

# COVID Talks for DOCS #8: Evidence Review

June 9, 2021

Zoom technical support  
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(Moderator)



# Live Recording

- Privacy Statement: Please note that the webinar you are participating in is being recorded. By participating, you understand and consent to the webinar being made publicly available via a link on the AMA website for an undetermined length of time.
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# Land Acknowledgment

We would like to recognize that we are webcasting from, and to, many different parts of Alberta today. The province of Alberta is located on Treaty 6, Treaty 7 and Treaty 8 territory and is a traditional meeting ground and home for many Indigenous Peoples.

# Disclosure of Financial Support

This program has not received any financial or in-kind support.

# Presenter Disclosure

- **Jia Hu:** Cleveland Clinic Canada - Advisory; CIHR, NSERC, Alberta Innovates and Pharmaceutical - research and operational funding; No honoraria
- **Heidi Fell:** AMA-physician contractor, PCN Contractor

# Session Overview

This session will respond to common and emerging questions from primary care and other generalist physicians (i.e., pediatricians, internal medicine) regarding COVID-19. Participants will have time to ask questions related to managing patient and practice needs during COVID-19, on topics such as:

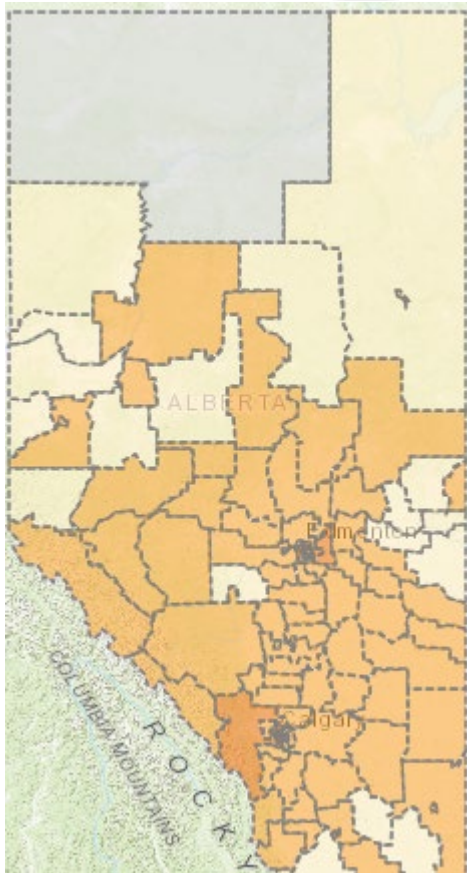
- How will the results from recent studies impact vaccination plans in Alberta?
- Current and future COVID-19 strategies in Alberta

# Learning Objectives

**At the end of this session participants will be able to:**

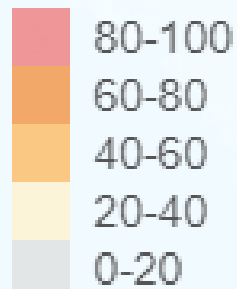
- Apply evidence from recent COVID-19 studies to their practice.
- Counsel patients on the impacts of the latest strategies on COVID-19 and vaccines.

# Vaccination in Alberta



First Dose:  
2,538,266

## Percent %



Second Dose:  
545,853



\* As of June 6, 2021



# Variants

Zone	B.1.1.7 - Alpha	B.1.351 Beta	B.1.617 Delta	P1 Gamma	Total
Calgary	19,379	78	150	735	20,342
Central	5,158	2	3	137	5,300
Edmonton	11,110	65	11	979	12,165
North	5,826	4	2	696	6,528
South	2,582	0	9	94	2,685
Total	44,056*	149	175	2,641	47,021

Variant testing resumed last week

# Vaccine effectiveness against variants (UK)

Vaccine	Dose	Vaccine Efficacy	
		B.1.1.7	B.1.617.2
Pfizer	One dose	49 (42-55)	33 (8.3-51)
	Two doses	87 (83-90)	81 (71-88)
AstraZeneca	One dose	51 (47-55)	33 (19-64)
	Two doses	66 (54-75)	60 (29-77)

Courtesy Dr. Allison McGeer  
University of Toronto - COVID COP June 4, 2021

Source:

<https://www.medrxiv.org/content/10.1101/2021.05.22.21257658v1>

# Comparison of Alpha and Delta Variants

Characteristic	Delta (B.1.617.2) vs. Alpha (B.1.1.7)
Secondary Attack Rate Household contacts Non-household contacts	Delta 13.6% vs Alpha 9.0% Delta 6.3% vs Alpha 4.6%
Sequential Interval	Median 4 days; No difference in Median/distribution
Risk of hospitalization	England: Delta HR 2.6 (95% CI 1.6-4.4) Scotland: Delta HR 2.4 (95% CI 1.7-3.3)

Courtesy Dr. Allison McGeer  
 University of Toronto - COVID COP June 4, 2021

Source:  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/991343/Variants\\_of\\_Concern\\_VOC\\_Technical\\_Briefing\\_14.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/991343/Variants_of_Concern_VOC_Technical_Briefing_14.pdf)

# Second Doses

mRNA Timing - 4 wks/8wks/12wks/16wks

From other vaccines:

- Antibody levels increase over time from first dose for several weeks
- Boosting better if 2nd dose “later” (2 months or 6 months vs 1 month)

Not much data, and no systematic study week by week. So:

- Anytime after 4 weeks is ok
- 8 weeks or after is better , no upper limit

Courtesy Dr. Allison McGeer  
University of Toronto - COVID COP June 4, 2021

Source: <https://www.canada.ca/content/dam/phac-aspc/documents/services/immunization/national-advisory-committee-on-immunization-naci/naci-rapid-response-interchangeability-authorized-covid-19-vaccines-en.pdf>

# Dose Intervals: Alberta Policy

- First shot was AstraZeneca
  - At least 8 week interval
  
- First shot was mRNA
  - At least 3-4 week interval

# Second Doses

## NACI Recommendations on Interchangeability

- After 1st dose of AZ, 2nd dose can be either AZ or mRNA
- mRNA vaccines can be interchanged for the second dose if needed

## What do I tell my patients who received AZ as first dose?

- Getting AZ for first dose was the right thing to protect them and others from severe outcomes of COVID
- Now it is important to get 2nd dose of any vaccine

# Second Doses - Deciding on AZ or Pfizer/Moderna

AstraZeneca	Pfizer/Moderna
A second dose of AstraZeneca may offer less protection against the variants than Moderna/Pfizer.	A second dose of Moderna/Pfizer may offer more protection against the variants than AstraZeneca.
It might be best to get AstraZeneca now if you have to wait several weeks for Moderna/Pfizer.	Canada has a large supply of Pfizer/Moderna. May be easier to find than AstraZeneca.
The risk of severe blood clotting disorder from the second dose of AstraZeneca is estimated to be 1 in 600,000	There is no known risk of blood clots with Pfizer/Moderna.
With any second dose (AstraZeneca, Pfizer, Moderna) you may feel more, the same, or fewer side effects (e.g. sore arm, fatigue, headache, body ache, chills for 1-3 days)	

Source:

[https://uwaterloo.ca/pharmacy/sites/ca.pharmacy/files/uploads/files/i\\_got\\_astrazeneca\\_for\\_my\\_first\\_dose.\\_which\\_vaccine\\_is\\_best\\_for\\_my\\_second\\_1\\_pager.pdf](https://uwaterloo.ca/pharmacy/sites/ca.pharmacy/files/uploads/files/i_got_astrazeneca_for_my_first_dose._which_vaccine_is_best_for_my_second_1_pager.pdf)

# Risk of VITT after AstraZeneca vaccine doses

- Canada: after 1st dose, 1 case of VITT reported for every 55,000 doses of vaccine given.
- Alberta: 5 cases of VITT with one death.
- **Rate after 2nd dose:** Not clear yet, but after about 9 million second doses of AstraZeneca vaccine, the United Kingdom has reported 15 VITT cases. (1 per 600,000 doses)

Source: <https://www.alberta.ca/assets/documents/health-second-dose-az-recipient-factsheet-public.pdf>



# Mixing Doses: Advising Patients

- How to make an informed decision?
- Base on values and priorities:
  - most effective
  - safest
  - fewest side effects
  - one with most evidence behind it
  - the one I can get now
  - the one that best protects against dominant variants in my area
  - Community-mindedness - Take an AZ if all things equal

# Myocarditis

## Myocarditis after Pfizer vaccine

- Israel Health Ministry is investigating cases of myocarditis (inflammation of the heart) in men under 30
- 148 cases have been discovered out of over 5 million vaccinated individuals; most cases occurred after the second dose
- Not associated with Moderna vaccine
- Unclear whether this incidence is higher than background rates of myocarditis and whether it is vaccine-linked; long-term cardiac effects unclear
- CDC , PHAC investigating for signals
- **Children:** A case series of 7 patients in children (all male, aged 14-19) was recently published. To date 5.8M kids in US 12-17 have been vaccinated

Sources: <https://www.cdc.gov/vaccines/covid-19/clinical-considerations/myocarditis.html>; Marshall M, et al. *Pediatrics*. June 4, 2021 (<https://pediatrics.aappublications.org/content/pediatrics/early/2021/06/04/peds.2021-052478.full.pdf>)

# Myocarditis

Onset median 4 days after vaccination

Investigate if acute chest pain, shortness of breath, or palpitations in younger adults post-vaccination

For suspect cases:

- Specialty consult based on acuity of patient

Patient may require: ECG, troponin, CRP - if all normal; very unlikely to be myocarditis

Courtesy Dr. Allison McGeer  
University of Toronto - COVID COP June 4, 2021

Source: <https://www.cdc.gov/vaccines/covid-19/clinical-considerations/myocarditis.html>

# Assessing risk / benefit in vaccinating Children & Youth

- Family, School, Mental Health and Societal Benefits
- Safe - similar adverse events to young adults
- Efficacy was shown to be 100% 7 days after the second dose was administered.
- Pfizer trial: 2,260 adolescents 12- 15 years of age (1,131 in vaccine group vs 1,129 in placebo group)
- Severity of COVID illness less than adults but not insignificant (~3% hospitalizations)

Source: [https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/recommendation-use-pfizer-biontech-covid-19-vaccine-adolescents.html?utm\\_source=link.cep.health&utm\\_medium=urlshortener&utm\\_campaign=vaccine](https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/recommendation-use-pfizer-biontech-covid-19-vaccine-adolescents.html?utm_source=link.cep.health&utm_medium=urlshortener&utm_campaign=vaccine)

# Vaccinating pregnant & breastfeeding

## NACI Recommendation for Vaccinating in Pregnancy:

“Complete vaccine series with COVID-19 vaccine (pref. mRNA) may be offered to pregnant individuals in the authorized age group if risk assessment deems benefits outweigh the potential risks to patient and fetus and informed consent includes discussion of evidence...”

*The NEW ENGLAND JOURNAL of MEDICINE*

ORIGINAL ARTICLE

### Preliminary Findings of mRNA Covid-19 Vaccine Safety in Pregnant Persons

Tom T. Shimabukuro, M.D., Shin Y. Kim, M.P.H., Tanya R. Myers, Ph.D., Pedro L. Moro, M.D., Titilope Oduyebo, M.D., Lakshmi Panagiotakopoulos, M.D., Paige L. Marquez, M.S.P.H., Christine K. Olson, M.D., Ruiling Liu, Ph.D., Karen T. Chang, Ph.D., Sascha R. Ellington, Ph.D., Veronica K. Burkel, M.P.H., Ashley N. Smoots, M.P.H., Caitlin J. Green, M.P.H., Charles Licata, Ph.D., Bicheng C. Zhang, M.S., Meghna Alimchandani, M.D., Adamma Mba-Jonas, M.D., Stacey W. Martin, M.S., Julianne M. Gee, M.P.H., and Dana M. Meaney-Delman, M.D., for the CDC v-safe COVID-19 Pregnancy Registry Team\*

35,691 pregnant individuals in VAERS between Dec 14, 2020 - Feb 28, 2021

3,958 patients followed in v-safe:

827 completed pregnancy

115 pregnancy loss

712 live birth

9.4% Preterm birth

Similar incidence of outcomes pre-pandemic

# Vaccinating pregnant & breastfeeding

## NACI Recommendation on Vaccinating Breastfeeding Individuals:

“Complete vaccine series with a COVID-19 vaccine may be offered to individuals in the authorized age group who are breastfeeding, if a risk assessment deems that the benefits outweigh the potential risks for the individual and the infant, and if informed consent includes discussion about the limited evidence on the use of COVID-19 vaccines in this population.”

No published studies - No safety signals

From other vaccines: Live virus vaccines contraindicated; other vaccines may be protective through antibodies passed in breast milk.

# Potpourri

- Vaccine passports
- Reducing travel quarantine period
- PPE IPAC requirements in clinics
- Re-opening

# Questions and Answers





# Upcoming Webinars

Date	Host	Topic	Registration Link / For More Info
June 9 7pm	U of C COVID Corner	Management of Acute COVID-19 in the Hospital and Long COVID in the Community	<a href="https://cumming.ucalgary.ca/cme/courses/calendar/calendar#!view/event/event_id/337558">https://cumming.ucalgary.ca/cme/courses/calendar/calendar#!view/event/event_id/337558</a>
June 23 7pm	PFSP & WellDoc Alberta	Moral Dilemmas: Reflecting on Physicians' Experiences and Approaches	<a href="https://www.albertadoctors.org/Events/moral-dilemmas-reflecting-on-physicians-experiences-and-approaches">https://www.albertadoctors.org/Events/moral-dilemmas-reflecting-on-physicians-experiences-and-approaches</a>

# Evaluation Link & CME Credits

## Evaluation Link:

<https://interceptum.com/s/en/R06092021>



## CME Credits:

- Specialist physicians can only claim their credits *once* at the end of the webinar series
- Family physicians can claim their credits individually after each webinar using the following session IDs. Please note that it may take two weeks or more to show in your member portal.

Date of webinar	Session ID
March 31, 2021	192413-020
June 9, 2021	192413-021