	↑	↓
Corticosteroids	↓	↓	↓

--- = unknown ↑ = increase ↓ = decrease ↔ = no effect Dop = dopamine EPI = epinephrine ICU = intensive care unit NE = norepinephrine NSAIDs = non-steroidal anti-inflammatory drugs SSRI = selective serotonin reuptake inhibitors SNRI = serotonin norepinephrine reuptake inhibitors TCAs = tricyclic antidepressants
*based on one study in healthy volunteers receiving a single oral morning dose

Pharmacological agents: effects on sleep

Patients admitted to ICU are complicated and require multiple pharmacologic agents to support basic vital functions and attain adequate pain control and sedation. The most common pharmacologic agents used in ICU can be divided by indication:

Indication for Use	Examples
Blood pressure support/ control	Pressors (norepinephrine, dopamine, epinephrine) Beta-blockers (metoprolol, labetalol)
Pain control	Opiate analgesics (morphine, hydromorphone, fentanyl)
Withdrawal	Clonidine
Sedation	Benzodiazepines (midazolam, diazepam) Propofol
Delirium management	Haloperidol, olanzapine, quetiapine
Stress dosing or Immunosuppression	Glucocorticoids (dexamethasone, methylprednisolone, hydrocortisone, prednisone)
Seizure control	Neuroleptics (phenobarbital, phenytoin)

Unfortunately, use of the above medications can significantly impact sleep patterns. Table 2 provides a summary of commonly used pharmacological agents in ICU and their effects on sleep structure. The most commonly used agents to facilitate mechanical ventilation are opioids (fentanyl) and benzodiazepines, particularly midazolam. Benzodiazepines increase total sleep time by lengthening the N2 phase of sleep but tolerance to this occurs within days of starting therapy requiring increasing dose titrations to maintain sedation (14). Opioids also decrease total sleep time (TST), slow-wave sleep (SWS) and rapid-eye movement (REM) sleep. Agents to maintain blood pressure such as norepinephrine are used frequently. Norepinephrine, dopamine and epinephrine have not only been shown to disrupt sleep, but also increase memory recall, contributing to the development of post-traumatic stress syndrome in patients previously admitted to the ICU (17, 18).

Ideally, an agent that increases TST, increases SWS and increases REM while providing sedation would prove optimal for ICU patients. From the above chart, the atypical antipsychotics may promote sleep, but there are no clinical studies evaluating their effects on sleep structure specific to ICU patients. Quetiapine is a drug of choice for the management of delirium in ICU patients as it was shown to be better than placebo in ICU patients receiving as needed haloperidol for the management of delirium (19). Due to its sedating properties, quetiapine is gaining popularity to promote sleep. Interestingly, propofol does not affect sleep patterns and has some amnestic properties.

PROMOTING SLEEP IN THE ICU

Role of Melatonin

Melatonin to promote sleep regulation in the ICU is a popular research topic. According to the Natural Standard monograph, melatonin has the highest grade evidence for the treatment of jet lag and some evidence to support use for delayed sleep syndrome, insomnia in the elderly and sleep disorders in children and adults (20). Physiologically, melatonin is produced primarily by the pineal gland in response to low levels of light. Melatonin production starts at around 21:00, peaks at 02:00-04:00 and is

inhibited around 07:00 when cortisol peaks are present for awakening. Melatonin also possesses other biological functions such as environmental adaptation, both anti-oxidant and pro-oxidant effects, inhibition of neoplastic growth, immune regulation and neuroprotection (21). It is hypothesized that melatonin supplementation in ICU patients may help to regulate the sleep-wake cycle as well as other immunologic effects.

Unfortunately, the evidence is conflicting. A small, randomized controlled trial in 2008 enrolled 24 critically ill patients requiring mechanical ventilation and randomized patients to melatonin 10mg or placebo administered at 21:00 for four consecutive nights. The investigators found that melatonin supplementation increased sleep by one hour (2.5 hours versus 3.5 hours) but was not statistically significant (22). Another double-blind, randomized controlled trial in 32 ICU patients with a tracheostomy received either 3mg melatonin at 22:00 or placebo over 3 nights. Investigators found no significant difference between groups in terms of mean sleep time (240 minutes for melatonin and 243.4 minutes for placebo) (23). Other studies have shown that patients on mechanical ventilation (24) and patients with severe sepsis (25-27) have low levels of urinary 6-sulfoxymelatonin (a metabolite of melatonin) secretion. Another study showed ICU patients who were *not* septic had normal diurnal variations in 6-sulfoxymelatonin excretion (28).

The greatest challenges to studying the effect of melatonin on sleep regulation in the ICU are the environmental confounding factors. Controlling for light levels, noise levels and nursing care is incredibly difficult, if not impossible. In addition, measurement of good-quality sleep is also difficult due to interferences in PSG and potentially inaccurate readings. Regardless, melatonin as a treatment for ICU sleep deprivation is being actively investigated.

Non-pharmacological interventions to promote sleep in the ICU

There are many ways in which health care professionals can minimize sleep disruption when considering environmental factors. The following table provides practical ways to optimize sleep in the ICU.

Table 3: Environmental modifications to promote sleep in the ICU (4)

Limit Noise	Adjust monitor alarm settings, turn pagers to vibrate, turn down phone ringer, close patient doors, enforce strict visiting hours, consider earplugs and/or masks, consider monitoring decibel level
Limit patient-care activity at night	Schedule lab work for mornings/days, limit baths, dressing changes, room changes
Promote natural circadian rhythm	Turn off lights at 21:00, turn lights on/open curtains by 10:00
Minimize sleep disrupting medications	Minimize benzodiazepines (if possible), consider melatonin use, consider propofol use if deep sedation required, stop and start medications one at a time
Adequately manage pain	Ensure adequate pain control, especially post-procedures
Adjust ventilator settings	Ensure hyperventilation does not occur, ensure comfortable mask fit, ensure patient synchrony with ventilator settings

Pharmacists can play a significant role especially when stopping/starting medications as often this happens too quickly and patients go into opiate or benzodiazepine withdrawal which largely disrupts sleep. Encouraging the team to titrate medications slowly and being mindful of patient pain/anxiety control is very important as the patient recovers.

Conclusion

In conclusion, sleep deprivation is an important concern for ICU patients as this patient cohort is most vulnerable due to environmental factors, need for mechanical ventilation and significant medication use. Sleep deprivation can result in delayed healing, longer recovery and acute delirium. Pharmacological agents frequently used in the ICU are quite disruptive of normal sleep patterns and the pharmacist should be aware of their effects. The role of melatonin in promotion of a normal sleep cycle is still to be determined and further research is required. Environmental factors such as controlling noise, light and patient care activities can promote sleep. The pharmacist can also actively monitor pain, anxiety, delirium and withdrawal effects of medications and make recommendations to the team on how to manage these effects to promote sleep. On that note, time for a nap!

References

1. Freedman NS, Kotzer N and Schwab RJ. Patient perception of sleep quality and etiology of sleep disruption in the intensive care unit. Am J RespirCrit Care Med 1999;159:1155-1162
2. Simini B. Patients' perceptions of intensive care. Lancet 1999;354:571-572
3. Pressman MR. Stages and architecture of normal sleep. UpToDate; Last updated December 2012. [Accessed Jan 26, 2012] Available at: http://www.uptodate.com.proxy2.lib.umanitoba.ca/contents/stages-and-architecture-of-normal-sleep?source=search_result&search=sleep+cycle&selectedTitle=1%7E150
4. Hardin KA. Sleep in the ICU: Potential Mechanisms and Clinical Implications. CHEST 2009;136:284-294
5. Pressman MR. Definition and consequences of sleep deprivation. UpToDate; Last updated October 2012. [Accessed Jan 26, 2012] Available at: http://www.uptodate.com.proxy2.lib.umanitoba.ca/contents/definition-and-consequences-of-sleep_deprivation?source=search_result&search=sleep+deprivn&selectedTitle=1%7E150
6. Speigel K, Sheridan JF and Van Cauter E. Effect of sleep deprivation on response to immunization. JAMA 2002;288:1471-1472
7. Drouot X, Cabello B, d'Ortho MP and Brochard L. Sleep in the intensive care unit. Sleep medicine reviews 2008;12:391-403
8. Gabor JY, Cooper AB, Crombach SA, Lee B, Kadlkar N, Bettger HE and Hanly PJ. Contribution of the intensive care unit environment to sleep disruption in mechanically ventilated patients and healthy subjects. Am J RespirCrit Care Med 2003;167:708-715
9. DeMartinis NA and Winokur A. Effects of Psychiatric Medications on Sleep and Sleep Disorders. CNS and Neurological disorders – Drug Targets 2007;6:17-29
10. Reishtein JL. Sleep in mechanically ventilated patients. Crit Care NursClin N Am 2005;17:251-255
11. Mantz J. Perspectives on sleep and sleep disturbance for the ICU patient. Intense Times.April 2009;38-42
12. Roehrs T and Roth T. The effects of medications on sleep quality and sleep architecture. Last updated September 2012. [Accessed Jan 26, 2012] Available at: http://www.uptodate.com.proxy2.lib.umanitoba.ca/contents/the-effects-of-medications-on-sleep-quality-and-sleep-architecture?source=search_result&search=quetiapine+and+sleep&selectedTitle=1%7E150#H6
13. Weinhouse GL and Watson PL. Sedation and Sleep disturbances in the ICU. Crit Care Clin 2009;25:539-549
14. Bourne RS and Mills GH. Sleep disruption in critically ill patients – pharmacological considerations. Anaesthesia 2004;59:374-384
15. Gedge L, Lazowski, Murray D, Jokic r and Milev R. Effects of quetiapine on sleep architecture in patients with unipolar or bipolar depression. Neuropsychiatric Disease and Treatment 2010:6 501–508
16. Gottschlich MM, Mayes T, Khoury J, McCall J, Simakajornboon N and Kagan RJ. The effect of ketamine administration on nocturnal sleep architecture. J Burn Care Res. 2011 Sep-Oct;32(5):535-40
17. Schelling G. Post-traumatic stress disorder in somatic disease: lessons from critically ill patients. Progress in Brain Research 2008;167:229-237
18. Jones C, Griffiths RD, Humphris G and Skirrow PM. Memory, delusions, and the development of acute posttraumatic stress disorder-related symptoms after intensive care. Crit Care Med 2001;29(3):573-580
19. Devlin JW, Roberts RJ, Fong JJ,Skrobik Y, Riker RR, Hill NS, Robbins T and Garpestad E. Efficacy and safety of quetiapine in critically ill patients with delirium: a prospective, multicenter, randomized, double-blind, placebo-controlled pilot study. Crit Care Med 2010;38(2):419-427
20. Melatonin (N-Acetyl-5-Methoxytryptamine): Natural Standard monograph 2011. Pp 1-16. [Accessed Jan 25, 2012] Available at: www.naturalstandard.com
21. Bellapart J and Boots R. Potential use of melatonin in sleep and delirium in the critically ill. British Journal of Anaesthesia 2012;108(4):572-580
22. Bourne RS, Mills G and Minelli C. Melatonin therapy to improve nocturnal sleep in critically ill patients: encouraging results from a small randomised controlled trial. Crit Care 2008;12(R52):1-9
23. Ibrahim MG, Bellomo R, Hart GK, Norman TR, Goldsmith D, Bates D and Egi M. A double-blind placebo-controlled randomised pilot study of nocturnal melatonin in tracheostomised patients. Crit Care Resusc. 2006 Sep;8(3):187-91
24. Frisk U, Olsson J, Nylen P and Hahn RG. Low melatonin excretion during mechanical ventilation in the intensive care unit. Clinical Science 2004;107:47-53
25. Verceles AC, Silhan L, Terrin M, Netzer G, Shanholtz C and Scharf SM. Circadian rhythm disruption in severe sepsis: the effect of ambient light on urinary 6-sulfatoxymelatonin secretion. Intensive Care Med 2012;38:804-810
26. Mundigler G, Delle-Karth G, Koreny M, Zehetgruber M, Steindl-Munda P, Marktl W, Fertl L and Siostrzonek P. Impaired circadian rhythm of melatonin secretion in sedated critically ill patients with severe sepsis. Crit Care Med 2002;30(3):536-540
27. Srinivasan V, Pandi-Perumal SR, Spence DW, Kato H and Cardinal DP. Melatonin in septic shock: some recent concepts. Journal of Critical Care 2010;25(656):656e1-656e6
28. Riutta A, Ylitalo P and Kaukinen S. Diurnal variation of melatonin and cortisol is maintained in non-septic intensive care patients. Intensive Care Med 2009;35:1720-1727

IT IS ESTIMATED THAT NEARLY 1 IN 3 CANADIANS WILL EXPERIENCE HERPES ZOSTER IN THEIR LIFETIME, AND THE RISK INCREASES AFTER THE AGE OF 50.[1]

FOR SOME, IT CAN MEAN EXCRUCIATING AND POTENTIALLY DEBILITATING PAIN.[1,2,*]

SELECTED IMPORTANT SAFETY INFORMATION

ZOSTAVAX® is not a treatment for zoster or postherpetic neuralgia (PHN). If an individual develops herpes zoster despite vaccination, active current standard of care treatment for herpes zoster should be considered. Vaccination with ZOSTAVAX® may not result in protection of all vaccine recipients. ZOSTAVAX® is contraindicated in patients with a history of hypersensitivity to any component of the vaccine, including gelatin; a history of anaphylactic/anaphylactoid reaction to neomycin; primary and acquired immunodeficiency states due to conditions such as: acute and chronic leukemias; lymphoma; other conditions affecting the bone marrow or lymphatic system; immunosuppression due to HIV/AIDS, cellular immune deficiencies; immunosuppressive therapy (including high-dose corticosteroids); active untreated tuberculosis; pregnancy. In clinical trials, ZOSTAVAX® has been evaluated for general safety in more than 32,000 adults 50 years of age or older. ZOSTAVAX® was generally well tolerated. Vaccine-related injection-site and systemic adverse experiences reported at an incidence ≥1% are shown below. The overall incidence of vaccine-related injection-site adverse experiences was significantly greater for subjects vaccinated with ZOSTAVAX® versus subjects who received placebo (48% for ZOSTAVAX® and 17% for placebo among recipients aged ≥60 (Shingles Prevention Study [SPS]) and 63.9% for ZOSTAVAX® and 14.4% for placebo among recipients aged 50-59) (ZOSTAVAX® Efficacy and Safety Trial [ZEST]). Vaccine-related injection-site and systemic adverse experiences reported in ≥1% of adults who received ZOSTAVAX® (N=3,345) or placebo (N=3,271) (0-42 Days Postvaccination) in the Adverse Event Monitoring Substudy of the SPS were: erythema† (35.6%, 6.9%), pain/tenderness† (34.3%, 8.6%), swelling† (26.1%, 4.5%), hematoma (1.6%, 1.4%), pruritus (7.1%, 1.0%), warmth (1.7%, 0.3%), headache (1.4%, 0.9%). Most of these adverse experiences were reported as mild in intensity. The remainder of subjects in the SPS received routine safety monitoring, but were not provided report cards. The types of events reported in these patients were generally similar to the SPS subgroup of patients in the Adverse Event Monitoring Substudy. Vaccine-related injection-site and systemic adverse experiences reported in ≥1% of adults who received ZOSTAVAX® (N=11,094) or placebo (N=11,116) (1-42 Days Postvaccination) in the ZEST were: pain† (53.9%, 9.0%), erythema† (48.1%, 4.3%), swelling† (40.4%, 2.8%), pruritus (11.3%, 0.7%), warmth (3.7%, 0.2%), hematoma (1.6%, 1.6%), induration (1.1%, 0.0%), headache (9.4%, 8.2%), pain in extremity (1.3%, 0.8%).

* ZOSTAVAX® is not indicated to reduce the morbidity and complications associated with herpes zoster.

† Designates a solicited adverse experience. Injection-site adverse experiences were solicited only from Days 0-4 postvaccination in SPS and from Days 1-5 postvaccination in ZEST.

References: 1. Data on file, Merck Canada Inc. Product Monograph. ZOSTAVAX®, 2011. **2.** Clinical Manifestations: Chickenpox. In: Mandell G, Bennett J, Dolin R eds. Principles and Practice of Infectious Diseases, 6th ed, vol 2. Philadelphia: Elsevier; 2005.

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See insert for prescribing summary

Travel Tips

Any successful and memorable journey requires a lot of planning and preparation. Besides the visas and passports, ensuring travel medical and cancellation insurance are part of the official paperwork prior to travel.

Next on the list are immunizations. This list is available through the family doctor, travel clinic or on line at the Centre for Disease Control. Immunization against hepatitis A and B are now routine practice. Depending on the part of the world the journey is taking the traveler, immunizations can include malaria, yellow fever, typhoid, travelers' diarrhea, cholera, encephalitis, rabies and antibiotics for diarrhea. Many of these require a dosing schedule that needs to begin well before traveling so that the immune system is prepared prior to departure. Patients should be encouraged to research this or ask the pharmacist in advance for the schedules and availability of the vaccines in case of short supply from the manufacturer.

MEERA B. THADANI
M.Sc.(Pharm.)

Clean drinking water can be a problem. Here are some suggestions to ensure adequate hydration when clean tap water is not available.

1. Drink only bottled water, carbonated beverages (diet or regular) beer and wine. Wine is the liquid of last choice because of the higher alcohol content.
2. If in a restaurant, always ask that the *sealed* container is brought to your table.
3. Do not ask for ice – the cubes are often made from local water. Instead, ask for a *sealed* chilled bottle of the beverage of your choice.
4. Avoid drinking milk unless it has been scalded (pasteurized) or the *sealed* container in which it is presented clearly states it is pasteurized. Boiled beverages such as masala chai are acceptable if served hot and steaming. If tepid or if there is any question whether they have been prepared properly, refuse the serving.
5. When showering, avoid ingesting the water. Wash toothbrushes and brush teeth using bottled water only. Rinse the toothbrushes and gargle with bottled water. Most 4 and 5 star hotels will provide four bottles of complimentary bottled water for the room per day.
6. Carry a 500 mL bottled water container at all times.

Food must be hygienically prepared. Most reputable large chains of hotels comply with western standards. In other restaurants, insist that it be freshly prepared. Do not eat anything that looks or smells suspicious. Avoid roadside food stands. Take along individually packaged granola bars and if not allergic, a supply of salt-free nuts as a snack for the road. As a rule, if you cannot peel it, wash it or cook it "forget it" and stick to food prepared at the hotel.

Toilet facilities can also be a problem. Frequently, there is no toilet paper. Often, hand-washing supplies such as soap, running water and paper towels are not available or depleted. Carry a roll of toilet paper, pocket pack of tissue, wet wipes, hand sanitizer, and folded paper towels or napkins at all times in case emergency potty supplies are needed. Sometimes there is not enough time to check the facilities for the supplies and it is best to have them on your person when you visit the facility.

Take clothing appropriate for the region. For instance, reflective light colored clothing such as long sleeves, trousers, and hats for summer wear (sunscreen is vital). Comfortable walking shoes are very important. Avoid sandals and open toed shoes in areas where pedestrian sidewalks are not clean. Take bug repellant if anticipating a hike or walk in a wooded region where mosquito bites can result in malaria or dengue fever.

Dengue fever

Figure 1 – Aedes ageypti mosquito filled with a blood meal

While the problems of malaria are known and medications are available to treat it, there are no medicines to treat dengue fever and there has been an increase in the number of cases. Dengue fever is caused by a virus spread by two species of mosquitoes including *Aedes aegypti* and *Aedes albopictus*, that feed in the daytime (Figure 1). Dengue fever virus (DENV) is an RNA virus of the family *Flaviviridae*; genus *Flavivirus*. Other members of the same genus include Japanese encephalitis virus, St. Louis encephalitis virus, Kyasanur forest disease virus, yellow fever virus, West Nile virus, tick-borne encephalitis virus, and Omsk hemorrhagic fever virus. Most are transmitted by arthropods (mosquitoes or ticks), and are referred to as arboviruses (*ar*thropod-*bo*rne viruses).

The countries at risk are shown in Figure 2.[2,3]. Again, there is no vaccine or medication available for prevention of dengue fever.

Humans are the primary host of the virus. It also circulates in nonhuman primates. An infection can be acquired from a single bite. A female mosquito that takes a blood meal from a person infected with dengue fever becomes infected with the virus in the cells lining its gut. About 8–10 days later, the virus spreads to other tissues including the mosquito's salivary glands and is released into its saliva. The virus seems to have no harmful effect on the mosquito, which remains infected for life. *Aedes aegypti* prefers to lay its eggs in artificial water containers, to live in close proximity to humans, and to feed on people rather than other vertebrates (Figure 3).

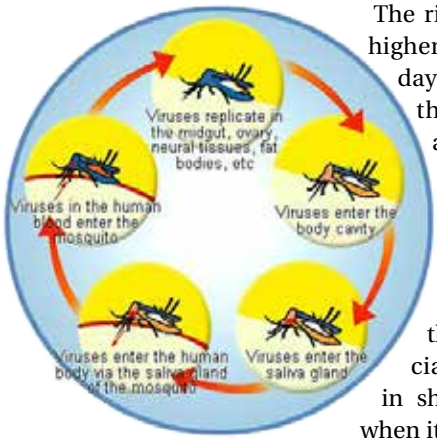

Figure 3 – transmission cycle of Aedes aegypti

The risk of a bite is higher during the daytime, two to three hours after dawn and during the early evening. Mosquitoes bite at any time during the day, especially indoors, in shady areas, or when it is overcast.

Risk is low for travelers who stay only a few days in air-conditioned hotels with well-kept grounds and who participate in outdoor activities during non-peak biting periods.

Risk is increased for those spending longer periods of time in endemic areas, and who stay in the home of friends and relatives. Aid or humanitarian workers are at a higher risk.

Prevention is key to avoiding dengue fever. Wear protective clothing, long sleeved shirts and trousers, hats, shoes and socks, Use mosquito repellants. In areas of risk, the better hotels will provide screened windows, doors and mosquito netting covering the beds.

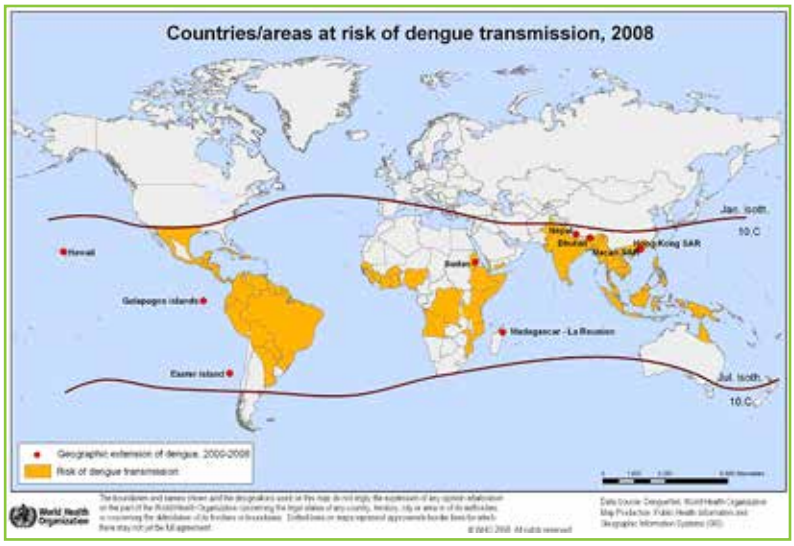

Figure 2 – Dengue transmission 2008 WHO map

Symptoms of dengue fever

High fever and at least two of the following:

- Severe headache
- Severe eye pain (behind eyes)
- Joint pain
- Muscle and/or bone pain
- Rash
- Mild bleeding manifestation (nose or gum bleed, petechiae, or easy bruising)
- Low white cell count

Go to the hospital if the following are observed:

- Severe abdominal pain or persistent vomiting
- Red spots or patches on the skin
- Bleeding from nose or gums
- Vomiting blood
- Black, tarry stools
- Drowsiness or irritability
- Pale, cold, or clammy skin
- Difficulty breathing

This signals the more severe form of dengue called Dengue Hemorrhagic Fever (DHF). DHF is characterized by a fever that lasts from 2 to 7 days, with general signs and symptoms consistent with dengue fever. When the fever declines, warning signs may develop. This marks the beginning of a 24 to 48 hour period when capillaries become excessively permeable, allowing the fluid component to escape from the blood vessels into the peritoneum (causing ascites) and pleural cavity (leading to pleural effusions). This may lead to failure of the circulatory system and shock, and possibly death without prompt, appropriate treatment. In addition, the patient with DHF has a low platelet count and hemorrhagic manifestations, tendency to bruise easily or have other types of skin hemorrhages, bleeding nose or gums, and possibly internal bleeding.

Treatment

There is no specific medication for treatment for dengue infection. Persons who think they have dengue should use analgesics with acetaminophen. Avoid those containing ibuprofen, naproxen, aspirin or aspirin containing drugs because they may increase bleeding. Rest, drink plenty of fluids to prevent dehydration, avoid mosquito bites while febrile and consult a physician. Mention the dates and areas of travel.

As with dengue, there is no specific medication for Dengue Hemorrhagic Fever (DHF) the more severe form of dengue. If a clinical diagnosis is made early, DHF can effectively be treated using fluid replacement therapy. Adequate management of DHF generally requires hospitalization.[4]

The following is a very useful non-prescription medication list that can be included as part of a portable pharmacy. Often when away from home, especially in an underdeveloped country, these supplies can be challenging to find. Where to purchase them and what to purchase can be confusing, even more so if there is a language barrier. Table 1 provides a check-list for items which are useful to take as part of routine travel. Note that adult dosing is provided as a guide. For pediatric dosing, consult the pharmacist. Do not exceed maximum recommended dosages.

For travelers' diarrhea, patients can request the appropriate antibiotic from their physicians. The most common is ciprofloxacin 500 mg bid for 3 days. If there is bloody diarrhea, the patients must seek medical attention.

Indication	*Medication*	*Dosing (adults)*
Minor cuts, abrasions	Band aids, cotton bandages, antibiotic cream sterile gauze	Apply as required
Gastro esophageal reflux (heartburn)	Calcium carbonate ranitidine, famotidine	When needed Once or twice daily formulations
Headaches, body aches, fever, pain relief	Acetaminophen Acetylsalicylic acid Ibuprofen Naproxen Tylenol #1	325 – 500 mg q4-6h prn 325 – 650 mg q4-6h prn 400 – 800 mg q6-8h prn 220 mg q12h 1 – 2 tabs q4-6h prn
Nausea, vomiting	Dimenhydrinate Electrolyte replenishing fluid	50 – 100 mg q4 to 6h prn 1 sachet/200 mL prn
Allergy	Diphenhydramine Cetrizine and other 2nd generation antihistamines	25 – 50 mg q6-8h prn Once or twice daily formulations
Skin irritation	Calamine Hydrocortisone 0.5% cream	Apply prn Bid to tid prn, maximum 7 days
Dehydration	Electrolyte replenishing fluid	1 sachet/200 mL prn
Diarrhea	Electrolyte replenishing fluid Loperamide	1 sachet/200 mL prn 2 mg after each bm prn
Cough Sore throat	Lozenges Oral analgesics	Many choices available See above
Blisters Bunions	Blister band aid Cushions	Use prn Use prn
Sprains	Tensor bandage	Use prn
Muscle aches pains	Topical analgesics Oral analgesics with muscle relaxants	Use prn 1 – 2 tabs q6h prn
Motion sickness	Dimenhydrinate	50 – 100 mg q4 to 6h prn
Eye drop	Artificial tears Polysporin	Use prn 1 gtt q3 – 4h for 7 days
Ear drop	Polysporin	1 gtt q3 – 4h for 7 days
Burns, scalds, boils	Polysporin topical with or without topical anesthetic	Apply up to qid for 7 days
Bug bites	Bug repellant	Apply prn

Table 1 – Medication Check-List

The final word

Encourage travelers to be prepared for contingencies. Timely planning and preparation for travel will result in a more pleasant journey. Go prepared for a Bon Voyage. Avoid that holiday from hell!

References

1. http://www.cdc.gov/
2. http://www.cdc.gov/dengue/
3. http://gamapserver.who.int/mapLibrary/Files/Maps/World_DengueTransmission_Extension_2008.png
4. http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0002350
5. Health Canada on line

Pharmacists Awareness Month

The profession of pharmacy is growing and evolving all around us. Here in Manitoba we have been preparing for these changes for a long time and now, here we are, on the precipice. Pharmacists have a long-standing tradition of providing timely, accessible and reliable health care. No matter what environment, we connect with our patients in a close and comfortable way that is fairly unique to our profession. With all the changes we face, full of possibility and uncertainty, we need to remain true to that central ideal relationship. We need to be able to bring our patients with us through the change.

There is no better time than now, within the familiar rhythm of our day-to-day jobs, to reach out and strengthen existing bonds with our communities. Pharmacists are highly educated, well regarded, health professionals with a great deal more to offer than a simple pill-counter. We are a liaison into the world of health care, patient advocates and sources of high quality health information. Our patients already trust us. But they don't always understand the extent of our abilities.

PROVINCE OF MANITOBA

PROCLAMATION

Pharmacist Awareness Month

WHEREAS this year's goal is to encourage patients to take a more assertive approach when examining their health care needs and to encourage them to ask for advice from their pharmacist; and

WHEREAS pharmacists are a valuable and expert resource in patient care and an important part of a person's health care team; and

WHEREAS with more than 25,000 drug products available in Canada, a pharmacist's knowledge and expertise in managing drug therapy and providing patient care is essential and valuable to all Manitobans; and

WHEREAS pharmacists can help patients with preventative and chronic disease management and overall health consultation and can also provide up-to-date advice on staying well, preventing disease, and making healthy lifestyle changes;

Now therefore let it be known that I, Theresa Oswald, Minister of Health for the Province of Manitoba, do hereby proclaim March 2013, as

Pharmacist Awareness Month

in Manitoba and do commend its thoughtful observance to all citizens of our province.

Minister

This year, Health Minister Theresa Oswald has proclaimed the entire month of March as Pharmacist Awareness Month. This month long promotion is one way in which MSP is working to improve public recognition of pharmacy and pharmacists. This year, we have been working to connect pharmacists with a variety of interested community groups throughout the province. We are working with the General Council of Winnipeg Community Centres, Manitoba Association of Senior Centres, Healthy Start for Mom & Me and several long term care and assisted living homes to get pharmacists out in the communities talking directly to patients. A range of activities are planned, from an information booth to a "Coffee with a Pharmacist" Q&A session with new parents. We are also seeing individual pharmacies and pharmacy chains making the effort to increase awareness through in-store events. Keep an eye on MSP's website for scheduled events across the province.

There are some really creative things happening, so feel free to browse for ideas to use at your own stores! You will also see information booths set up in malls across Winnipeg and, possibly, other centres as well. Staffed by volunteer pharmacists and pharmacy students, these are going to be a great point of contact with a wide variety of people. Similar booths will be set up throughout the WHRA and St. Boniface Hospital as well. These will focus on the contributions of hospital pharmacists to patient care and a successful healthcare team.

Pharmacist Awareness Month will also include a strong advertising campaign from the Manitoba Society of Pharmacists. The goal is to ensure the public has a strong awareness of our profession. Public transit buses in Winnipeg and for the first time ever, in Brandon will convey our message. Video screens in various medical facilities across the province will do the same. Also, various newspaper and radio stations will have advertising along with editorials on a range of pharmacy topics. Live interviews on various media streams are also planned.

The generous contributions from the Manitoba Institute of Patient Safety, the Manitoba Medication Return Program, and the Manitoba Pharmaceutical Association have supported these efforts immensely. The general objective of patient safety is such a natural fit within the scope of pharmacy. Many of the community groups we contacted were very interested in talking with a pharmacist about safety issues, especially in relation to medication, and it's very exciting to be able to present pharmacists as the primary source of this kind of information.

Please keep looking to the MSP website for updates on events throughout March and contact Bobby Currie or Barret Procyshyn at pam.manitoba@gmail.com if you would like to be involved! Help us continue to build our profession and the largest Manitoba Pharmacy Awareness campaign ever!

Personal Health Information Act to be Amended What Pharmacists Need to Know

Amendments to Manitoba's Personal Health Information Act introduced in November, 2012 should close a loophole in regulation that have barred improper disclosure of patient information but did not address unauthorized access of information without disclosure. Second reading should take place in early spring with the intent of eventual passage.

The new rules, still before the Legislature at time of writing, will make it clear that snooping for any reason even without disclosure will result in penalties up to $50,000 upon conviction.

The need for the clarification arose in fall, 2012 when two complaints to the provincial ombudsman, Mel Holley, requested an official investigation into to alleged breaches of patient privacy at CancerCare Manitoba. A trustee of health information under the PHIA, it was bound to protect patient information from improper disclosure of such data. Yet, due to a loophole in the statute, it was not required to act in cases in which one of its employees snooped for what may be considered personal or recreational reasons without disclosure.

ANDREW ALLENTUCK

Investigations by the Ombudsman's office headed by acting ombudman Mel Holley showed that there had been a breach of a patient's records at CancerCare Manitoba by an acquaintance who lives near the patient. There was an indication of a difficult relationship between the employee and the patient's family. According to the Ombudsman's report, the employee of CancerCare had previously tried to obtain information about the complainant's daughter from another person at the institution. That person told the would-be snooper to leave the family alone.

In spite of advice to desist, the employee searched CancerCare's electronic medical records for information about the complainant's child. Using tracking software, the institution then confirmed that there had been a breach of privacy and identified the person who had committed the breach.

The statutory problem in dealing with the breach was that the statute in section 63 makes it an offense to disclose someone's personal health information without authorization, but Mr. Holley explains, "It was not an offense to use the personal information without disclosure."

To close that gap, the Minister of Health, Theresa Oswald, introduced amendments to the Personal Health Information Act to close the loophole of lack of regulation of snooping without disclosure. Defining snooping as looking into records without a permitted need, the Minister added clarification and, as well, added a provision that makes it an offense to falsify records knowingly.

"Our amendments strike a balance between security of medical records to protect patient privacy but not to do it so tightly that professionals in the field feel bound not to share information."

The breach of the patient's privacy and confidential health records has had a salutary effect on health care providers. Considered as trustees of information under the statute, pharmacies and other entities that provide health care services and products need to review procedures.

The Personal Health Information Act can easily be breached by scanning files or using a fax machine to transmit data. Accordingly, the regulations attached to the PHIA require trustees of information to maintain a record of user activity which shows what information has been viewed or edited, when access took place, which employee or employees viewed the information and all of this must be reviewed and audited at least once every two years. If there are deficiencies in the safeguards, "appropriate and timely steps must be taken to remedy any deficiencies," the Ombudsman's report says.

The Ombudsman's report and resulting statutory recommendations add another layer of procedure to the PHIA, but really no new substance.

"Pharmacies and their employees are already obligated to protect the confidentiality of their patients' health information," explains Ronald Guse, Registrar of the Manitoba Pharmaceutical Association. "In any request for patient information, it is imperative that the pharmacist is knowledgeable about the restrictions on access and disclosure and apply professional judgment to the request."

The question comes down to interpretation of the duty to protect information and the duty to disclose it under appropriate circumstances. The present Drug Product Information Network can show what medications a patient has received. The data can help to protect against adverse drug reactions, doctor shopping and polypharmacy in which a patient uses a script or scripts from one or more prescribers to obtain more drugs than the prescribers intended or that are suitable.

Disclosure or examination of a drug record without authorization is a potential issue, Mr. Guse says. "If the trustee believes that the disclosure is necessary to prevent or lessen a serious and immediate threat to the health and safety of the patient or of another individual or of public health and safety, then the information can be given. But disclosure must be limited to the minimum amount of information necessary."

Vigilance is needed at the pharmacy level, Mr. Guse emphasizes. When there is access of patient records, then a log should be made and kept showing who asked for information, his or her contact phone number, reason for the information request, and details of information provided. Each request for disclosure of personal health information must be considered individually and assessed to determine if it conforms to PHIA requirements. If a pharmacist is unsure, then it is possible to obtain advice from Manitoba Health, he notes.

The existing procedure whereby a prescription that is not filled after a pharmacist or an employee of the pharmacy who

has signed a standard form or an agreement drafted by the pharmacy must be logged with the name or initials of the person who did the lookup and the reason why the script presented was not filled or the reason for the lookup. There are, in fact, abundant reasons for lookups that do not result in fills, Mr. Guse adds. "The patient's physician might call and want drug information related to the patient. The pharmacy has to record that too. It is all covered by legislation and by the confidentiality agreements that pharmacists and other employees have to sign."

In the end, amendments to the Personal Health Information Act tighten the safeguards on patient information, but do not require pharmacies to do anything different than what they already do, Mr. Guse says. "The intent of the legislation to close the access without disclosure loophole has special importance for pharmacies, because DPIN is the only province-wide patient information database. It is accessible in every community pharmacy in Manitoba," he adds.

In the end, the question is not only who has a need to know, who has authorization to check a patient file, what notes and records must be kept by the pharmacy for DPIN or other patient file records access, and what diligence is required on the part of pharmacists does not change as a result of proposed PHIA amendments. It will, of course, be easier to track snooping without disclosure, but the data management already in place requires no additional work on the part of pharmacies. The cost to the trustee or an employee of snooping is now clarified as up to $50,000 per incident, making it that much more important to observe the intent of patient privacy legislation. "You can always make a good system better and that is what this legislation will do," Mr. Guse concludes. Vigilance will be its own reward.

manitoba society of Pharmacists

ANNUAL GENERAL MEETING

April 6, 2013
9:30 am
The Winnipeg Convention Centre
375 York Ave., Winnipeg, MB

Members who wish to receive an advance copy of the Annual Report, please contact the MSP office at 204-956-6681 or 1-800-677-7170 prior to March 23, 2013 and a copy will be mailed to you.

The MSP Human Resource and Compensation Committee

The Board of Directors has a responsibility to fulfill its obligations in respect to human resources and compensation matters. They must ensure that processes are in place to drive performance against the board's strategic goals and to establish a succession and executive development plan. We must adhere to fair and legal human resources policies that extend beyond being a good employer who is fiscally responsible.

Following the departure of the past Executive Director in January of 2012, it became necessary to take a structured and focused approach to effectively manage that vacancy and advance the Board's accountabilities. A Human Resources and Compensation Committee was established and the terms of reference have been posted to the MSP website at www.msp.mb.ca. Members are encouraged to review the document to get an understanding of the mandate, responsibilities, and structure of the committee.

GAYLE ROMANETZ
Vice President, MSP; HRCC Chair

Where do you start when searching for an Executive Director after an eleven year relationship? The use of an executive search firm is very costly however the board decided to use a professional recruitment service to source the best candidate for this position. The process began with an environmental scan and telephone interview with eight executive search firms. A request for proposal was received from five of the firms contacted and the committee selected two based on the quality of their submission. The executive search firms were interviewed in early April and following reference checks, Harris Consulting was selected as the successful applicant.

We immediately began meeting with Harris Consulting and went through a rigorous process to ensure they understood the skill set that we were looking for. By the end of May, Harris presented 35 candidates to the committee; this was short listed to 8, then 5, and ultimately, 2 candidates presented themselves to the Board on June 26. The Board was given an opportunity to ask questions and provide feedback to the HRCC that assisted in making the final decision.

Dr. Brenna Shearer was chosen as the successful candidate and began work officially as our Executive Director on September 11, 2012. Brenna holds a PhD and MSc in Health Care Administration and a Bachelor in Medical Rehabilitation (Occupational Therapy). Her career in health care administration includes government, public health, hospital, community, and educational settings. Most recently Brenna worked for Manitoba Health as Executive Director Health Workforce Strategies. In addition to her management portfolio, Brenna has been actively involved in research, teaching, and fundraising activities.

Jill Ell, former Acting Executive Director, has returned to her former role as Assistant Executive Director. The entire board and membership is grateful to her and the MSP staff for their outstanding service and oversight of the Society during this difficult transition year. The board is to be congratulated as well for their commitment to step up and assist with operational issues as needed.

Once the HRCC had the office fully staffed, we were able to turn out attention to other matters. To date we have successfully completed:

1. Updated another terms of reference
2. Expense and Travel Policy
3. Executive Director work performance review process, score card, and feedback survey
4. Policy outlining the Executive Director's powers, authority, and accountability to the Board in managing the business and affairs of the Society.

Work in progress includes:

1. Cost analysis and feasibility study of a group benefits plan for MSP employees
2. Analysis of the MSP Human Resources Assessment document which was submitted by Jill Ell
3. Transition to the Human Resources and Finance Committee

This committee will be transitioning from the Human Resources and Compensation Committee to the Human Resources and Finance Committee and will have additional responsibilities that will provide financial oversight for the organization. The working group will update the terms of reference to clarify what the enhanced fiduciary responsibilities will entail. Future responsibilities may include active engagement in the budgeting, financial planning, reporting, and the development of internal control and accountability policies in cooperation with the MSP Executive Director and staff. Committee membership will have to be re-evaluated, as it will be advantageous to include non board members who have financial expertise.

The reward for hard work is often more, and there is no shortage on the horizon for the Human Resources and Compensation Committee. I am grateful to the entire board for their active participation and resolve in making the difficult decisions that had to be made. In particular, a thank you to committee members who's guidance and ongoing commitment to get the job done is truly remarkable.

The last four years has been an immense learning experience coupled with opportunity beyond imagination. This is a bittersweet moment knowing that the time is right to see pharmacists with new ideas join the Board while saying good bye to many friends who have dazzled me with their talent and commitment to advocate on behalf of pharmacists in Manitoba.

Best wishes for success to the incoming Board of Directors and staff at the MSP.

2013 Annual Manitoba Pharmacy Conference Schedule

April 5th to 7th at the Winnipeg Convention Centre

FRIDAY APRIL 5, 2013		ROOM
12:00 pm	Registration Desk Open	Second Floor Lobby
1:00-2:00 pm	Session A • Pharmacists as Decision-Makers	2GH
2:00-2:45 pm	Session B • A Day Late and A Dollar Short – Human Resource Planning in Pharmacy	2GH
2:45-3:00 pm	Refreshment Break	Second Floor Lobby
3:00-3:45 pm	Session C • The Way Forward to Better Patient Care: A Pivotal Role for Pharmacists	2GH
3:45-4:30 pm	Session D • Looking Back – Reflections on the Pharmacist in Society	2GH
4:30-5:30 pm	✤ MSP 40th Reception & Young Leaders Presentation	2F

SATURDAY APRIL 6, 2013		ROOM
8:30 am	Registration Desk Open	Second Floor Lobby
9:00-9:30 am	Continental Breakfast	2GH
9:30-10:30 am	Manitoba Society of Pharmacists • Annual General Meeting	2GH
10:30-11:00 am	Refreshment Break with Exhibitors	2EF
11:00-12:00 pm	Manitoba Pharmaceutical Association • Annual General Meeting	2GH
11:45-1:15 pm	✤ Buffet Lunch with Exhibitors	2EF
1:15-4:30 pm	Issues Forum	Theatre Room
2:45-3:15 pm	Refreshment Break with Exhibitors	2EF
6:00 pm	✤ Annual Awards Banquet & Silent Auction	Ballroom A, Delta Hotel

SUNDAY APRIL 7, 2013		ROOM
8:30 am	Registration Desk Open	Second Floor Lobby
9:00-9:30 am	Continental Breakfast	Second Floor Lobby
9:30-4:00 pm	ADAPT Medication Assessment Full Day Workshop	Campaign B, Delta Hotel
9:30-11:30 am	Session E1 • Short & Snappy	Room 2E
	Session E2 • Interprofessional Education and Practice: From WHAT and WHY to HOW	Pan Am
10:30-10:45 am	Refreshment Break	2nd Floor Lobby
11:30 am-1:00 pm	✤ Manitoba Pharmaceutical Association Awards Luncheon	2F
1:00-4:00pm	Pharmacy Student Preparations	Millennium
1:00-2:30 pm	Session F1 • Practice Spotlight	2E
1:00-3:00 pm	Session F2 • CATALYST Module 4: Marketing Smoking Cessation Service	Pan Am
2:30-2:45 pm	Refreshment Break	2nd Floor Lobby
2:45-4:00 pm	Session G • Headline News for Pharmacists	2E

The Role of Insurance in Tax Planning

Insurance has typically been used to protect against the risk of future financial loss. However, more and more, innovative insurance solutions are being used to safeguard the value of investors' assets in a tax efficient manner.

Creating a tax-free wealth transfer

Once you have a financial plan that ensures your capital will generate sufficient income and address your needs, you may want to consider shifting a portion of your assets to a tax-exempt environment. With a tax-exempt insurance policy, you can maximize the value of your estate and the value of your assets at death since the assets accumulate within a contract, free of annual accrual taxation. Part of the policy premium will pay for the cost of the insurance and the rest will be invested, allowing the policy's ultimate benefit to grow through the years. Tax-exempt life insurance shares certain characteristics with other types of investments, however no other asset allows for all of the following:

- tax-deferred growth, much like within your registered pool of capital
- potential for tax-free income during retirement
- tax-free distribution on death

Protecting assets against taxation

If you've worked hard to build your investment portfolio, it is worth protecting it from the eroding effects of taxation. This is especially critical for registered investments like RRSPs and RRIFs that become fully taxable on the death of a surviving spouse. Taxation concerns extend beyond your retirement assets to other investments or valuables such as the family cottage that may be subject to capital gains tax.

Key Tax-Related Insurance Benefits

1. *Creating a tax-free wealth transfer*
   Insurance is transferred to beneficiaries outside of your estate and as such does not trigger taxes, probate fees, or legal costs.
2. *Preserving assets against taxation*
   Insurance can be designed to provide beneficiaries with a lump sum of cash equal to the taxes owing on the deemed disposition value of your investments.
3. *Generating tax-preferred income*
   Insurance strategies can be used to create tax-preferred retirement income streams.
4. *Minimizing tax on corporate assets*
   Insurance can provide a means to move surplus assets out of the corporation on a tax-preferred basis while enhancing the value that will be passed to beneficiaries.
5. *Minimizing tax through charitable giving*
   Insurance will help increase the size of your gift and in most cases provide significant tax benefits.

Tax-free insurance proceeds are immediately available on death and provide the funds to pay taxes at the time. In the absence of using tax-free insurance, beneficiaries may have to consider either selling the estate assets or borrowing funds necessary to pay taxes owing on the estate.

GENERATING TAX-PREFERRED INCOME

Creating an insured retirement strategy

An insured retirement strategy can help you meet the need for both supplemental retirement income and estate liquidity in a tax effective way. By allocating excess capital or income into a tax-exempt insurance structure a number of years ahead of retirement, you allow the investment component to grow over time into a large pool of capital, better known as the policy's cash value. At retirement, up to 90% of this cash value can be pledged to a bank in exchange for a series of loans. As loans, the corresponding retirement income created is not considered taxable income.

This approach is also a consideration for small corporations. Shareholders can use the tax-free loan proceeds against the cash value of a corporate-owned policy to supplement their retirement income.

Securing a guaranteed income stream

Life annuities can be very useful in providing a guaranteed, lifetime, tax-preferred income. An annuity is the opposite of life insurance: instead of paying an insurer small annual amounts in return for a large amount on death, you give the insurer a large amount up front and receive small annual amounts every year until death. Each payment is a blend of interest and a return of your original capital, of which only the interest portion is taxable.

If guaranteed income is a requirement as well as maintaining your estate, this can be accomplished by insuring your original annuity deposit. The net income from this strategy is often much higher than the net income from a GIC or bond, even with the cost of the insurance.

This strategy can be considered if you own shares in a small corporation.

The concept is the same: a higher net income for the shareholder than a traditional fixed income investment through the purchase of an annuity. However, an added benefit is derived from the corporation receiving the insurance proceeds at death, which allows for a greater amount of corporate wealth to be paid out of the corporation free of tax. Additionally, the corporation reduces the value of the shares, thereby reducing or potentially eliminating capital gains tax that might otherwise be owing on the value of the shares.

Minimizing tax on corporate assets

A tax-exempt life insurance policy can be employed as a strategy to move surplus assets or retained earnings out of a

corporation on a tax-preferred basis, significantly enhancing the value of corporate assets that are passed on to beneficiaries. This is well worth considering since annual growth on investment income inside a corporation is taxable at a higher rate than if owned personally. And when money is taken out of the corporation, it will be taxed again, most likely as a personal dividend, thereby creating double taxation.

The strategy involves shifting redundant corporate assets from a taxable portfolio to a tax-exempt life insurance policy. The proceeds of the combined death benefit and tax-deferred growth within the policy are paid to the corporation at death. This creates the ability to channel funds from the company to the shareholder's estate without tax; an opportunity not readily available with taxable investments. The mechanism for this asset flow is an account that permits Canadian controlled private corporations to pay out tax-free capital dividends.

Four Ways To Leave A Legacy Through Life Insurance

1. Transfer ownership of a paid-up policy to a charity. This is equivalent to an outright gift of cash in the amount of the policy's cash surrender value. The charity can surrender the policy immediately or retain it until the insured individual dies and collect the death benefit then.
2. Transfer ownership of an existing policy in which the premiums are still being paid. A policy is gifted to a charity and the person receives charitable receipts for each subsequent premium. Tax savings are received during life from donating the policy itself and subsequent premiums. The charity will receive the death benefit but no further receipt will be issued.
3. Create a new policy and name the charity as owner and beneficiary. This is an effective way to donate to a charity you are currently supporting. You receive a tax receipt for annual premiums but not for the death benefit.
4. Designate the charity as the beneficiary of a new or existing policy so that the charity will receive the life insurance proceeds at death. This will not generate any tax credit during your lifetime however the amount of the death benefit will be paid out as if it was a bequest made in your Will. In the year of death, your estate will receive a charitable receipt for the face amount of death benefit that the charity receives.

Minimizing tax through charitable giving

The gift of life insurance can be effective in providing a practical and affordable way to make sizeable charitable gifts to your favourite charities or private foundation. Not only will life insurance help increase the size of your gift, in most cases it will provide significant tax benefits.

Executive Director's Message

The MSP Board of Directors and staff have been busy working on activities to ensure the vision and role of MSP is set on the right course to meet the challenges and opportunities for Manitoba pharmacists in the near future. MSP has refreshed its Vision and Mission, the Manitoba Pharmacy Conference has advanced in program content, and we have been actively involved in representing the interests of pharmacists regarding the pan-Canadian generic drug price initiative.

DR. BRENNA SHEARER
Executive Director

The MSP Board of Directors, liaisons, and staff held a **Strategic Planning** Workshop on January 23, 2013. The purpose of the workshop was to engage all participants in the discussion and setting of MSP strategy, establishing overall objectives and definition of goals. As a result of the workshop, MSP revised their Vision and Mission to reflect their past, current, and future purpose and direction. The new Vision and Mission statements are:

Vision

To unify and advance the pharmacy profession

Mission

To enhance the recognition and compensation of professional services while inspiring excellence in practice

The focus of the **Manitoba Pharmacy Conference** is to offer Manitoba pharmacists practice information and professional development tools to foster adaptation within our changing landscape. The Manitoba Pharmacy Conference has expanded the program scope to:

- facilitate pharmacists' knowledge of how to incorporate new practice and services into operations
- improve awareness of Manitoba Health program operations and primary care initiatives
- showcase undergraduate, resident, and graduate pharmacy student projects and research through poster presentations
- include free continuing education registration for 3rd and 4th year pharmacy students

The most recent **generic drug pricing initiative** announcement from the Council of the Federation, Health Care Initiation Working Group places additional pressure on pharmacists in Manitoba. On January 18, 2013 the Council of the Federation announced generic drug cost savings effective April 1, 2013. Six generic drugs are to be priced at 18 per cent of brand: Atorvastatin, Ramipril, Venlafaxine, Amlodopine, Omeprazole, and Rabeprazole. These six molecules in Manitoba currently range from 19-43% of brand. While the economic impact on community pharmacies is still to be determined, emphasis on reinvestment of the savings into pharmacy based services is a key priority for Manitoba and all Canadian jurisdictions.

MSP is committed to working with the Manitoba Government to identify strategies and opportunities to reinvest savings from previous and future generic drug price initiatives to compensate professional pharmacy services. There are services within the current scope of pharmacy practice that can be considered for compensation in addition to new services which will follow after the new *Pharmaceutical Act* (Bill 41) is enacted. MSP is working with community stakeholders to develop a framework for professional pharmacy service reimbursement to be shared with the Manitoba Government that is consistent with our provincial counterparts.

MSP has communicated to the Minister of Health and the Provincial Drug Program, Manitoba Health to voice our concerns regarding the impact of the pan-Canadian generic drug pricing initiative and the need to prioritize reinvestment of savings into community pharmacy. The timing of the announcement from a Manitoba perspective is a positive opportunity to advance our position that pharmacists are being underutilized in the achievement of improved access to care, improved service delivery, and improved health care for all Manitobans.

Nationally, discussions continue between the Canadian Pharmacists Association, Canadian Association of Chain Drug Stores, Canadian Generic Pharmaceutical Association, and Canadian Association for Pharmacy Distribution Management and the Health Care Innovation Working Group. A Pan-Canadian sub-group to discuss long term strategies for achieving government savings and reallocating these savings into other health care priorities, including pharmacy services, has been suggested. Manitoba has communicated strong interest in participating on this working group to CPhA.

Together, we are working to open discussions about the role of pharmacy in health service delivery. Our Vision and Mission reflects our commitment to promote the value and role of Manitoba pharmacists. While MSP strives to open discussions regarding pharmacy service compensation, we also organize and support educational opportunities to match new skills with new models of service delivery. **Enhancing our potential** requires partnership within our profession, partnership with other health care professionals, and partnership with our government and key stakeholders.

Name: **Miro Cerqueti**

Place/Year of Graduation: University of Manitoba, Bachelor of Science, 1992

University of Manitoba, Bachelor of Science in Pharmacy, 1995

Years in Practice: 18 years

Currently Working: Pharmacy Manager for the past 16 years at Loblaw Pharmacy #1516 at 550 Kenaston Blvd and Grant Ave, Winnipeg.

Accomplishments in pharmacy: Having the lowest staff turnover, and highest client loyalty. I run and grow the business likes it's my own and it gives me great pride. My recent certifications are in Obesity, QUIT, Catalyst, CPR and Injections.

Family: I come from an immigrant Italian family who taught me the important values of hard work and dedication, while making room to enjoy life. My mother taught me to make spaghetti and wine, my father taught me everything about tools and plumbing, and my big brother taught me how to toughen up and take a punch. After I graduated from pharmacy I met and married my best friend and wonderful wife Franca in 2001. She says she married me for my kind heart and not my looks. Somehow I think it was supposed to be a compliment. We have beautiful 7-year-old twin girls named Angelina and Juliana. They inspire me to be my best.

Hobbies: I enjoy being active: I play soccer to keep fit, I play curling to keep my mind sharp, I fish to be outdoors with nature and I play golf… not sure why I do it as it drives me nuts. I love cuddling up with the family to watch movies. Gone are the good old days of Lethal Weapon, now Princess Barbie movies rule the land.

Community activities: Mini-Soccer coach for 4 years in the Lindenwoods community. I love organizing events for family and friends such as car rallies and bocce tournaments.

Favourite things about Manitoba: My favourite things about Manitoba are the friendly people and strong sense of community- from family to co-workers to customers. I am very lucky to have fantastic friends and family and I work with some of the greatest people around. And yes, the customers, let's just say, a little smile is very contagious and soon becomes a big smile back at you.

Most favourite vacation choice: Before kids, Contiki European Tours. After kids, Dreams hotel in Huatulco Mexico, the best five star family focused resort that we love to go to whenever we can. Although I don't tan, I enjoy snorkeling and playing beach volleyball.

Pet peeves: When computers crash and IT say they are having IT problems? Makes you want to pull out the typewriter.

Favourite fictional character and why: My favourite fictional character is the Disney animated character Handy Manny - because he is always optimistic and never gives up and he will find the solution or fix anything just like my girls say about their Dad.

What could you do without forever? War, life-threatening disease, mosquitoes.

What couldn't you do without for even a day? Sad to say, but I could not do without my Blackberry for even a day.

What you love about pharmacy? The thing I love about pharmacy is the great feeling and personal satisfaction I get when I know I helped make a difference in someone's life to improve their health and well-being.

Words to live by: Never stop, whether you are good or even the best, always strive to be better.

Do you know someone who is making a difference in the pharmacy community? We would like to highlight them in this article! Please contact the MSP office at (204) 956-6681 or info@msp.mb.ca.

FEATURE ARTICLE

FUN FACTS

- In 1973 the membership fee was $5.00.
- The average hourly pharmacist wage was $4.90.
- Membership consisted of 513 pharmacists and 213 stores.
- The first issue of "Communication" was published on May 3, 1976. "Communication" operated as joint committee of MSPP and CSHP-MB Branch for two years and in 1978 "Communication" became a publication of the MSPP Professional Relations Committee.
- In 1984 the first professionally published issue was produced.
- "Communication" was published 10 times per year until 1989 at which time it was reduced to 6 times per year. In 2011 "Communication" became a quarterly publication.
- In 1977 the pharmacist insurance programs for group and life insurance transferred from MPhA to MSPP and became the first membership program under the MSPP umbrella.
- The Malpractice Insurance Program officially transferred on January 1, 1979.
- The cost of Malpractice Insurance was $10 per member annually for $200,000 in coverage or $15 annually for "shop" coverage.
- On April 26, 1990 **The Manitoba Society of Professional Pharmacists** officially became **The Manitoba Society of Pharmacists** under the Corporations Act.

The first issue

The map of mortality: for long life, choose places where people eat too well

Is work good for you? The question has occupied theologians and physicians for millennia. In the last hundred years, economists have weighed into the debate. The issue pits the view of those who could be termed "naturalists" against others who could be called "productionists." The debate leads to the question of whether drugs do more than cure the diseases produced by the industries of advanced industrial economies.

The naturalists argue that man's progress from hunter to tiller of fields to industrial worker and, lately, sedentary tapper of keyboards has harmed, led to warfare over control of land to raise crops, diabetes from overconsumption of the simple starches of grains and, of course, of sugar, lung diseases from smokestacks and atrophy from sitting in front of glowing screens. The productionists point to the close relationship of growing lifespan with land enclosure for crops, the development of cities based where industrial workers eat the agricultural surpluses of ever more productive farmers, of plumbing and sewers that have reduced disease in cities, medicines produced in factories, and the network of sciences that thrive on computing machines.

ANDREW ALLENTUCK

We need to deconstruct the debate to understand it. From a health maintenance perspective, economic development has a powerful effect on the illnesses that people have. Economists have modeled the effect of growth of gross domestic product on life expectancy. Life spans have increased over the last many hundreds of years. With longer life goes a demand for more medical care and drugs. Moreover, the longer individuals live, the more they can learn and work, the more capital they can accumulate, and the more they can invest in, among other things, health services. It looks like a chicken and egg problem, but there are keys to the puzzle.

A study entitled *Health, Economic Growth, and Poverty Reduction* prepared by Working Group 1 of the Commission on Macroeconomics and Health for the World Health Organization in Geneva and published in 2002 found a basic driver of health is the availability of food. "The secular declines in mortality that have been observed over the past two hundred years in Europe have been essentially due to the increased availability of calories," said the report, citing Robert W. Fogel, an economist who shared the 1993 Nobel Prize in economic sciences. More food means children can develop earlier and, in some cases, become workers at an earlier age. They are healthier when they are in the prime years. Their infants' survival rates rise. They live longer. They save more and can invest more in education and what they learn is useful over longer life spans. The corollary of this finding is that the stages of growth predict the kinds of illnesses people have and the means available to treat them.

Primitive societies have people afflicted with rickets and other illnesses caused by lack of vitamins, sub-optimal weight that shortens their working lives, untreated traumatic injuries, and, in hot places, illnesses associated with insect plagues, river-borne parasites, and, often, malnutrition from the inability of soils to produce much food.

In societies going through the first, extractive industrial stages of growth workers have more to eat and better care – even in plantation economies in which workers are tied in one way or another to the land they may be forced to till, but they suffer from inhalation of such things as the dust of the coal they mine. Analgesics ameliorate the symptoms but cure none of the causes. In the second stage of development come the diseases of modest prosperity including overuse of alcohol, tobacco, inhalation of inorganic fibres, cancers caused by environmental factors, and, of course, the diseases of obesity include heart attacks and late onset diabetes. In the third stage, the postindustrial period, come the diseases of sedentary life including early gross obesity and its cardiovascular complications, more diabetes and the myriad of illnesses that come from a diet high in the chemicals in processed food, too much dietary salt linked to strokes, and, of course, the trauma of industrial accidents.

Books advising what to eat for good health have been a good business since the time of Galen, the Greek physician and philosopher who lived from 129 to 200 A.D... Giving up this or that has been good for the health of their authors though not necessarily of readers who followed their advice. Recently, the American anthropologist and best selling author Jared Diamond, author of *Germs, Guns and Steel*, published *The World Until Yesterday: What We Can Learn from Traditional Societies.*

In his new book Diamond asserts that if one avoids salt and saturated fats, which are indeed major constituents of such things as potato chips and franchise burgers, long life will follow. Return to the caveman diet of meat and coarse vegetables and long life should follow, runs the argument.

The problem with this nutritional myopia is that it excludes Inuit who subsist on high fat seals and their blubber, Japanese who manage to have the world's longest lifespans at 82.7 years averaged for men and women while tippling immense amounts of salty soy sauce, and Norwegians who drink a lot of high cholesterol whole milk but manage to have an average 80.2 years in spite of it. African countries in which the primitive Jared diet is followed by the majority of poor citizens have life expectancies half those of the fat-saturated rich nations.

Medical and pharmaceutical intervention separates rich nations from poor states. It is true that strokes and cardiac arrest are rarer in Swaziland, which life expectancy is 31.9 years – lowest in the world, than in Canada where average life expectancy is 80.7 years. Swazilanders do not get to be old

enough to have the illnesses of old age.

There is another difference that well fed or overfed Canadians and Americans have in relation to the residents of developing countries. We have medical and pharmaceutical services and products that can extend the lives of Swazilanders. They can do little to extend our lives, even through the agency of nutritional emissaries like Professor Diamond.

That is the bottom line. Economic development raises living standards by definition, increases the range of illnesses as people get old enough to have them, tends to substitute the diseases of excess eating for those of insufficient eating, and, creates choice – including the choice to send doctors and drugs to those who need them in places where getting enough to eat is a rare luxury for the majority of the population.

This is the fourth stage of the cycle of development and health. In spite of the lamentations of critics of fatty diets, it is the prosperous nations of Europe and the Americas and a few enclaves of development in Southeast Asia such as Singapore that ship drugs for malaria to less fortunate parts of Asia and Africa and drugs for control of AIDS to places like Swaziland, which has the world's highest incidence of AIDS with 26.10 cases per 100 people.

In the end, if you want to live long, live in a highly developed country. If you have a serious illness, you'll get your best care and best drugs from developed countries, not from ones struggling to climb through the stages of growth. Economic development not only changes the types of illness people get, but it also provides their cures.

Oguzhan Ozturk
Consultant

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