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THE UNIVERSITY OF BRITISH COLUMBIA

Pharmacists Clinic

Faculty of Pharmaceutical Sciences

# Our Practice

By pharmacists for pharmacists.



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**CORONAVIRUS (COVID-19) and UBC's response: Information and FAQs here.**

## FEATURE ARTICLE

# Addressing Vaccine Hesitancy

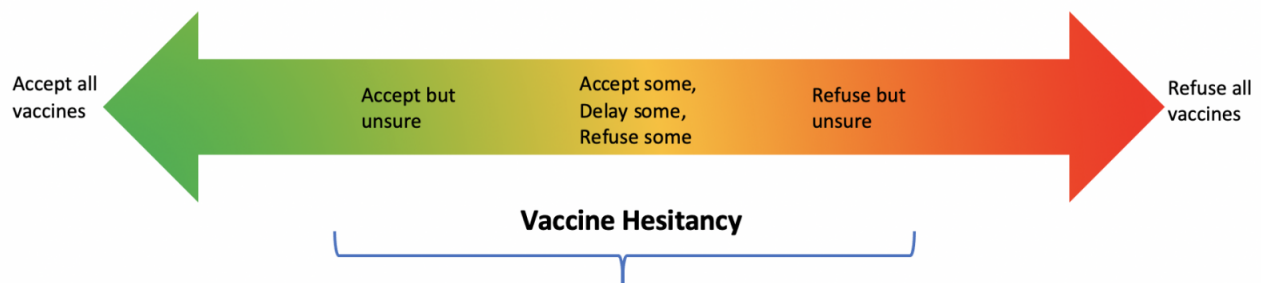
BY: ADRIAN ZIEMCZONEK, BSC(PHARM), RPH



Vaccines prevent millions of deaths worldwide every year, and have saved more Canadian lives than any other medical intervention in the last 50 years.<sup>1</sup> Despite overwhelming scientific evidence of vaccine benefits, up to 20-30% of Canadians have wavering or uncertain views on vaccination, which may be a factor in outbreaks of vaccine preventable diseases in Canada.<sup>2,3</sup>

The World Health Organization defines vaccine hesitancy as the “delay in acceptance or refusal of vaccines despite availability of vaccination services.” As depicted in Figure 1, vaccine beliefs and attitudes vary across the spectrum, from full acceptance to complete refusal of all vaccines. Vaccine hesitant individuals are somewhere in the middle of this continuum, with attitudes and opinions that can change over time or vary depending on the vaccine. These individuals should not be confused with “anti-vaxxers” who are people with strong anti-vaccination convictions and make up an estimated 5-10% of the population.<sup>3</sup>

*Figure 1: Spectrum of Vaccine Acceptance*



Vaccine hesitant people tend to be misinformed, express reluctance toward vaccines, and often have difficulty articulating specific concerns.<sup>4</sup> Their most commonly expressed barriers and concerns are related to side effects, fear of the vaccine causing the disease itself, and lack of perceived necessity.<sup>5</sup>

Our team at the Pharmacists Clinic prioritizes our role as vaccine educators for all people, and particularly for those who are vaccine hesitant.

## Our Approach

Below are considerations and strategies we have found helpful in our practice.

**Leverage our position as a trusted resource.** Canadians identify health care providers (HCPs) as their most trusted source for vaccine information and advice, and direct recommendations from an HCP drive acceptance.<sup>2,6</sup> At our clinic, we ensure we are current on vaccine information (including the latest circulating rumours) and ready to discuss vaccines with patients.

**Be proactive.** We ask all patients about their vaccination status, rather than wait for them to voluntarily express interest in a vaccine. Screening for vaccination status has been incorporated into all of our clinical documentation templates, to serve as a routine reminder for clinicians and students that this is a vital component of a patient's health history.

**Have reliable information on hand.** We have links at our fingertips (on our workstations) so we can print off the latest vaccine recommendations and reliable sources of vaccine information for patients. We used to pre-print information but found it went out of date and we were wasting paper. We have also developed a [vaccine assessment algorithm](#) to quickly and confidently identify immunization opportunities.

**Ask patients about their beliefs and values.** During our first appointment, we ask patients about any preferences, beliefs or values they hold regarding their health or medications, including vaccinations. Establishing these preferences sets the tone for the remainder of the appointment and helps tailor our messaging when vaccine

hesitancy is expressed.

**Offer a vaccine consultation.** Any patient with questions about vaccines is offered a one-on-one vaccine consultation with a pharmacist. These appointments are intended primarily to have an open discussion and address a patient's questions and concerns related to vaccines, not necessarily to administer a vaccine.

**Make vaccinations easy and convenient for patients.** We know that one of the main reasons for vaccine hesitancy is inconvenience in accessing vaccination services. We keep a number of publicly funded vaccines on-hand and administer doses whenever the opportunity presents itself (i.e. following a vaccine consultation).

As trusted and accessible HCPs, we are relentless advocates for improved public awareness and the utilization of vaccines. However, we respect and work with patients where they are at in terms of beliefs, values and attitudes towards vaccines. Our goal is not just to get vaccines in arms. We also strive to support vaccine hesitant people in shifting their thinking and taking a step toward greater vaccination acceptance.

#### References

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## CASE STUDY

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# Taking a break from bisphosphonates: Treatment decisions after 10 years of therapy

BY: NICOLE DOMANSKI, BSC, PHARMD, RPH, ACPR and MIN JOO LEE, BHSC, ENTRY-TO-PRACTICE PHARMD CANDIDATE, 2021



An 86-year-old female was referred to the Pharmacists Clinic by her physician for our input on deprescribing her bisphosphonate after 10 years of continuous therapy. She is currently taking alendronate 70mg once weekly for osteoporosis, apixaban 5mg po BID for atrial fibrillation, citalopram 10mg daily for depression, calcium 500mg daily, and vitamin D 1000IU daily. Her social history is non-contributory.

The patient started alendronate in 2010 after falling from standing height and sustaining a wrist fracture. With no previous history of hip or vertebral fracture, she received a bone mineral density (BMD) scan, which returned a T-score of -2.3 (interpretation: osteopenia). Despite no history of glucocorticoid use or rheumatoid arthritis, her FRAX Fracture Risk Assessment Tool score revealed moderate risk (10-20%) of major osteoporosis-related fracture in the next 10 years and the alendronate was started. Since then, the patient has had no falls or clinical fractures. A repeat T-score done this year was -2.8 (interpretation: osteoporosis).

Bisphosphonates are the mainstay of osteoporosis treatment, however the optimal duration of treatment is a matter of controversy. There is a concern that long-term treatment may increase bone fragility and escalate the risk of two rare but serious adverse events: osteonecrosis of the jaw (ONJ; 1 case in 100,000 person-years) and atypical femur fracture (AFF; 2 to 78 cases in 100,000 person-years).<sup>1,2</sup>

The concept of a “drug holiday”, usually recommended after three to five years of treatment, may mitigate the risks of long-term exposure.<sup>2</sup> However, seeing how the benefits far outweigh the risks, many patients continuing bisphosphonate therapy without holiday for up to 10 years.<sup>3</sup> Unfortunately, the benefit of continuing treatment is uncertain since bisphosphonate use has not been studied beyond 10 years.<sup>4,5</sup>

The Canadian Agency for Drugs and Technologies in Health (CADTH) recently published a report summarizing the evidence on bisphosphonate treatment duration.<sup>5</sup> In the report, only the 2017 National Osteoporosis Guideline Group (NOGG) mentioned treatment beyond 10 years.<sup>5</sup> Unfortunately, the NOGG recommendation was that “There is no evidence to guide decisions beyond 10 years of treatment and management options in such patients should be considered on an individual basis.”<sup>5</sup>

Various groups have taken this recommendation from NOGG and adapted it based on clinical consensus. In particular, one UK group suggests a two-year treatment break after 10 years of bisphosphonate therapy to minimize the risk of ONJ and AFF.<sup>4</sup> This recommendation is reiterated by other authors, who additionally state that therapy should be reinstated right away if significant loss of BMD or a fracture occurs within the two-year treatment break.<sup>6</sup>

Clear recommendations for continuing bisphosphonates beyond 10 years of treatment are still lacking. In our case, we recommended that alendronate can be discontinued given that the patient does not present with typical “high risk” factors (no fractures while on therapy; no oral glucocorticoids). We suggested continuous reassessment of risk factors and repeating a BMD scan in two years. Although FRAX could be repeated as well, this calculator is only validated in treatment-naïve patients so results in other patients need to be interpreted with caution.<sup>4</sup>

As pharmacists in the care of patients approaching 10 years of bisphosphonate therapy, we engage in shared decision making with the patient and their health care team around continuing or stopping therapy. We also optimize calcium and vitamin D supplementation, advise on treatment for smoking cessation, identify medications associated with an increased falls risk and investigate therapeutic alternatives to spare patients from long-term glucocorticoid use, all of which impact the risk of fractures once bisphosphonate therapy is stopped.

The Fracture Risk Assessment Tool (FRAX) can be found [here](#).

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### 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.

*Images: Justin Lee Ohata, UBC Pharm Sci*



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