The official newsletter of the Pharmacy Association of Nova Scotia

PHARMACY LIFE

APRIL 2018

PANS

PHARMACY ASSOCIATION OF NOVA SCOTIA

In this issue:

Pharmacy Association of Nova Scotia

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Have an interesting story idea or know of a pharmacist we should profile, we want to hear about it. Email amy@pans.ns.ca or call 422- 9583, ext 4.

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PHARMACY ASSOCIATION OF NOVA SCOTIA

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Message from the Chair and CEO: Where Will Pharmacy be in Five Years?

By: Rose Dipchand, Chair of the Board and Allison Bodnar, CEO

"Where do you see yourself in five years?" "Where do you see the profession of pharmacy in five years?" These may seem like questions that we have desensitized ourselves to our conversely, don't really think about, but we should.

In past years there has been remarkable change in the profession of pharmacy: some good and some bad with much of it out of our control. But not everything is out of our control.

Pharmacists have the ability to do more than ever before for their patients, however, the business model of pharmacy has been repeatedly impacted making it tremendously difficult to enable and incorporate pharmacists to their full scope of practice. The introduction of regulated pharmacy technicians, automation, paperless workflow, outcome measures, the DIS, e-prescribing, collaborative practice, mail order pharmacy, PPNS, CQA, social media and decreasing reimbursement for dispensing medications have all affected the way in which pharmacy and pharmacists can and must practice.

This is the reality of today and by all accounts, the pace of change will only continue to increase. What we do know however is that the residents of Nova Scotia are sicker, older and utilize healthcare more than in other parts of the country and that the stainability of our healthcare model is in serious jeopardy. Pharmacists are uniquely positioned to do more in primary care, not only improve patient outcomes but do so at a lesser cost to society but also in a manner that is sustainable to the community pharmacy.

As healthcare professionals, we have an obligation to help improve the health of Nova Scotians. Together with government we need to understand and deliver what patients want and need in a manner that supports the stainability of the system.

BUT WHAT DO PATIENTS WANT? This we know - members of the public are changing the way they want to access products and services including healthcare. There is a reason why Uber has become the ride of choice in some markets while cutting out the traditional competition. There is also a reason why Amazon founder Jeff Bezos is the richest man in the world. People want immediate access to products and services and they want them when and where it is convenient for them. They have the world's biggest shopping mall at their fingers and healthcare is not immune to such consumer demand.

Other industries are trying to model after Amazon's success. In Nova Scotia, the past six months we have seen the rise of online grocery shopping and convenience stores and on-line restaurant delivery, with more promised within the next 12 months.

It has been reported that Amazon is organizing to enter the pharmacy market and they have hired 30-40 people to "figure it out." This is not Bezos' first foray into the pharmaceutical world, having started Drugstore.com in the 1990s. Industry experts say that "it is not a matter of if but when" Amazon will start supplying prescription medications to its Amazon customers.

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Message from the Chair and CEO

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What does that mean for traditional bricks and mortar pharmacies?

It means that now is the time to differentiate pharmacies from just providers of a commodity but of valuable therapeutic services that require living, breathing people to provide them. It means putting the patient and the pharmacy team at the heart of the practice and business model. Shifting the conversation from cost to value for patients and giving them a reason to want to come to the pharmacy in person to receive care from their pharmacists as well as their medications. It also means finding ways to work with patients who want to get their prescriptions delivered to their home easily and within a reasonable time (Amazon's prices aren't always the cheapest for items but they make it easy to get them).

Whether we like it or not, this is the future pharmacy is facing for all of the reasons previously mentioned. We already have centralized dispensing and mail order pharmacy growing in popularity and automation is increasing all the time. Those are all expected aspects of an evolving industry. One area we do have control over is our ability to build and maintain relationships with patients and to implement other healthcare services.

Robots cannot develop relationships with patients. They don't notice nuances in the delivery of a phrase or body language and they certainly can emphasize or sympathize with patients. Yes AI is making robots smarter but they can't make them human and the human factor is what most patients need.

Yes, many of the changes coming at us are out of our control - how we react to them is not. We have to prepare for to tomorrow, today. If we don't, someone else will be deciding our future and in five years it may not look like anything like what we wanted for ourselves.

PANS is working hard to ensure that Nova Scotia pharmacy has a strong and vibrate future. But we are only a small part of the equation. It is up to every member of the pharmacy team to show the we are truly indispensable.

Pharmacists in the Canadian Red Cross Emergency Response Unit (International Operations)

by: Elizabeth McMahon, BSc(Pharm), CD1

No doubt by now you have seen in recent weeks the plight of the hundreds of thousands of Rohingya population having fled Myanmar to Bangladesh with nothing but the clothes on their backs. As a result of the very short timeframe and the sheer number of people; the local bamboo forest, which was a habitat for elephants just months ago, has been literally stripped of its trees to make room for the displaced people. Even the tree roots have been dug out for kindling for their fires in order to cook their food. All that is left of this massive area is a sprawling landscape of makeshift shanty-style 'homes' of tarps, aluminum and bamboo on a floor of packed mud over miles of rolling and steep hills. This is a humanitarian crisis of epic proportions.

Normally I would be witnessing this crisis from the comfort of my living room here in Nova Scotia. This time would be different. This time I would get my chance to do something other than a heartfelt donation. This time I would have skills that the organizations helping these people would need.

On Jan 1 2018, I boarded a plane headed for Ottawa where I would meet some of the other eight members of my Mobile Health Clinic team as part of the Canadian Red Cross Emergency Response Unit, International Operations, and we would receive an in-depth briefing about our mission in Bangladesh. Later that day we would be boarding another flight as part of our four flights and finally a 1.5 hour drive to the Red Cross/Red Crescent base camp located in Cox's Bazar, Bangladesh.

Our mission as part of the mobile health clinic was to travel by foot with medical supplies in knapsacks on our backs to the Canadian clinic,

a medium-sized one room structure made of bamboo 45 minutes away. Along this route, children came running to greet us, chickens scampered aside and we were witness to the dire living conditions of many beautiful, sombre and gracious people. Upon arrival into the

Pharmacists in the Canadian Red Cross in ERU *continued...*

outpatient clinic, my job would be to set up the pharmaceutical supplies on a table and get ready to receive the patients from my fellow Canadian and Bangladeshi physicians who sat on stools not far from my elbows.

They sequentially tended to the needs of patients who had patiently waited in line and had been triaged by our Bangladeshi paramedics. Some patients required referral to the services of another clinic for such diseases as diphtheria or to the Norwegian Red Cross field hospital back at the base camp for a condition other than what we could treat on an outpatient basis. With my Bangladeshi volunteer interpreter at my side, and armed with the WHO Essential Medical Guidelines, I dispensed many medications ranging from antifungal creams and acetaminophen to oral antivirals and antibiotics for conditions ranging from skin infections to pneumonia. We regularly administered tetanus from our mobile cooler, however we did not carry any controlled meds nor IV products other than basic rehydration solutions for basic IVs. Also as part of our team, we had a mental health nurse who was on hand to sit down with patients as needed. Later in the day, upon return to base camp, we would unload our knapsacks and reload them in our small medical warehouse with replacement supplies to be ready for the following day. After our four-week mission, we returned home after having trained the Bangladeshi staff to take over our clinic.

My experience in this mission as a Red Cross ERU pharmacist was unique in that normally there would not be a pharmacist as part of the smaller mobile clinic. Generally the ERU pharmacist's role is to run a large medical warehouse of medical equipment and medications to resupply and support the adjacent field hospital. One's clinical skills are needed as a pharmacy expert however the emphasis is on inventory control and management (medical logistics) to ensure the critical life-saving functions of the field hospital are maintained without interruption. (While I was with the mobile clinic there was a

Pharmacists in the Canadian Red Cross in ERU *continued...*

Norwegian clinician running the warehouse for the field hospital). On this particular mission, I felt privileged to be working in the heart of the local village, dispensing and interacting directly with those who so desperately need our help.

My background is primarily that of a military pharmacist with multiple overseas deployments in war torn countries. With the Red Cross, you never know where you may be needed next and you may be responding to a crisis within 48-72 hours. The crisis may be man-made as this one is, or a natural disaster such as an earthquake (Nepal 2015), or mudslides (Philippines 2012).

As a pharmacist you have a unique skill set that can help out greatly. You can be part of a life-saving team, which works quickly to provide medical assistance to a nation in need; and subsequently empowers the local medical population to take over and carry on the necessary work of the field hospital, which we leave physically behind (approximately 4 months later or whenever the region has recovered enough to do so). We are then free to respond to the next crisis wherever and whenever it may occur.

It's up to you whether you choose to put your name forward for a particular mission or not – you can opt in or out – and you undergo extensive training before going on a mission.

If this appeals to you, check out the Canadian Red Cross website at www.redcross.ca, where you can look up more details about the Emergency Response Unit and current job postings and/or feel free to contact me, at eamcmahon1@hotmail.com.

Canadian Red Cross

Tech Talk: The Pharmacy Technician - My Ride or Die (A Pharmacist's Perspective on Technicians in Pharmacy)

by: Michelle Stewart, PhC

Do you remember your pharmacy interview? What was your answer when you were asked why you wanted to be a pharmacist? Did you tell them this was your dream job because you love to count by fives? Or you always wanted to be a psychologist but didn't like to sit down? More likely, your reasons were about providing care for the patient, improving the healthcare system through collaboration or contributing to society through research. Regardless of where our careers have taken us since that interview, we all started out with intentions that were anchored in clinical care. Another question if I may? Does the bulk of your day focus on the very reason you became a pharmacist? Are you spending most of your day with your patients or would I be more likely to find you secluded behind a computer?

My experience up until a couple of years ago was like most of my peers, I think. I was a great advocate for my patients and there were countless interactions that were meaningful. I felt like I was making a difference but was disappointed daily with the amount of time I had to spend with the patients who put their trust in me. Conversations felt rushed and my mind was always split between what I was doing and what I had to do next. Medication reviews were an infrequent reminder that meeting alone with patients revealed critical information. These meetings also left me wondering who else desperately needed a review but hadn't gotten one. Then, things changed. I'll spare you the details because it certainly didn't happen overnight, but in the end I found my most trusted colleague, a technician named Ashley.

I've named her on purpose, I hope she won't mind. I want you to know that my experience is real and that this article is not meant to be an abstract manual on improving your workflow. This article is about how my role as a pharmacist changed for the better and my job satisfaction is at a record high.

The fundamental idea is that a technician takes over the technical aspects of prescription processing and allows the pharmacist to focus on the clinical aspects. It sounds very official, doesn't it? But what does that really mean?
It means that your precious time is not chiselled away by verbal orders, inspecting blister packs or demonstrating proper inhaler technique. These tasks, among many others, are no longer your priority. Ashley and I have this arrangement down pat. Each prescription makes its way to my desktop where I sign off on the clinical aspects. This check is ensuring that the drug is the best option for the indication, the dose and duration are appropriate and that any drug interactions are managed. Here I can add any counselling notes I wish to include or special instructions for administration. I sign off on my clinical assessment and the prescription is forwarded to Ashley to complete.

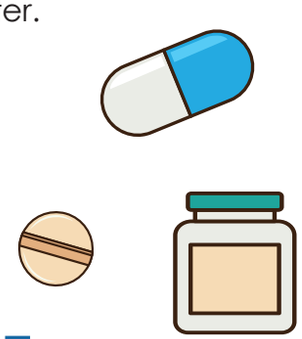
Along with the electronic prescription record she also receives the actual medication for a physical check. She is solely responsible for this step. I never actually see or handle the drug itself. Does this make you nervous because you've become accustomed to completing the entire prescription? Please don't let it. Technicians have been adequately trained, are liable and completely capable of this responsibility.
During the technical check Ashley confirms that the written prescription is complete and if it is not she will acquire any missing information from the prescriber. Disclaimer: she is meticulous and our prescription audits have never been better. Next, she confirms that each component of

the written prescription is accurate (correct doctor, sig, refills, etc). Finally she ensures that the actual drug that has been labelled is correct by assessing the dosage form, quantity, shape, color and markings. All prescriptions are processed this way, whether they are dispensed in vials, blister packs or in nursing home batches. Knowing that I don't need to check the technical aspects of the drug order makes me much more acutely conscious of the clinical. I spend my time thinking about how the drug fits into the patient's care plan and about what questions I need to ask them during counselling and less about generic equivalence. The patient benefits, bottom line.

For refill prescriptions the clinical assessment requires much less time than a new prescription that has never been evaluated. For example, Atorvastatin that has been established for three years does not require the same scrutiny as a new order for Vancomycin. Therefore some prescriptions can be clinically validated very quickly and once I have ensured the clinical accuracy of the prescription my job is done. I can move onto other tasks, like patient counselling. In many instances I am able to "get ahead" of Ashley and while she continues processing prescriptions I move onto follow up calls, medication reviews or OTC counselling. Likewise, if I become sidetracked with a prescription Ashley can continue on with other duties including inventory management, checking batches, checking balances, transferring prescriptions & receiving doctors orders.

Each prescription is dissected further than it was in the past and provides more opportunity to prevent error and maximize care. I spend more time now updating myself on the drugs I am passing across the counter. During my clinical check I purposefully research the drug and make notes for the patient based on their specific circumstance. My counselling includes much less general information and a lot more specific details that pertain to that individual. I provide more resources for them than I did before, in terms of written literature, community programs and websites of interest. I also put more emphasis on monitoring the patient and set clear expectations for efficacy. Follow up calls are performed regularly to determine if the drug is working as expected and if it isn't we begin a plan to find one that does. More time is now devoted to investigating alternative therapies when the primary drug is not covered, not tolerated, undesirable or unavailable. Providing information about drug alternatives (comparable efficacy, available dosage forms/ strengths, etc.) to patients and practitioners' allows for more timely treatment and filters out poor treatment options proactively.

Ashley's support has allowed me to work at the top of my license and before our collaboration I know that I was not. Our pharmacy is very busy and there are still overwhelming moments and circumstances when I feel that I could do more if I had time. Regardless of the imperfection of it all, we all strive to achieve optimal patient care. Since that our pharmacy interview we've continued to make progress in caring for our patients. In my experience working alongside a pharmacy technician is most certainly a change for the better.



Pharmacy Health Care Services - Why they are Important for Patient Health

by: Lorie Collins, CJM Solutions+ & Theresa Rose, Senior Account Executive, Atlantic Canada, Green Shield

Over the past decade, the pharmacy industry has been moving in a new direction as its scope of practice shifts from primarily providing fee-based dispensing of prescription drug products to the delivery of high-quality patient-focused pharmaceutical care.

Health insurance carriers have a role to play in supporting pharmacies in this ongoing practice evolution. We see a few key components:

Pharmacist Health Coaching

Research shows that success rates improve when the right drugs are combined with counselling from a pharmacist. Given that, there is significant value in pharmacists providing health coaching that focuses on cardiovascular health and offer blood pressure and cholesterol management to patients.

Green Shield Canada (GSC) sees the value pharmacists can play in improved health outcomes and includes Pharmacist Health Coaching as part of its standard offering for its clients.

The key is to empower patients diagnosed with hypertension and elevated cholesterol to take ownership and responsibility for their overall cardiovascular health. Pharmacists are ideally placed to:

- Provide guidance and support to patients to achieve target blood pressure and cholesterol measurements
- Implement strategies to improve patient adherence to cardiovascular drug therapy
- Offer coaching and follow up sessions to help plan members adopt healthy lifestyle behaviours that will positively impact their cardiovascular and overall health

Recognizing the negative impact smoking has on employee health and well-being, as well as workplace absenteeism and productivity, there is a compelling argument for implementing smoking cessation programs.

Like cardiovascular health coaching, this is included as a standard benefit under all GSC drug plans.

GSC sees value in giving plan members a choice – receive drug therapy, participate in one-on-one counselling provided by pharmacists, or take advantage of both.

- All pharmacists offering the program have specialized training in smoking cessation – they have the training, interest, and time to make an impact
- In-depth counselling – not a one-shot deal – includes eight sessions over the course of 12 months

Value-based Pharmacy

It is critical for pharmacies to have insight into what they are already doing well and areas where they can improve.

- With that in mind, GSC is taking a progressive approach to using its claims data to provide pharmacies across Canada with easy-to-understand scorecards that highlight key information such as patient adherence, high risk medication use, and disease management.

Pharmacy Health Care Services *continued...*

- These reports helps pharmacies identify which patients may need more attention, focus their quality improvement efforts, and continue to evolve their practice.
- This approach puts an emphasis on quality of care and value for spend, rather than simply recognizing the lowest dispensing fees.

Medication Synchronization

- Multiple prescriptions for multiple chronic diseases presents numerous challenges when it comes to ordering refills.
- We see great value in medication synchronization to ensure that refills are due at the same time. We have adjusted our adjudication rules via override codes to facilitate syncing, and we continue to encourage plan member uptake of the service.

Refusal to Fill

GSC encourages pharmacists to use their professional judgement to determine whether or not a prescription should be filled. In situations where you do not fill the prescription, for example, due to an adverse drug adverse drug reaction or therapeutic duplication.

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Straight Answers About Car Insurance

by: TD Insurance Meloche Monnex

Getting the right car insurance shouldn't be complicated, but understanding it can be. Here, Pete Karageorgos of the Insurance Bureau of Canada (IBC) gives us easy-to-understand answers to some complicated questions.

Q: Why does where I live affect my insurance?

A: "Where you live is just one factor insurers consider when determining your rate," explains Karageorgos. "And that's simply because some areas have greater claim costs than others." If you live in an area that has a greater risk of accidents and damage (for example, a high-density urban area rather than a smaller town), then that can translate to higher premiums and claim costs.

Q: What is it about a car that affects my premiums?

A: Insurers use the Canadian Loss Experience Automobile Rating (CLEAR) system to track the average size and frequency of insurance claims for most makes and models. Insurers use this data to rate vehicles based on their safety record and the cost to repair or replace them, and predict future claims. Buying a car with a higher rating will likely mean a higher insurance rate. Learn more about CLEAR here.

"The good news is that safety features and anti-theft devices — even after-market ones — may reduce your insurance premium. Ask your insurance company for details before investing in any," he advises.

Q: Does my policy automatically cover everyone in my household?

A: No. You must declare the principal driver and all licensed drivers who have access to your vehicle. "Since the best drivers get the best rates," says Karageorgos, "one driver in your household can affect your rate."

Q: How can I be smart about my deductible?

A: The deductible is the portion of your claim that you pay before your insurance company contributes. So if you have a $500 deductible for vandalism/fire/theft and someone slashes one of your tires, replacing it will cost less than $500 so you won't file a claim. "Raising your deductible will reduce your insurance rate because you'll only be using your insurance for bigger events — not for a dent or broken taillight," explains Karageorgos. Your insurance company can help you determine how to best adjust your deductible.

Q: What happens if I lend my car to a friend and they have an accident?

A: "In the majority of cases, if you're lending your car to someone, you're also lending them your insurance record," explains Karageorgos. "If your car is in a collision — even if you're not in it — your insurance coverage applies and the collision will reflect on your insurance."

Car Insurance *continued...*

Q: How often should I review my policy?

A: "Take time on an annual basis to look at your coverage and go over it with your insurance company," he says. This way, you can review any limitations and/or exclusions in your policy.

"Check to see if you're eligible for any discounts and to see what happens if you increase your deductible or reduce your collision coverage," adds Karageorgos.

(Note: Collision coverage is optional in all provinces except BC, Manitoba and Saskatchewan. However, in those provinces, due to provincial legislation, insurance companies do not offer auto insurance).

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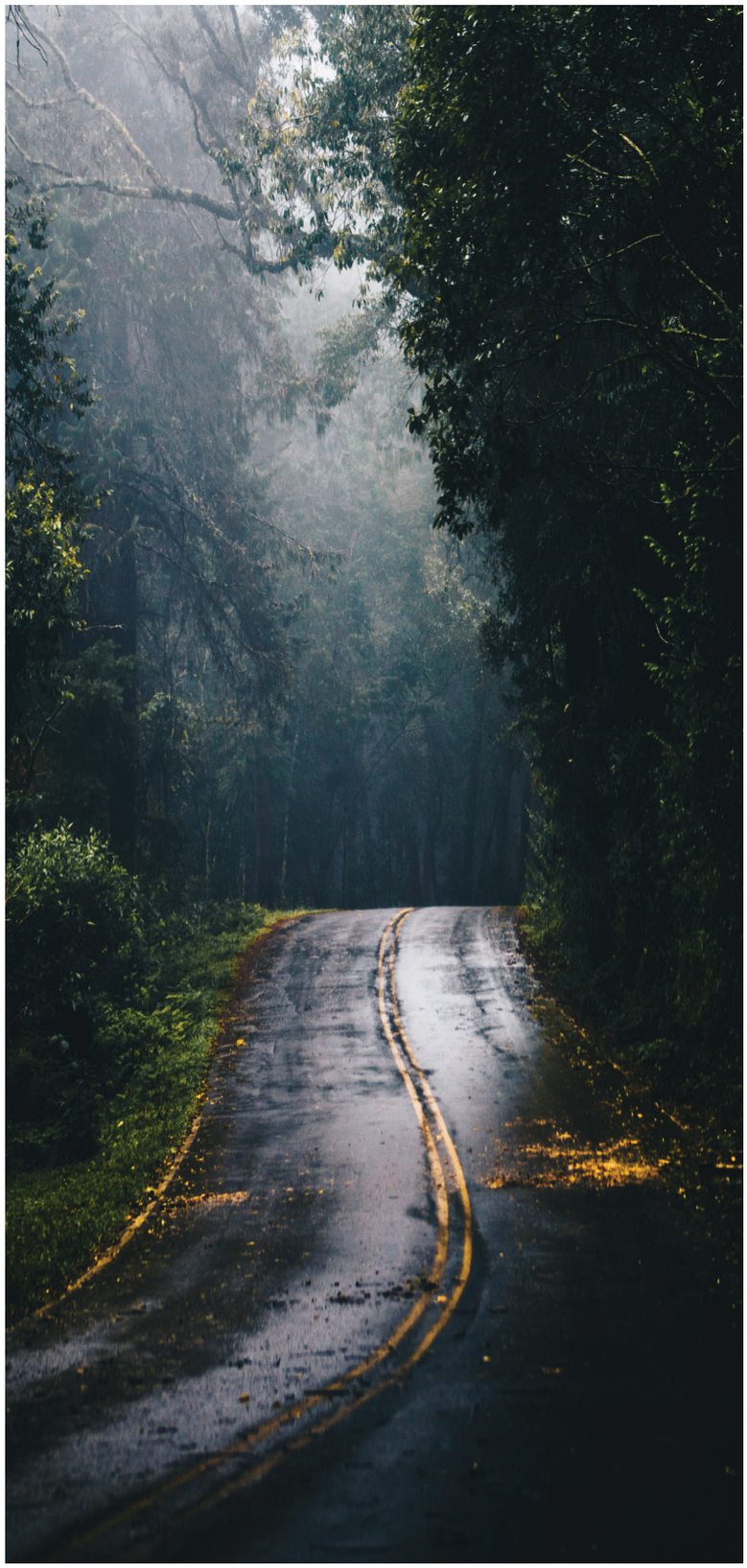

Ask a Drug Information Pharmacist

Question:

Which Direct Oral Anticoagulants can be Delivered Through Enteral Feeding Tubes?

Pharmacists are often challenged by which drugs can be administered through enteral feeding tubes. Issues to consider include: suitability of drug formulation for tube administration, possible decrease in drug efficacy or increase in adverse effects due to absorption, and compatibility with the enteral feed formula.[1] Of the four direct oral anticoagulants (DOACs) currently available in Canada: dabigatran, rivaroxaban, apixaban and edoxaban, not all are suitable for enteral feeding tube administration.

Dabigatran is not recommended for enteral feeding tube administration. The manufacturer recommends that dabigatran should not be chewed, broken, or opened in any way.[2] Loss of the outer shell increases the bioavailability (normally 6.5%) by up to 75%.[2,3] Dabigatran is not an option if the capsule cannot be swallowed whole.

Rivaroxaban is a film-coated, immediate-release tablet that can be administered via an enteral feeding tube, with some restrictions. Since the absorption of rivaroxaban is acid-dependent, it should only be given through nasogastric (NG) or gastric tubes as any tubes bypassing the stomach would result in reduced absorption.[3] In one study, evaluating the bioavailability of rivaroxaban given either orally or crushed and mixed with 50 mL of water administered via an NG tube, the AUC was comparable; however, the Cmax was slightly below the accepted 80% bioequivalency range. [3,4]

Apixaban is a film-coated, immediate-release DOAC that can be administered via an enteral feeding tube. Apixaban is absorbed in the upper gastrointestinal tract (duodenum, jejunum, and ileum); therefore, delivery to the distal small bowel or ascending colon results in reduced absorption.[3] Apixaban can be crushed and suspended in 60 mL of dextrose in water (D5W) and flushed through an NG tube.[3] Absorption of apixaban in solution is comparable to that of an oral tablet.[3]

Edoxaban, the newest DOAC on the market, is a film-coated, immediate release tablet, requiring an acidic environment for absorption. Limited information is available on its use via feeding tubes. A preliminary study assessed the kinetics, safety and tolerability of edoxaban in a water suspension administered via an NG tube. The bioavailability was comparable to an intact oral tablet or a tablet crushed and mixed with apple puree.[5]

Although recent studies may confirm the comparable bioavailability of DOACs via enteral tube administration, it is important to note that it is not known whether the clinical efficacy or risk of bleeding complications is comparable. Further research is needed.

References:

1. Williams N. Medication administration through enteral feeding tubes. *Am J Health-Sys Pharm.* 2008 Dec;65:2347-2357.
2. Pradaxa (dabigatran) [product monograph] Burlington, ON; Boehringer Ingelheim Canada Ltd; 2016.
3. Peterson J, Hoehns J. Administration of direct oral anticoagulants through enteral feeding tubes. *J Pharm Technol.* 2016;32(5):196-200.
4. Moore K et al. Rivaroxaban crushed tablet suspension characteristics and relative bioavailability in healthy adults when administered orally or via nasogastric tube. *Clin Pharmacol Drug Dev.* 2004 Jul;3(4):321-7.
5. Duchin K et al. An open-label crossover study of the pharmacokinetics of the 60mg edoxaban tablet crushed and administered either by a nasogastric tube or in apple puree in healthy adults. *Clin Pharmacokinet.* 2017 May; epub ahead of print.

The Nova Scotia Palliative Care Competency Framework: A Guide for Health Professional and Volunteers

by: Meg McCallum, Manager, Education, Practice Support and Special Projects, NS Cancer Care Program, NSHA and Cheryl Tschupruk, Provincial Palliative Care Coordinator, NSHA

In 2014 the Nova Scotia (NS) Department of Health and Wellness released a provincial palliative care strategy and working groups were established.[1] The Capacity Building and Practice Change Working Group was asked to select palliative care education programs for health professionals and volunteers. The first step in achieving this mandate was to establish competencies for health professionals and volunteers caring for patients with life limiting illness and their families and those specializing in palliative care.

In 2015, a literature search for palliative care competencies and a scan of related education programs were conducted. The Irish Palliative Care Competence Framework serves as the foundation of the NS Palliative Care Competency Framework (the Framework).[2,3] Additional disciplines and competencies were added and any competencies not specific to palliative care were removed. To emphasize the interprofessional nature of palliative care, the Framework illustrates shared and discipline-specific competencies.

Fifty-four palliative care stakeholders and twenty-one professional associations/colleges validated the Framework and mapped the competencies to relevant educational programs. The Framework includes competencies for twenty-two disciplines, nine nursing specialties, four physician specialties, those who supervise palliative care volunteers and palliative care volunteers.

The Framework and the selection and implementation of education programs were significant undertakings, representing twenty six months of work. The Framework will support the implementation of the NS Palliative Care Strategy, enhance the interprofessional nature of palliative care and guide education program selection. The Framework and the impact of its implementation on patients' and families' palliative care experiences will be evaluated.

The Framework is the first of its kind in Canada! Other jurisdictions have expressed considerable interest in the Framework.

The NS Palliative Care Framework: A Guide for Health Professionals and Volunteers and a Palliative Care Toolkit for Health Professionals will be posted on the Nova Scotia Health Authority's website by early March, www.nsha.ca. In the interim, those interested in receiving a PDF copy of the Framework may contact palliativecare@nshealth.ca.

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[1] Nova Scotia Department of Health and Wellness. (2014). Integrated Palliative Care in Nova Scotia: Planning for Action. Halifax, N.S, accessed from https://novascotia.ca/dhw/palliativecare/documents/Integrated-Palliative-Care-Strategy.pdf.

[2] Palliative Care Competence Framework Steering Group. (2014). *Palliative Care Competence Framework*. Dublin, Ireland: Health Service Executive, accessed from: https://www.hse.ie/eng

[3] McCallum, M., Carver, J. Dupere, D., et al. (2017). *The Nova Scotia Palliative Care Competency Framework, A Guide for Health Professionals and Volunteers*. Halifax, N.S.: Nova Scotia Health Authority.

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Therapeutic Options

THERAPEUTIC OPTIONS: FOCUS ON *H. PYLORI* TREATMENT IN ADULTS

By Fauzia Lalani, BScPhm, RPh

BACKGROUND

Helicobacter pylori (H. pylori) is a common chronic bacterial infection that is usually acquired in childhood.[1] Typically colonizing the stomach, this bacteria has been found to cause peptic ulcers, chronic gastritis, dyspepsia, gastric adenocarcinoma, and lymphoma.[2,3] In Canada, approximately 20% to 30% of the population is infected with *H pylori*.[3] About 25% of Canadians with uninvestigated dyspepsia have active *H. pylori*.[4] The incidence of *H. pylori* was found to be about 23% in Ontario as of 2007. Men are generally twice as likely to be infected as women.[3] There is also a strong correlation of infection with certain ethnic groups, low socioeconomic status, having an infected parent, overcrowding, smoking, diet and poor sanitation.[1,3] Immigrants have a higher prevalence of infection than those born in North America.[1] Some First Nations communities have shown a higher incidence of infection, with a few as high as 95%.[3]

DIAGNOSIS

Refer to **Table 1** for a list of indications when testing for *H. pylori* is appropriate. There are several methods available. The gold standard is endoscopy, but it is invasive and not always practical. The Urea Breath Test (UBT), specific for *H. pylori*, is a common alternative and has a high sensitivity. The stool antigen test is also an alternative which is very specific but not as sensitive as the Urea Breath Test.[4] To avoid false negative results with these tests, patients must not take antibiotics or bismuth for one month prior, and proton pump inhibitors (PPIs) for at least two weeks prior, to the test.[4,5] Lastly, serology testing may be appropriate if the patient has never received treatment for *H. pylori*; otherwise, false positives can occur even with successful eradication.[4]

SUSCEPTIBILITY TESTING

Given the increasing levels of antibiotic resistance of *H. pylori* in the general population and the lack of regional data on the prevalence of resistance, it can be difficult to choose which antibiotic regimen would be the most effective for an individual.[5,6]

TABLE 1: Who to test for *H. Pylori*?

HIGH RISK GROUPS THAT SHOULD BE TESTED FOR *H. PYLORI**
Active peptic ulcer disease (PUD)
Past history of PUD[a]
Low-grade gastric mucosa-associated lymphoid tissue (MALT) lymphoma
History of endoscopic resection of early gastric cancer (EGC)
Uninvestigated dyspepsia in patients < 60 years old without alarm features[b,c]
Patients at high risk of gastric cancer or with alarm features[b,d]
Patients taking long-term, low-dose aspirin
Patients initiating chronic non-steroidal anti-inflammatory drug (NSAID) treatment
Unexplained iron deficiency anemia despite appropriate evaluation
Adults with idiopathic thrombocytopenic purpura (ITP)
GROUPS THAT DO NOT NEED ROUTINE TESTING FOR *H. PYLORI**
Typical gastroesophageal reflux disease (GERD) symptoms without PUD history
Asymptomatic individuals with family history of gastric cancer
Patients with lymphocytic gastritis
Patients with hyperplastic gastric polyps
Patients with hyperemesis gravidarum

* *Adapted from the ACG Clinical Guideline.*

a: Unless prior *H. pylori* cure has been documented.

b: Alarm features include: weight loss, dysphagia, iron deficiency anemia, abdominal mass, or overt gastrointestinal bleeding.[2]

c: Test and Treat strategy using non-endoscopic testing is recommended in this group.[1,2]

d: Endoscopic testing is recommended in this group.

There is evidence that culture-guided therapy increases the likelihood of successful eradication.[6] However, routine testing of antibiotic susceptibility is not always done since it is not practical in all patients.[6,7] It may be considered for patients with refractory disease since levels of resistance are expected to be higher.[7] It should also be encouraged for patients undergoing an endoscopy. Due to the lack of local data and the fact that most patients may not get susceptibility testing, health professionals should collect and maintain locally obtained records of treatment eradication rates.[5]

TREATMENT RECOMMENDATIONS

Recommendations for treatment have changed recently due to increasing rates of antibiotic resistance. Generally, clinicians should consider the patient's previous antibiotic exposure as well as regional antibiotic resistance patterns when selecting therapy.[1,6] This is particularly important when selecting rescue therapy in cases of treatment failure.[1]

Treatment Duration

Overall, Canadian recommendations now advocate for 14-day therapy due to increasing rates of treatment failure.[6] The longer duration helps kill certain persistent organisms.[5] PPIs need three or more days to reach their full effect, another reason to support a longer duration of treatment.[5]

Treatment Regimens:

Bismuth quadruple therapy

Bismuth quadruple therapy is a first-line regimen consisting of a PPI, bismuth, metronidazole and tetracycline (PBMT). Studies show this regimen, given for 10 to 14 days, is more effective than the standard PPI triple therapy (see below) given for 7 days.[6] It is also a first-line option for patients who are penicillin allergic or who have had previous exposure or intolerance to macrolides.[1,4,6] The major advantage of this regimen is that it can at least partially overcome metronidazole resistance while maintaining efficacy in clarithromycin and levofloxacin resistance, however success rates are still decreasing over time.[5,6] The higher frequency of side effects including abdominal pain, nausea, and vomiting is a disadvantage and can lead to poor compliance.[5] This regimen is also recommended when previous treatment with triple therapy has failed. More data is needed to conclude whether the PBMT regimen is superior to other alternatives as rescue therapy. There is also a debate whether it can be used to retreat patients who have failed treatment with it previously. Some experts advise against repeated use while others suggest using a higher dose of metronidazole and/or a PPI, also known as an optimized PBMT.[6]

Concomitant non-bismuth quadruple therapy

Concomitant non-bismuth quadruple therapy is a first-line regimen consisting of a PPI, amoxicillin, metronidazole and clarithromycin (PAMC).[1,6] Given that the levels of resistance to metronidazole and clarithromycin individually are high, the prevalence of resistance to both is suspected to be lower unless both have been used together previously.[5] The PAMC regimen performed better than other regimens in resistant clarithromycin strains, in resistant metronidazole strains and in dual resistant strains. A drawback to this regimen is that not all infections are susceptible to both antibiotics; hence, the use of both seems inappropriate. Since this is a commonly recommended regimen, on a global level, this implies a high rate of unnecessary antibiotic use which can potentiate antibiotic resistance. Currently, there is insufficient evidence to advise for or against the use of this regimen as rescue therapy when other treatments have failed.[6]

PPI triple therapy

PPI triple therapy consists of a PPI and a combination of two of the following: amoxicillin, clarithromycin or metronidazole (PAC, PMC and PAM). Triple therapy was once considered first-line; however, its efficacy has decreased over time as some studies have reported an eradication rate less than 50%. Therefore, clinicians are now advised to avoid this regimen unless they are in areas with evidence of low clarithromycin resistance (<15%) or high local eradication rates (>85%).[6] These patients should not have had any prior macrolide exposure for any reason.[1] This regimen is not recommended for rescue therapy in the case of previous treatment failures.[1]

Levofloxacin triple therapy

Levofloxacin triple therapy consists of a PPI, amoxicillin and levofloxacin (PAL).[6] Although this regimen is one of the first-line options in the US guidelines, it is not considered a first-line choice in Canada.[1,6] In Canada, PAL is recommended as second-line or rescue therapy when first-line options have failed, and is especially useful if the first-line treatment was PBMT, contained clarithromycin, or was in areas of high clarithromycin resistance.[1,6,7] It is important to note that it is not recommended to repeat treatment with levofloxacin (in cases of failed therapy) as repeated use may increase the risk of resistant *H. pylori*.[6] The high prevalence of levofloxacin resistance and the lower success rates with PAL-containing therapy make it a second- or third-line therapy option.[8] In addition, safety warnings associated with fluoroquinolones, both from Health Canada and the FDA, further limit its use.[5,9,10]

Rifabutin-containing therapy

Rifabutin-containing therapy consists of a PPI, amoxicillin and rifabutin (PAR). This regimen is restricted to those who have failed at least three prior treatment regimens. Of note, this is the only regimen where a shorter duration of therapy (10 days) is recommended. Current evidence shows there was no added benefit of extending therapy to 14 days, but the longer duration may increase side effect burden. Rifabutin is associated with serious side effects, such as myelotoxicity, and is considered less safe than other regimens. Though resistance is low for *H. pylori*, overuse may increase rifabutin-resistance in other bacteria, affecting its overall use. For these reasons, this regimen is reserved for patients with multiple treatment failures.[6]

Sequential non-bismuth quadruple therapy

Sequential non-bismuth quadruple therapy consists of a PPI and amoxicillin (PA) for 5 to 7 days followed by a PPI, metronidazole and clarithromycin (PMC) for the next 5 to 7 days.[1] This regimen is obsolete in Canada, but is still one of the first-line options in the US guidelines.[1,5,6,7] It has fallen out of favour because concomitant non-bismuth quadruple therapy has proven to be superior to this regimen.[5] It is also not recommended as a rescue therapy in Canada because other regimens are more effective.[6]

Increasing the PPI dose

Therapies using a higher PPI dose have been associated with improved treatment success rates due to greater acid inhibition which enhances antibiotic effects.[1] Efficacy data comes mainly from standard triple therapy regimens that compared a standard dose with a double dose of the PPI.[1] This effect has also been noted in studies of patients with a loss of CYP2C19 function who naturally have an increased bioavailability of the PPI. Overall, these

patients demonstrated improved eradication rates.[1]

Please see **Table 2** for a summary of these treatment regimens.

Other therapies

Several additional treatment regimens are recommended for use in the US guidelines, but have not been recommended in the Canadian guidelines. Note that the US guidelines provides guidance for treatment in North America, i.e. US and Canada.

Hybrid therapy: PPI + amoxicillin for 7 days followed by PPI + amoxicillin + clarithromycin + metronidazole for 7 days. This is a suggested first-line regimen in the US guidelines. This regimen is felt to be comparable to clarithromycin triple therapy with respect to efficacy and tolerability.[1]

Fluoroquinolone sequential therapy: PPI + amoxicillin for 5 to 7 days followed by PPI + fluoroquinolone + metronidazole for 5 to 7 days. This is a suggested first-line regimen in the US guidelines. A meta-analysis comparing this regimen with clarithromycin triple therapy or standard sequential therapy found it to be associated with superior eradication rates overall.[1]

High-dose dual therapy: PPI standard or double dose TID or QID + amoxicillin 1000mg TID or 750mg QID for 14 days. This is recommended as rescue therapy in the US guidelines.[1] The advantage of this regimen is the low incidence of amoxicillin resistance and the fact that amoxicillin efficacy increases with increased gastric pH. Although not endorsed by the Canadian consensus due to limited evidence, this regimen is still an option as rescue when dual metronidazole/clarithromycin resistance and levofloxacin resistance are suspected. This would more likely be the case in a patient with multiple treatment failures.[6]

ANTIBIOTIC RESISTANCE

Data on antibiotic resistance is lacking in most areas, including Canada, and can make it difficult to predict the chance of treatment success for an individual.[1,6] However the trends below may be helpful to know the overall status in the population.

A study from Sudbury, Ontario in 2015 showed that 65% of the *H. pylori* isolates were found to be resistant to at least one of the following antibiotics: amoxicillin, tetracycline, metronidazole, ciprofloxacin, levofloxacin, or clarithromycin. Dual metronidazole/clarithromycin resistance was found in 25% of the isolates.[3] Metronidazole and clarithromycin resistance are usually found more often in women than men.[7]

Clarithromycin resistance is more common in the mid-Atlantic and northeastern regions of the US. It is also more common in older patients and in the presence of an inactive ulcer. In the US, it is usually assumed that resistance is higher than 15% unless local data proves otherwise.[7] Globally, the prevalence of resistance has risen from between 1% and 8% in the 1990s to as high as 30% in recent data.[6,11] Clarithromycin resistance is generally the reason for treatment failure with empiric treatment regimens, especially standard triple therapy. For this reason, when treatment fails, clarithromycin resistance should be assumed and should be avoided in subsequent therapies.[5,6,7]

Metronidazole resistance has remained stable between 20% and 40%.[6,11] Prior use of metronidazole can almost guarantee resistance to it.[5] However, resistance can be partially overcome by increasing the dose and duration of metronidazole, increasing the likelihood of success even in resistant strains. This is not true for clarithromycin and levofloxacin.[6]

Amoxicillin resistance is low, between 1% and 3%, therefore in cases of treatment failure it can be reused without automatically assuming it is the cause of the resistance.[5,6,11]

Levofloxacin resistance varies, but can be as high as 63%. The reason for this is because fluoroquinolones are used to treat a variety of other common infections and there may also be cross-resistance within this class.[6] Prior fluoroquinolone use sharply increases the likelihood of having a levofloxacin-resistant *H. pylori* infection and should be avoided in such cases as well as in prior treatment failure with levofloxacin.[5,6]

Rifabutin resistance is generally low at around 1.3% while resistance to tetracycline is rare.[5,6]

PROBIOTICS

Canadian recommendations don't endorse the use of probiotics as a meta-analysis found no benefit with respect to reducing antibiotic side effects or increasing treatment success.[6] However, a couple of studies demonstrated improved antibiotic tolerance with the addition of probiotics, especially with respect to diarrhea, thus potentially increasing compliance with the antibiotic regimens.[5,6,7] Less data is available to suggest probiotics increase *H. pylori* eradication.[5] Since probiotics may be helpful in certain situations, and are generally not harmful, some patients may consider their use as an adjunct especially if they're at high risk of developing diarrhea or C. difficile.[1,6]

FOLLOW UP TESTING

Testing to prove eradication of *H. pylori* is strongly recommended after completing therapy.[1,7] In cases of persistent symptoms or treatment failure, especially after two failed courses of therapy, subsequent therapy should be based on susceptibility testing.[4,5] If treatment is successful, the risk of reinfection is approximately 1% per year.[4]

REFERENCES

1. Chey WD, et al.: Treatment of Helicobacter pylori Infection. Am J Gastroenterol 2017; 112:212-38.
2. Kavitt RT, Cifu AS. Management of Helicobacter pylori Infection. JAMA. 2017 Apr 18;317(15):1572-3.
3. Eng NF, et al. Antimicrobial susceptibility of Canadian isolates of Helicobacter pylori in Northeastern Ontario. Canadian Journal of Infectious Diseases and Medical Microbiology. 2015;26(3):137-44.
4. Targownik L. Dyspepsia and Peptic Ulcer Disease. Canadian Pharmacists Association. June 2014. [accessed online from RxTx: May 19, 2017]
5. GRAHAM DY. Treating Helicobacter pylori effectively while minimizing misuse of antibiotics. Cleveland Clinic journal of medicine. 2017 Apr;84(4):310-8.
6. Fallone CA, et al. The Toronto Consensus for the treatment of Helicobacter pylori infection in adults. Gastroenterology 2016; 151:51–69.
7. Crowe, SE. Treatment regimens for Helicobacter pylori. UpToDate. Dec 1, 2016.
8. Pharmacist's Letter Canada. Recommend 14 Days with a Quadruple Therapy to Treat H. pylori. Therapeutic Research Center. October 2016.
9. FDA Drug Safety Communication: FDA updates warnings for oral and injectable fluoroquinolone antibiotics due to disabling side effects. U.S. Food and Drug Administration. July 26, 2016.
10. Recalls and safety alerts. FLUOROQUINOLONES - Risk of Disabling and Persistent Serious Adverse Reactions. Health Canada. January 23, 2017.
11. Ghotaslou R, et al. Prevalence of antibiotic resistance in Helicobacter pylori: A recent literature review. World journal of methodology. 2015 Sep 26;5(3):164.

TABLE 2: *H. pylori* Treatment Regimens*

Recommendation	Therapy Regimen	Acronym	Dosing**
First-line			
Recommended	Bismuth quadruple therapy	PBMT	PPI X mg BID[a] + Bismuth subsalicylate (262 mg) 2 tabs QID[b] + Metronidazole 500mg TID to QID[c] + Tetracycline 500mg QID
Recommended	Concomitant non-bismuth quadruple therapy	PAMC	PPI X mg BID[a] + Amoxicillin 1000mg BID + Metronidazole 500mg BID + Clarithromycin 500mg BID
Restricted[d]	PPI triple therapy	PAC	PPI X mg BID[a] + Amoxicillin 1000mg BID + Clarithromycin 500mg BID
		PMC	PPI X mg BID[a] + Metronidazole 500mg BID + Clarithromycin 500mg BID
		PAM	PPI X mg BID[a] + Amoxicillin 1000mg BID + Metronidazole 500mg BID
Not Recommended	Levofloxacin triple therapy	PAL	PPI X mg BID[a] + Amoxicillin 1000mg BID + Levofloxacin 500mg QD[e]
Not Recommended	Sequential non-bismuth quadruple therapy	PA followed by PMC	PPI X mg BID[a] + Amoxicillin 1000mg BID for 5–7 days followed by PPI X mg BID[a] + Metronidazole 500mg BID + Clarithromycin 500mg BID for 5–7 days
Prior Treatment Failure			
Recommended	Bismuth quadruple therapy	PBMT	PPI X mg BID[a] + Bismuth subsalicylate (262 mg) 2 tabs QID[b] + Metronidazole 500mg TID to QID[c] + Tetracycline 500mg QID
Recommended	Levofloxacin-containing therapy	Usually PAL	PPI X mg BID[a] + Amoxicillin 1000mg BID + Levofloxacin 500mg QD[e,f]
Restricted[g,h]	Rifabutin-containing therapy	Usually PAR	PPI X mg BID[a] + Amoxicillin 1000mg BID + Rifabutin 150mg BID
Not Recommended	Sequential non-bismuth quadruple therapy	PA followed by PMC	PPI X mg BID[a] + Amoxicillin 1000mg BID for 5–7 days followed by PPI X mg BID[a] + Metronidazole 500mg BID + Clarithromycin 500mg BID for 5–7 days
Undetermined	Concomitant non-bismuth quadruple therapy	PAMC	PPI X mg BID[a] + Amoxicillin 1000mg BID + Metronidazole 500mg BID + Clarithromycin 500mg BID

QD=once daily; BID=twice daily; TID=three times daily; QID=four times daily;

* *Adapted from the Toronto Consensus*

** Treatment Duration: 14 days[h]

a: The dose depends on the PPI used. Examples of standard doses include esomeprazole 20 mg, lansoprazole 30 mg, pantoprazole 40 mg, and rabeprazole 20mg. Double doses are also used in some cases.

b: There is some evidence for the efficacy of a double dose of bismuth twice daily as well.

c: There's a lack of strong evidence for giving metronidazole QID, however it may help simplify the regimen.

d: Restricted to areas with evidence for low clarithromycin resistance (<15%) or high local eradication rates (>85%).

e: Efficacy appears to be similar for dosing levofloxacin 250 mg BID or 500 mg QD.

f: Evidence suggests that adding bismuth may increase efficacy.

g: Restricted to patients who have failed at least 3 prior recommended treatment options.

h: For rifabutin-containing therapy, there is evidence that increasing the duration from 10 to 14 days does not increase efficacy, however side effects may be prolonged or increased; therefore, this is the only regimen where 10 days of therapy is recommended.

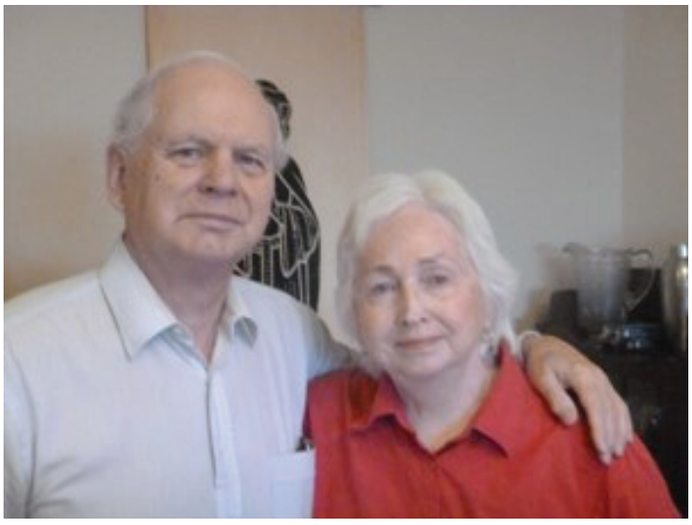
Reviewed by Joanne Deshpande, BScPhm, RPh and Tim Mickleborough, BSP, RPh, MEd

Linking to Alzheimer Society Programs and Services

by Donna McLean, Coordinator First Link Outreach

"I was still teaching full time," says Reginald, retired Dean of Arts and Science at Mount Saint Vincent University. "I noticed I was beginning to forget things. I missed a couple of classes." After receiving a diagnosis, he was referred to the Alzheimer Society of Nova Scotia First Link® program.

A few weeks later, Reginald and his wife Penelope were contacted by staff from the Society, who answered their questions, provided support, and asked if they would like a follow up call. "I'm very independent and it would take an awful lot for me to ask for help," says Penelope, but she welcomed the regular phone calls. "Now that I've become accustomed to all the educational information and benefits of being one step ahead, I feel that I can reach out for help and accept this disease."



The couple has attended a number of Alzheimer Society programs. They jointly participated in a course for persons with dementia and their care partner. Individually, Reginald participated in a support group for people with dementia and Penelope completed the Family Caregiver Education Series.

"Our association with the Alzheimer's Society has made us feel more at peace, and helps us to recognize that we actually can still lead a good life and enjoy what we have while we have it," says Penelope. "Although I know there will be stressful times down the road, I have some of the tools."

See Reginald and Penni in our First Link Video https://www.youtube.com/watch?v=BtWnu7BtUdw&list=PLJfRsWgBQnHxBWJ1iLI8sBxyz90c54Bhf

First Link® Model

First Link® is a program/service delivery model where healthcare professionals like you connect your clients with dementia and/or their families to supports by filling out a referral form and faxing it to the Alzheimer Society. We contact your clients to provide information, education and support services. The model promotes these connections as early as possible in the disease course and maintains contact throughout the progression of the disease.

For information on how you can make referrals to First Link and to access a referral form, contact donna.mclean@asns.ca or go to http://www.alzheimer.ca/en/ns

Alzheimer Society
NOVA SCOTIA

Products Liability - Understanding Recall Risks

by Jonathan Hines, BBA, CAIB, CRM, Partner at Wilson Insurance

With increased media attention, products recall risks are a relevant topic in pharmacy practice. In Canada, manufacturers, packers and labelers, importers, sellers, or distributors have various obligations to consumers and are the responsible party to notify consumers, as well as report to Health Canada.

Many businesses are not aware that they are responsible to undertake various actions as sellers of products such as; reporting to Health Canada, maintaining detailed records, ordering recalls or even the responsibility to bear the costs of corrective action including shipping the product to a specified location. Various situations can result in the need to initiate a recall, including but not limited to:

- Improper labeling
- Failure to confirm to claims made about performance or effectiveness
- A potentially dangerous or defective condition that may cause the product to perform as intended
- Failure to meet regulatory requirements
- Errors in compounding or mixing

Depending on where the business or individual sits in the supply chain (distributor, packer/ labeller, seller, etc.), there are various requirements for notification and corrective action. In addition, pharmacies can carry a variety of products that carry different recall requirements such as drugs, medical devices, food products and natural health products, as well as other consumer goods.

Risk Management Advice

- Identify within the range of products sold or handled where you and/or your business fit in terms of how you are classified (IE seller, distributor, packer/ labeler, manufacture, etc.)
- Identify what corrective actions may be required to be undertaken in the event of a recall
- Ensure compliance with requirements; such as record keeping and public notifications
- Ensure your business or your employer has a product recall plan and reporting process, and that it is reviewed regularly
- Understand the process required to order a recall; what the process is and who within the organization is in charge in a recall situation
- Understand the extent of insurance coverage that may apply and what resources the insurer may include or offer

Resources Insurance can offer:

- Specialized claims services offering advice and guidance during a recall
- Financial costs for notification and logistics costs associated with the recall
- Negative publicity or crisis management expenses coverage and resources

Sources: *https://www.canada.ca/en/health-canada/services/drugs-health-products/compliance-enforcement/information-health-product/drugs/recall-policy-0016.html*

Collaborative Care Demonstration Project Update

by Dr. Jane Gillis, PharmD, CCDP Project Coordinator

A little over a year ago, a call went out from the Pharmacy Association of Nova Scotia and Doctors Nova Scotia looking for pharmacists and physicians to participate in the Collaborative Care Demonstration Project. This project was supported by the Department of Health and Wellness and the response was impressive! After reviewing all the applications, a team of 23 physicians and 41 pharmacists from all over the province were invited to participate. The pharmacist received training on chronic disease management and developing care plans. The group gathered in June throughout Nova Scotia for orientation sessions and on July 1st they got to work recruiting patients. By the end of January, most physician/pharmacist teams had recruited approximately 15 patients.

Once the patient consented to the study, the pharmacists met with them to conduct an initial patient interview, which is a lot like a full medication review. But instead of asking the patient to discuss important issue with their doctor or trying to catch up with their doctor by phone, the pharmacist had a face to face meeting with the physician to discuss the patients and come up with a plan collaboratively. By now, the pharmacists have implemented the plan with each patient and over the year will continue to follow-up with each one of them another 5 times.

In order to participate in the project, patients had to be registered with Pharmacare and have either two specified chronic diseases (diabetes, ischemic heart disease (IHD), chronic obstructive pulmonary disease (COPD), hypertension) or one of these chronic diseases and one identified risk factor (obesity, smoking, or non-adherence to medication). Four hundred and forty-four patients were recruited to participate in the study and 49% were male and 51% female. Most of the patients (40%) fell within the age 66-75 years and over 90% of patients are 55 years old or older. Almost 90% of patients have hypertension and 55% have diabetes. Almost half of patients with diabetes (45%) are also obese.

Although we don't yet have outcome data, the research team did conduct focus group sessions with the pharmacists and physicians

and here are some early findings:

- Participants identified positive changes that will contribute to improved patient health and wellbeing as a key success of the project so far
- The project provides patients with information and education to support their health and wellbeing, including connecting patients to other supports they might benefit from outside of the pharmacist and physician (e.g., a dietitian)
- The doctors and pharmacists have improved collaboration and communication as a result of this project, and in some cases, this even carried to patients outside the study.
- The project is helping to improve and strengthen the relationship between the pharmacist and patient
- The doctors report that they now have a better understanding of the pharmacist's scope of practice and competencies, and how they could work with pharmacists more effectively to support patients.

Many of the physician-pharmacist teams already had a good working relationship before starting the project. These early finding suggest that physicians and pharmacists are ready and willing to collaborate on patient care. Some of the challenges were finding the time in busy practices, recruiting patients and establishing the meetings into their workflow.

We look forward to seeing if this collaboration can lead to better health outcomes.

Stay tuned – there will be more to come!

Collaborative Care
Demonstration Project

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