Changing the Way We Work:
COVID-19 Community of Practice for Ontario Family Physicians

May 7, 2021: Variants, the J&J vaccine, VIIT, and more

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Moderator: Dr. Tara Kiran

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Answers from panelists and co-hosts to in-session questions posed by participants, based on guidance and information available at the time.

- **Question for Dr. McGeer – what (if any) do you see as the role for COVID antibodies down the road? Some patients have asked about being tested for antibodies – how should we respond?**

[Answered after CoP session due to a technical issue with Zoom Q&A]
Two issues: (i) At the moment, the test that is available (via Lifelabs, and must be paid for privately) can tell you if you have been infected with COVID-19. They detect antibody to the nucleocapsid protein, which you make if you have been infected. But vaccines contain only the spike protein, so this test doesn't tell you if you have responded to vaccine (a second test that detects antibody to spike has been approved by Health Canada, but as far as I can tell, not yet available). These tests are pretty good, but imperfect. Nucleocapsid antibodies decline over time, so you can be infected and have a negative test. And there may be some cross-reactivity with other seasonal coronaviruses, so being positive is also not a sure thing (if you haven't had a PCR test). So, even if you test positive, you shouldn't assume you are protected and turn down vaccination.

(ii) We don't (yet anyway) have what is called a "correlate of protection" – that is, an antibody concentration above which we know you are protected, and below which you are not. We have these correlates for many, but not all, infections, but they take time to figure out. So, knowing whether or not you have antibodies is not very helpful at the moment, which is why these tests aren't publicly funded.

So, one day they may well be useful. And if someone wants a test and is willing and able to pay, it does have some information, and there is no reason why they shouldn't get it. But it is not that helpful.

- **With NACI now saying publicly they recommend waiting for Pfizer or Moderna, vs taking AZ vaccine, what do we tell our patients regarding AZ vaccine and one dose J&J vaccine**

[Answered following CoP session due to a technical issue with Zoom Q&A]
RE AZ: At an individual level, given the current disease incidence in Toronto and Peel, and the short gap to mRNA vaccines, there are very few people with a high enough risk of COVID-19 that they will significantly lower their risk of ICU admission and death by getting the AZ vaccine. The risk of VITT is low enough that if people over 40 are determined that they wish AZ to protect themselves or others, I am ok to give it, but I would no longer recommend it.

RE Janssen**:** Not an issue at the moment, because we still don't have supply, but there are two challenges with this vaccine that we need to deal with:

Although the current U.S. estimate of VITT from Janssen is significantly lower than that with AZ, there is a signal in their phase III study, which would suggest that the rate is higher than the current estimate – needs to be watched carefully to be sure about the level of risk.

In the phase III trial, the efficacy of one dose of vaccine was 67% (equivalent to AZ and less than Pfizer), and protection was lower against variant B.351. Protection against hospitalization and severe disease was good, so that this may be enough. However, a trial of two doses of the vaccine is on-going. Thus, there is some uncertainty about whether a second dose is going to be needed. People who are getting it because they only want one dose should I think be informed at the least that the variants may mean that they should have a second dose. It is also true, that it may be that one dose of an mRNA vaccine is as good as one dose of Janssen (i.e.. One or two dose vaccines may be in the eye of the beholder….)

- **If a patient already had the first dose before pregnancy, should she have the second dose in pregnancy later?**

[Answered following CoP session due to a technical issue with Zoom Q&A]
As always for pregnant women, she should make an informed choice, but given what we know about variants [and the risks for pregnant women from COVID-19 disease], it is a very reasonable choice to be vaccinated (first and/or second dose) during pregnancy.

- **Can we recommend mRNA vaccine to first trimester pregnant patients, or [preferable] to wait till second/third trimester still?**

[Answered following CoP session due to a technical issue with Zoom Q&A]
The only reason to avoid first trimester is to avoid the risk that a miscarriage will be blamed on the vaccine – temporal association is very powerful, and everyone wants a reason for a miscarriage. But if you have had the conversation, and the person understands the risks and wished to be vaccinated, no reason not to.

- **How late into the pregnancy should we still consider giving the vaccine to pregnant women? And do we give both doses in the same pregnancy?**

[Answered following CoP session due to a technical issue with Zoom Q&A]
Any time up to the day of delivery is fine. Since antibody is transferred across the placenta, you ideally want to get a dose in by 32ish weeks (although risk of COVID illness low in neonates….). Two doses in pregnancy is fine.

- **If previously COVID positive, how long, if at all, should a patient wait before getting a COVID vaccine? Is there any indication for doing COVID antibody testing (which seems to be a mandatory precursor in some European countries)?**

Different experts have slightly different recommendations - ranges from 2-3 weeks to 3 months. We know that having had COVID will protect you at least as well as a single dose of vaccine for 6 months. So, delay is ok. And, if possible, you want to give as much space between infection and vaccination as you do between 2 doses of vaccine, because that optimizes the boost you get.

So, a recommendation for an individual depends on how anxious they are about getting vaccine and whether they are at risk of missing a dose later if they wait.

- **What can you tell us about risk of myocarditis with mRNA vaccines?**

A small number of people in Israel have been diagnosed with myocarditis after their second dose of Pfizer. The U.S. has not seen any such signal. Obviously, myocarditis occurs without obvious cause, and it is not yet clear whether what has been seen is due to vaccine or unrelated.

- **I have received many questions from patients this week who have received AstraZeneca vaccine asking if they can get an mRNA vaccine for their second dose. I also have heard many people say they will not get their second AstraZeneca because of fears of VIIT or side effects. How do I answer these patients?**

My answer to these people is to say that studies of mixing vaccines are currently being done, and we are waiting for these study results (maybe 3-4 weeks) before we decide about what the best solution is for second doses. It requires enormous patience to wait, but people are very aware of the problem and of working very hard to make sure the best decision gets made. [Here is link to the Oxford Vaccine Group's Com-COV study: https://comcovstudy.org.uk/home]

- **I have seen many who have received Pfizer vaccine, but their antibodies done through lab is negative. Are they not protected?**

The test for immunity currently available only tests for antibodies to nucleocapsid protein. Nucleocapsid is NOT in the vaccine. If you are vaccinated, you get antibodies to spike. These tests only test for infection, not vaccination. There are new ones coming, but I don't think anything is available in Ontario yet.

- **Given the new recommendations for Pfizer for those 12 and up, is someone keeping track of those elderly needing 2nd doses at 4 months after 1st or will those be delayed even more. Also, for those who received their first shot at a hospital affiliated clinic that has now closed, where do they go for their 2nd?**

First dose clinics are supposed to provide 2nd doses. Cancer clinics have contacted their patients to give them letters explaining that they need a second dose within the product monograph.

- **Can someone comment on inhaled budesonide in first week - Lancet study?**

It looks promising and low risk to me, but I think everyone is anxious about the number of early small trials that have looked good when later data has failed. But adverse events are low.

- **How soon after COVID can one receive COVID vaccination. Also timing of allergy injections / immunizations around COVID vaccination.**

There is no definitive guideline for allergy injections, but most allergists advise to avoid the shots on the same day, and the AAAAI recommends a 48-hour interval between shots, so that immediate or delayed reactions to either injection can be monitored. For vaccines/immunizations you need to way 14 days after another immunization before COVID vaccination and then 28 days after COVID vaccination for next one. Our OCFP FAQ on vaccination has more on this: https://www.ontariofamilyphysicians.ca/tools-resources/covid-19-resources/covid-vaccines-faqs.pdf

- **Is there any medication when it would be contraindicated to receive any of the vaccines?**

No specific contraindications, there are some medications that can diminish immune response and the effectiveness of the vaccine (like high dose prednisone for example) and so in some cases this is considered. More details about specific conditions here in our OCFP Special Populations guide: https://www.ontariofamilyphysicians.ca/tools-resources/covid-19-resources/covid-19-vaccines/covid-vax-special-populations.pdf

- **Are those patients who have always had relative thrombocytopenia at higher risk for VITT? Are those with concomitant autoimmune diseases higher risk?**

Neither are risks for VITT. ITP (relative thrombocytopenia) can get a bit worse with ANY vaccine (including mRNA). Suggest telling patients to monitor for bleeding symptoms.

- **Dr. Pai, I have read that VITT is similar to Heparin induced thrombocytopenia. Does that mean we don't use Heparin? So why are we telling patients not to use AstraZeneca vaccine?**

When we advise heparin, it's often because we don't have good options (e.g., cardiac bypass, ECMO). There are some options for AstraZeneca vaccine (though not accessible equitably to all patients yet). And: we very rarely use unfractionated heparin anymore in hospital unless we really must! So, I agree that clot risk should always be mitigated.

- **If a patient presents with (VITT) symptoms - is it safer to send straight to ER vs delay by ordering an outpatient CBC? Should these patients not be assessed in the emergency dept? It may take several days for me to get results back. Can D-dimer be ordered on an outpatient basis?**

[Answered following CoP session due to a technical issue with Zoom Q&A] I think that for safety's sake, sending a patient to the ER is best. We know CBCs can be delayed by up to 12-24 hours even if ordered "stat" - and a CSVT for example can progress in this amount of time. I believe that patients who are stable can wait, but all of the symptoms on the Science Table algorithms (see below) are serious enough that ER assessment is appropriate.

https://covid19-sciencetable.ca/sciencebrief/vaccine-induced-immune-thrombotic-thrombocytopenia-vitt-following-adenovirus-vector-covid-19-vaccination-interim-guidance-for-healthcare-professionals-in-the-outpatient-setting/

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- **What is the advice for recommending viral vector vaccines in low prevalence areas? (e.g., <21 cases/100,000 7-day average)**

The balance would tip away from viral vector vaccines in areas with low community transmission - but must also consider other factors (delay for mRNA vaccines, patient's own risk factors for illness if they get COVID, patient's personal exposures to COVID).

- **Can VITT be treated with Plavix?**

No, no effect - may make it worse.

- **Would it be beneficial for patients to take Aspirin as a form of prophylaxis after taking the vector vaccines?**

No protective effect- and could be harmful if severe thrombocytopenia.

- **How long does the thrombocytopenia last?**

Can last for up to a month (we are dealing with a case of this now). The antibodies are terribly persistent.

- **Can VITT present with both venous and arterial thrombi?**

Yes! Anything from DVT to PE to MI to limb ischemia to abdominal clots to CSVT to stroke.

- **Why can't family docs give AstraZeneca to patients less than 40 years of age? Any lobbying by OCFP?**

We are following the guidance from provincial public health closely on this.

- **If the rash is itchy, are we able to be less worried or should we still order a CBC if rash is the only SE? I see rashes not uncommonly after AstraZeneca.**

The rash of VITT is non-blanchable petechiae, blood blisters, purpura (driven by low platelets) - not a drug reaction rash. So, an itchy rash would be unlikely to be VITT.

- **You said GPs should order CBC. But we won't get the result until the next day. Shouldn't they go to ER for timeliness?**

From the Science Table brief: "All patients with unusual, non-severe symptoms following vaccination should have an assessment (virtual or in-person) with their primary care provider, and a diagnosis of VIPIT should be considered; initial investigations may be done in the primary care setting. Patients with severe symptoms should immediately present to the nearest emergency department."

- **This NEJM article discusses that there have been suspected cases of VITT with mRNA vaccines as well. Is there any evidence of this association or is it unique to adeno viral vector vaccines? https://www.nejm.org/doi/full/10.1056/NEJMx210006**

No - we see thrombosis (the regular kind), and we see thrombocytopenia (ITP) - we don't see them together, which is the scary part about VITT.

- **For the headache symptom for VIIT, any advice about the headache characteristics that would make us think of VIIT versus post vaccine headache?**

Neurologists telling us that headache is persistent and severe, commonly associated with diplopia, blurred vision, may include seizures. I tell my patients with chronic headache to look for NEW, PERSISTENT symptoms.

- **How quickly does VIIT need to be diagnosed? Can this be done as an out-patient? BW results takes 2 days to come back in the community (if patient can get same day appointment).**

Timeliness matters, so suggest sending to ER if 6-12 hours is going to be tough to achieve. I appreciate how hard it is to get rapid labs in the community - I struggle with it too!

- **One of my patients had the AstraZeneca vaccine 29 days ago. She has found that it made her concussion symptoms, which were resolving after 3 years, got worse, and she is right back to only being able to do 20 minutes of exercise or cognitive activity before she gets her H/A, nausea, and dizziness back. Other friends of hers with concussion have found the same thing with the AstraZeneca vaccine (and one had a worsening of her concussion symptoms with Shingrix). Her friends who have had Moderna or Pfizer have had no recurrence of concussion symptoms. Is this a side effect that others have seen? Is this something that I should be reporting to someone? If so, who? Public Health, AstraZeneca?**

I would suggest drawing a CBC for reassurance that this isn't VITT (sounds less likely) - but you can always report using Public Health Ontario's AEFI form (online submission). This goes to your local PHU and would be escalated if needed by them.
[PHO Report of Adverse Event Following Immunization Form: https://www.publichealthontario.ca/-/media/documents/a/2020/aefi-reporting-form.pdf?la=en]

- **There have been clots reported with the mRNA vaccines as well. Do we know the mechanism for these clots if they are not VITT?**

They are "regular" clots - and the rate with mRNA is no higher than background rate in the general population. So, coincidence but not causation.

- **Noticed there was no step of pulling back of plunger of the syringe before the injection on TV, any remote chance of injection into a blood vessel? Cause and effect of VITT?**

No - this theory was floated but has been disproven. Sensitization to platelet factor 4 doesn't depend on SC vs IM vs IV administration of polyanionic cofactors.

- **How do we counsel patients who do not understand risk and are just anxious?**

We will have some resources available through the COVID Science Table soon to address this. Anxiety is very real. I do have faith that connecting with your own trusted physician can overcome the anxiety and help patients weigh risk more objectively. Family physicians are amazing.

- **How should we proceed in the algorithm when patient's baseline platelets usually less than 120K?**

This is something where I suggest you contact a hematologist (locally, or the closest on-call hematologist to you - may be someone outside your community depending on where you are) to guide you. We'll talk to you about how to confirm coagulopathy (e.g., D dimers) which is another key feature of VITT.

- **After 40 days post AstraZeneca - do we have to be worried at all about VITT?**

Not a worry. The antigen / antibody response is very stereotyped. 40 days is outside the window.

- **What would the VITT rate need to be from a population perspective for policy makers to recommend withdrawing/ not using viral vector vaccines? I have seen the incidence rate vary- and I realize this number is likely a moving target. But given the high mortality rate, what is the population level risk that should be tolerated?**

This is such a good and context dependent question. When the pandemic is raging then the risk of VITT (1/30K - 1/100K) is far outweighed by the risk of COVID complications. Public Health colleagues & policymakers must struggle with this. NACI's statement on Monday was their suggestion that the balance is tipping away from viral vector vaccines based on Canadian epidemiology (which of course differs between different parts of Canada… and Ontario).

- **Can someone with COVID infection have the same picture of VIIT?**

No - HIT (the disease analogue of VITT) is very rare in COVID infection - we rarely see platelet activating antibodies.

- **Do you recommend treating patients with symptomatic COVID with Dexamethasone as soon as possible?**

Science Table clinical guideline group is coming out with guidance next week.
[Link to Ontario Science Advisory Table website: https://covid19-sciencetable.ca/]

- **Is there any prophylactic measure to prevent VIIT?**

No known prophylaxis.

- **I have had questions from patients with thrombocytopenia and safety of AstraZeneca and Johnson & Johnson. For example, is a precondition of ITT or low platelets – [secondary] to anti-seizure meds, for example – considered in the Risk Benefit analysis?**

Pre-existing thrombocytopenia does not predispose to VITT, regardless of cause (ITP, antiepileptic drugs, alcohol use, etc.).

- **How about patients with Factor V Laden? Are they at a higher risk of VITT? Should they avoid AstraZeneca vaccine?**

No - thrombophilia's and previous thrombosis do not mean higher risk of VITT.

- **Will the OCFP advocate for community physicians to receive their second COVID vaccine doses sooner than the 16-week interval. We are at higher risk!**

We have heard this from a lot of Family Doctors. Yes, we are bringing this concern forward - we know now that vaccine supply is increasing and so really hope that all of us working on the front lines will be vaccinated earlier than the 16 weeks for the second dose. This is a call being put forward by other health care workers as well who haven't had their second dose.

- **Any talk of frontline healthcare workers getting second shots earlier than 16 weeks? There is a COVID outbreak in our local hospital affecting COVID ward and ICU and some healthcare providers who have only received one dose have tested positive. We have taken many transfers from GTA to our hospital.**

This is such a concern, sorry to hear this story. I haven't heard anything yet but as vaccine supply has increased, we are talking more about the need to shorten these 16 weeks. I'm hopeful that we will have enough supply to go back and ensure those prioritized for vaccination in Phase 1 can get their second dose.

- **Are first shot clinics and second shot clinics going to be separate entities?**

Likely not. Organizations who did 1st doses are expected to provide 2nd doses.

- **In terms of same clinics offering second dose, I am wondering about all the pop-up clinics and how those people will be notified. Those people may not even be linked to primary care.**

Agree, it is going to be important to have ongoing communication to patients about this - via their email which they gave and public communication through PHU. We are hoping to soon have that information pushed to us about who has been vaccinated so we can also participate in that communication effort – that capability was to be here by end of April, we hope to hear that it is in place soon. We've got on our eye on this.

- **Can you clarify who can get their second dose early? E.g., a patient with RA on biologic qualify?**

[Here is a link to the guidance about which groups are exempt from the extended second dose interval: https://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/vaccine/COVID_19_medical_exceptions_vaccine_dose_intervals.pdf

- **What is the recommended shortened interval for transplant/chemo second dose if patient received AstraZeneca as first dose? Product monograph says 4-12 weeks.**

Interval for solid organ transplants and stem cell transplants is 21 days for Pfizer, 28 days for Moderna and 4-12 weeks for AstraZeneca.

- **I heard that the pharmacies were not using the provincial registry to record the vaccination. Is that correct?**

Yes, that is correct, they must also use the COVAX system.

- **Is there any way to get admin support for COVax [for those] who are not in an FHT?**

The government has not committed to any further admin support to primary care (or pharmacy) despite the increased demand related to COVax etc. I do wonder if the "primary care hub" model I mentioned where a larger clinic might support others might be one way to get around this. I know you

would be aware of the Ontario Health Quorum – that is a good place to learn more about how non-FHT practices do it and to connect with those who have vaccinated.

- **Want to give vaccine in community but we are still under resourced. We are told it can be done and advice is given, but it really is nowhere close to mass vaccination clinic pay. Will OCFP advocate to help support us in community? Resources in mass vaccination clinics and pop ups are huge relative to shots given.**

I hear you, and OCFP is strongly pushing on this at every turn - to government and PHUs. We really want vaccines to be available to us in our offices for those who want to offer it. Right now, the vaccination rollout is going well in our pilots, I am really hoping we can start to see Moderna coming to us (easier than Pfizer).

- **When will there be a push system to let us know when our patient has been vaccinated?**

Yes, this is coming, it was supposed to be here by end of April. I know that this is being worked on actively, and OCFP and others following this and pushing for this, Dr. David Kaplan is strongly advocating as well via Ontario Health.

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These additional questions were answered live during the session. To view responses, please refer to the session recording.

- I understand AstraZeneca second dose may not be available for patients who had it for their first vaccination. What can we tell them about this?
- When should those of us who got our mRNA vaccines early and are now close to six months need a booster dose?
- Can we recommend mRNA vaccine to first trimester pregnant patients, or preferred to wait till second/third trimester still?
- What is the risk of VIIT with 2nd dose of AstraZeneca vaccine?
- Why does this not occur with adenovirus infection which is so common?
- VITT has a still quite high fatality rate - up to 40%! - why is still the case? Is it just that we don't recognize these cases early enough or in some cases we simply cannot do much in some cases? Still it's awfully high.
- Our turnaround time for CBC is 36 hours - should the CBC be done in ER?
- Can Dr. Pai also share the treatment options for Emergency physicians at some point, as family physicians make up a significant number of Emergency physicians in the province. Often not recognized by some of our specialist colleagues.
- If my community CBC has a turnaround of 12-24 hours, should I be sending to ER for the platelet count in a stable patient instead or is progression slow enough to wait 1 day for results?
- Can someone comment on the drop off in protection with vaccines AFTER the first 2 months given the 4-month delay for 2nd dose?