

Our Practice

By pharmacists for pharmacists.



Welcome Message

Celebrating three years of *Our Practice*



Welcome to the third year of *Our Practice*, a bi-monthly newsletter for the practicing pharmacist community. Here we share cases, tools and information we use in our day-to-day patient care practice. We want to ensure *Our Practice* is relevant to your practice. **Please [click here](#) to complete our short reader survey. Your opinions and feedback are important!**

As always, if you have any questions, feedback or tips to share, please contact us at pharmacists.clinic@ubc.ca. Also, feel free to share this newsletter with your colleagues.

Warm regards,

Barbara Gobis

Director, Pharmacists Clinic
Faculty of Pharmaceutical Sciences, University of British Columbia

PS – Each case is peer reviewed and qualifies as a non-accredited CE learning activity in your learning portfolio for licensure.

Feature Article

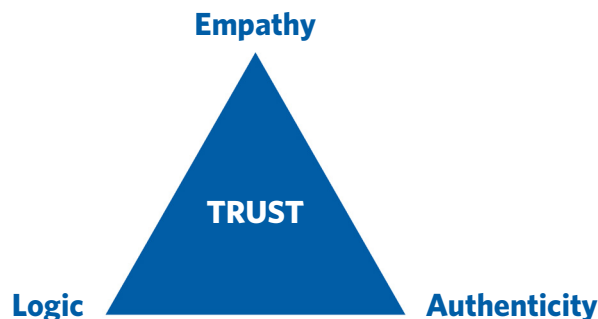
Trust: The cornerstone of our practice

BARBARA GOBIS BSC(PHARM), RPH, ACPR, MSCPHM, PCC

In today's fast-paced information age, trust remains a critical requirement in health care. Trust takes a lifetime to build and a moment to lose, and unfortunately, we are living in skeptical times. People rarely give their trust to institutions. While organizations can be described as credible and reliable, it's really the people within organizations that make those organizations what they are. Fortunately, Canadians tend to trust pharmacists.¹

At the Pharmacists Clinic, our team relies on trust relationships with our patients, our pharmacist colleagues, other health care professionals and health care leaders. How do we gain, maintain or regain trust? We have adapted an approach proposed by Dr. Frances Frei, a professor at the Harvard Business School, to our practice at the clinic.²

For us, the three requirements for trust are sound logic, authenticity and empathy (see below, **Figure 1 – Three Requirements for Trust**).



CONTINUED ON NEXT PAGE



Our Practice



Sound logic means we know what we are talking about. We keep our clinical knowledge current, we understand how to interpret the evidence and we articulate the facts clearly and respectfully. We use an approach developed by Dr. James McCormack here at our Faculty to critically appraise randomized controlled trials in 10 minutes.³ All our students learn this approach and it's an important tool for every pharmacist's toolbox.

Authenticity means we behave in a way that is true to our values. We have identified our values as the behaviours that are important to us. They are trust, honesty, respect, collaboration, positivity and humility. Our efforts to live these values each day help us be authentic. We accept ourselves and others without judgement, we are open to learning when things don't go our way, and we try to be thoughtful in our words and actions every day. It won't work any other way because people would be able to tell if we were pretending to be someone we weren't, and trust would automatically decrease.

Empathy means we pay attention to and respect the feelings, thoughts and experiences of others from their perspective – not just our own. By definition, patient-centered care requires us to empathize with our patients and hear what they are telling us. A pharmacist-patient interaction is a meeting of experts. We have expertise in drug therapy and patients are experts on their own lives, routines, values and preferences. We need to really listen.

Sometimes we encounter people (patients and health care professionals) who have negative, out dated or inaccurate opinions of pharmacists. They start with little or no trust in us without even knowing us. In these situations, we prioritize empathy to understand the other person's lived experience. Only then can we layer in sound logic and authenticity to build or rebuild trust over time. Trust really is the cornerstone of our practice.

References

1. A National Survey of Canadians on their Perceptions and Attitudes Towards Pharmacists. Abacus Data for the Canadian Pharmacists Association. March 2018. https://www.pharmacists.ca/cpha-ca/assets/File/cpha-on-the-issues/Pharmacists%20in%20Canada_Survey_2018.pdf
2. How to Build (and Rebuild) Trust. Frances X Frei. TED2018. https://www.ted.com/talks/frances_frei_how_to_build_and_rebuild_trust
3. How to Critically Appraise an RCT in 10 Minutes. James McCormack. https://therapeuticeducation.org/sites/therapeuticeducation.org/files/Ten_Minute_Critical_Appraisal_of_an_RCT.pdf

Case Study

Sick with Uncertainty: Management of post-concussive syndrome nausea

ADRIAN ZIEMCZONEK, BSC(PHARM), RPH (At the time of writing Adrian was a resident on rotation at the clinic)



A 59-year-old male is referred to the clinic with a chief complaint of nausea. The nausea began after a traumatic brain injury (TBI) suffered during a biking collision accident two and a half years ago. He was previously healthy and on no medications. Although he experiences other sequelae of TBI (cognitive changes, chronic headaches), nausea is the most debilitating. Neurological imaging and workup have not revealed any other underlying causes. Although the frequency of episodes has decreased, he continues to experience nausea daily (never vomiting), particularly in the morning and early afternoon. It occurs independently from headaches. He has identified several triggers including movement (while driving) and visual overstimulation, but also experiences nausea upon waking in the morning. The only previous medication tried was dimenhydrinate which was discontinued due to feelings of overstimulation and jitteriness. Current medical conditions and medications include: nausea (betahistine 8mg PO daily providing little or no benefit), depression and chronic head and neck pain (mirtazapine 30mg PO HS, venlafaxine 150mg PO daily, divalproex 500mg PO daily). He has no known drug allergies, and denies any alcohol, tobacco, cannabis, illicit drug or caffeine use.

Post-concussion syndrome (PCS) is a complex disorder with symptomatology that includes cognitive deficits, emotional changes, and somatic symptoms such as nausea.¹ PCS is best described in the context of mild TBI, but can also occur following other head and neck injuries including whiplash.² Recently, prospective studies suggest a considerable number of patients continue to experience post-concussion symptoms for a year or longer post-injury.³ In the absence of diagnostic imaging or specific biomarkers for PCS, a clinical diagnosis is made by evaluating patient history and individual symptoms. Due to the lack of defined treatment for this disorder, management

CONTINUED ON NEXT PAGE



is focused on treating individual patient symptoms. There are no published trials that specifically address the management of PCS nausea, therefore treatment should be based on patient presentation and individual factors.⁴

Nausea can be a disabling and distressing symptom which can be triggered by a variety of stimuli. Multiple interactions between the gastrointestinal (GI) system and central nervous system (CNS) are involved in the normal function of the GI tract and involve histamine, acetylcholine, dopamine and serotonin thus making these neurotransmitters the target of most pharmacologic therapies.⁵

Management of nausea requires taking a careful history to identify any underlying cause or exacerbating factors such as medications. Ensure optimization of non-pharmacologic therapies by incorporating dietary, physical, or psychosocial strategies as appropriate for the etiology of nausea including avoidance of triggers. Targeted therapy aimed at treating the underlying conditions should be provided when possible, otherwise symptom management with antiemetics should be initiated. To help guide initial management, evaluation of symptom severity, duration and frequency along with the nature of any associated symptoms such as pain, headaches or vertigo should be conducted. Tailor treatment to the most likely clinical stimulus while also considering patient preference, safety and cost concerns. Administer medications regularly rather than as needed and reassess therapy frequently every two to three days to determine tolerability or need for further dose titration. Given the acuity of nausea, it is valuable to have a detailed plan with several options so that a new medication class or route of administration can be tried if the initial strategy fails. Commonly used medications are summarized in **Table 1**. The histaminergic partial agonist and antagonist, betahistine, is not traditionally seen as an anti-emetic but is often used in the treatment of vertigo and dizziness related to inner ear disorders such as Ménière's disease. Although no prospective studies have evaluated betahistine in patients with PCS, anecdotal reports suggests betahistine in combination with vestibular rehab may be effective in patients with balance disorders following head trauma.⁶

Our patient is taking several medications that can potentially cause nausea including venlafaxine and divalproex, however he is clear that nausea predated the initiation of these agents. There is also no association of nausea with headaches and no known dietary triggers. At the initial visit, he was trialing betahistine but found it to have little benefit. As he was only taking 8mg once daily, our initial recommendation was to optimize treatment by increasing his daily dose to be taken two or three times daily to ensure an adequate trial was conducted before looking for alternatives. A brief review of systems and conversation regarding patient preferences revealed some factors that could help narrow down therapeutic options for future use. Our patient's goal of therapy is to reduce nausea to enable day to day function. Our patient is currently experiencing mild constipation and expressed preference for a non-sedating and lower cost medication. If betahistine proves to be ineffective at follow-up, a trial of domperidone at 10mg two to three times daily may be an appropriate alternative. Domperidone does not cross the blood-brain barrier (BBB) which would limit any CNS depressive effects, and its prokinetic activity may be beneficial for his current complaint of constipation. Combination antiemetic therapy may be needed for moderate-severe nausea or if only partial response is attained with monotherapy.

Table 1. Commonly used medications in treatment of nausea and vomiting^{7,8,9}

	Stimulus	Dose	General Cautions	Considerations
Antihistamine e.g. Dimenhydrinate	Motion related Meniere's disease	25-100mg Q4-6H (max 400mg/day)	-Sedation and anticholinergic effects; elderly particularly susceptible	-Available OTC
D2 antagonist e.g. Domperidone	Gastroparesis Dyspepsia	10mg QID	-Diarrhea, abdominal cramps -May ↑ QT in doses >30mg/d	-Useful as prokinetic
D2 antagonist e.g. Metoclopramide	Drug induced Migraine related Gastroparesis	10-20mg TID-QID	-Diarrhea, abdominal cramps -crosses BBB, may cause drowsiness and EPS	-Useful as prokinetic -Various routes including: PO/IM/SC
5-HT ₃ Antagonist e.g. Ondansetron	Postoperative Drug induced	4-8mg Q4-6H	-Headache, constipation, sedation, QT prolongation	-Available as ODT -Generally well tolerated -More expensive than other agents
Cannabinoids e.g. Nabilone	Drug induced	0.5-1mg BID	-Sedation, dizziness, dry mouth, euphoria	-Sedation, dizziness, dry mouth, euphoria

ODT = orally disintegrating tablet

CONTINUED ON NEXT PAGE

References

1. Cnossen MC, van der Naalt J, Spikman JM, et al. Prediction of Persistent Post-Concussion Symptoms after Mild Traumatic Brain Injury. *Journal of Neurotrauma*. 2018;35:2691-2698.
2. Haas D. Chronic Post-Traumatic Headaches Classified and Compared with Natural Headaches. *Cephalalgia*. 1996;16:486-493
3. Hiploylee C, Dufort PA, Davis HS, et al. Longitudinal Study of Postconcussion Syndrome: Not Everyone Recovers. *Journal of Neurotrauma*. 2017;34:1511-1523
4. Management of Concussion/mTBI Working Group. VA/DoD Clinical Practice Guideline for Management of Concussion/Mild Traumatic Brain Injury. *Journal of rehabilitation research and development*. 2009;46:CP1
5. Singh P, Yoon SS, Kuo B. Nausea: a review of pathophysiology and therapeutics. *Therap Adv Gastroenterol*. 2016;9(1):98-112.
6. Naguib MB, Madian YT. Betahistine Dihydrochloride With and Without Early Vestibular Rehabilitation for the Management of Patients With Balance Disorders Following Head Trauma: A Preliminary Randomized Clinical Trial. *Journal of Chiropractic Medicine*. 2014;13:14-20
7. DiPiro CV, Ignoffo RJ. Nausea and vomiting. In: DiPiro, JT, Talbert RL, Yee GC, editors. *Pharmacotherapy: A Pathophysiologic Approach*. 9th ed. New York: McGraw Hill Professional Publishing; 2014.
8. Canadian Pharmacists Association. Nausea in Adults RxTx. MacLean C and Petrucha R. Revised May 2018, accessed online from on <https://www.e-therapeutics.ca/> on January 26, 2018.
9. Flake ZA, Linn BS, Hornecker JR. Practical Selection of Antiemetics in the Ambulatory Setting. *American Family Physician*. 2015;91:293-296.

Note - Each case study has been peer reviewed and qualifies as a non-accredited learning activity (CE-Plus) within the annual professional development requirement for licensure by the College of Pharmacists of British Columbia.

Your Responsibility

The recommendations in this case are based on the views of our clinicians after careful consideration of the best available evidence and needs of a specific patient.

As a health care professional, you will assess each of your cases based on the patient's unique circumstances and in consultation with the patient and their care team. If you would like to discuss one of your patients with us please contact the [Clinic team](#).