

Ministry of Health

COVID-19 Vaccine Third Dose Recommendations

Version 4.0 December 2, 2021

Highlights of changes

- Updated to include individuals receiving dialysis (hemodialysis or peritoneal dialysis) as eligible for a three-dose primary series (page 4)

This guidance provides basic information only. This document is not intended to provide or take the place of medical advice, diagnosis or treatment, or legal advice.

- Please check the Ministry of Health (MOH) [COVID-19](#) website regularly for updates to this document, mental health resources, and other information.

Background

The Ministry of Health is closely monitoring the prevalence of the Delta variant of concern globally and within Ontario given its increased transmissibility and disease severity compared to previous COVID-19 virus strains.

Achieving high first and second dose coverage remains the focus and main priority of the Ontario's COVID-19 vaccination program. To date, a primary series of the COVID-19 vaccines have been shown to maintain high vaccine effectiveness with no evidence of waning against serious illness, hospitalization, and death from COVID-19 in most populations. Despite some evidence of increasing risk of breakthrough infection over time, those vaccinated against COVID-19 with a two-dose series continue to demonstrate significantly lower odds of SARS-CoV-2 infection compared to unvaccinated individuals and, when infections occur, symptoms tend to be milder in vaccinated cases ([NACI, 2021](#)). However, evidence is emerging that vaccine effectiveness against asymptomatic infection and mild COVID-19 disease may decrease with time, and that currently authorized COVID-19 vaccines may be less effective against the Delta variant which could contribute to increased transmission of infection. Therefore, for certain populations, an additional

dose may be needed to obtain more durable protection. On October 29th, NACI released [interim guidance on booster COVID-19 vaccine doses in Canada](#), which was based on a number of contextual factors including the vaccine products used for primary series, time elapsed since the last dose in the primary series, intervals between doses, protection from high vaccination coverage and the use of other public health measures and policies.

A risk/benefit analysis for individual patients is at the center of the collaborative clinician/patient decision-making process. Informed consent for additional doses of COVID-19 vaccine should clearly communicate what is known and unknown about the risks and benefits of an additional dose. Evidence from clinical trials suggests that booster doses of mRNA vaccines given six months after the primary series elicited a robust immune response. Real world data suggests that a booster dose provides good short-term effectiveness and a safety profile similar to the second dose of the vaccine. There is no evidence on the long-term effectiveness of booster doses so it remains unknown at this time how long this benefit might last. See [NACI interim guidance](#) for more information on the evidence, safety and immunogenicity of COVID-19 booster doses. The risk/benefit discussion should also include a discussion of the potential for increased risk of myocarditis and pericarditis following receipt of an mRNA COVID-19 vaccine, which is currently reported more commonly after second doses compared to first doses ([NACI, 2021](#)). As a precautionary measure, the additional dose of mRNA vaccine should be deferred in individuals who have experienced myocarditis or pericarditis following any preceding dose of an mRNA COVID-19 vaccine until more information is available ([NACI, 2021](#)).

The Ministry of Health and NACI are closely following the research on the safety and effectiveness of additional doses. Recommendations will be re-examined on an ongoing basis as new data emerges. Recommendations will be issued as part of Ontario's ongoing COVID-19 vaccination program as further evidence becomes available. Serological testing is not recommended before or after COVID-19 vaccination ([NACI, 2021](#)).

For additional doses related to out of province vaccination, see the MOH [COVID-19 Guidance for Individuals Vaccinated outside of Ontario/Canada](#).

Third Dose: 3-Dose Primary Series vs. Booster

Dose

Historically in other vaccine programs, it takes years of post-marketing surveillance to determine the optimal interval between doses and dose number to complete a primary series to sustain long-term protection. Per NACI's [interim guidance on booster COVID-19 vaccine doses in Canada](#), the intent of a booster dose is to restore protection that may have decreased over time to a level that is no longer deemed sufficient in individuals who initially responded adequately to a complete primary vaccine series. This is distinguished from the intent of a third dose which might be added to the standard primary vaccine series with the aim of enhancing the immune response and establishing an adequate level of protection for individuals who developed no or sub-optimal immune response to a 2-dose primary series. See [NACI interim guidance](#) for more information.

Recommendations

- Either Moderna or Pfizer vaccines may be used as a third or booster dose (regardless of which COVID-19 vaccine was used in the primary series).
- Residents of long-term care homes, retirement homes or seniors in other congregate living settings, adults 70 years of age and older, and all eligible immunocompromised individuals are recommended to receive the full dose (100 mcg) if being offered Moderna for a third or booster dose.
- For all other individuals less than 70 years of age, if offering Moderna as a booster dose, a half dose (50 mcg) is recommended.
- If offering Pfizer-BioNTech for a third or booster dose, the full dose (30 mcg) is recommended.¹
- Individuals that received AstraZeneca/COVISHIELD COVID-19 vaccine for their first and second dose are recommended to receive an mRNA vaccine for their third or booster dose unless contraindicated. A booster dose of a viral vector vaccine should only be considered when an mRNA vaccine is contraindicated or inaccessible. People who experienced a severe immediate allergic reaction after a first dose of an mRNA COVID-19 vaccine can safely receive future doses of the same or another mRNA COVID-19 vaccine after consulting with an allergist/immunologist or another appropriate physician. See [NACI's recommendations on the use of COVID-19 vaccines](#) for more information.

¹ See [NACI's interim guidance on booster COVID-19 vaccine doses](#) for more details.

Informed consent for an additional dose of viral vector vaccine should include discussion about the lack of evidence on the use of an additional dose of viral vector COVID-19 vaccine and the increased risk of Vaccine-Induced Immune Thrombotic Thrombocytopenia (VITT), Capillary Leak Syndrome (CLS), and Guillain-Barre syndrome (GBS) following viral vector COVID-19 vaccines ([NACI, 2021](#)).

3-Dose Primary Series for Moderately to Severely Immunocompromised

Rationale:

- Certain populations are at increased risk of severe outcomes from COVID-19, and have demonstrated a sub-optimal immune response to a complete two-dose COVID-19 vaccine series due to their underlying condition. See [NACI's Rapid Response Statement: Additional dose of COVID-19 vaccine in immunocompromised individuals following 1- or 2- dose primary series](#) for more information.
- There is emerging evidence on safety and immunogenicity following a third dose of a COVID-19 vaccine for those that had not seroconverted following their second dose in select immunocompromised populations. Certain moderately and severely immunocompromised populations may benefit from a third dose to complete a primary COVID-19 vaccines series.

Recommendations:

- At this time a third dose of the mRNA COVID-19 vaccine will be offered for the following populations eligible for vaccination with the vaccine product authorized for their age group, to complete the primary COVID-19 vaccine series:
 - Individuals receiving dialysis (hemodialysis or peritoneal dialysis)
 - Individuals receiving active treatment² (e.g., chemotherapy, targeted therapies, immunotherapy) for solid tumour or hematologic malignancies.

² Active treatment includes patients who have completed treatment within 3 months. Active treatment is defined as chemotherapy, targeted therapies, immunotherapy, and excludes individuals receiving therapy that does not suppress the immune system (e.g. solely hormonal therapy or radiation therapy). See Ontario Health/Cancer Care Ontario's [Frequently Asked Questions](#) for more information.

- Recipients of solid-organ transplant and taking immunosuppressive therapy
 - Recipients of chimeric antigen receptor (CAR)-T-cell therapy or hematopoietic stem cell transplant (within 2 years of transplantation or taking immunosuppression therapy).
 - Individuals with moderate to severe primary immunodeficiency (e.g., DiGeorge syndrome, Wiskott-Aldrich syndrome).
 - Individuals with stage 3 or advanced untreated HIV infection and those with acquired immunodeficiency syndrome.
 - Individuals receiving active treatment with the following categories of immunosuppressive therapies: anti-B cell therapies³ (monoclonal antibodies targeting CD19, CD20 and CD22), high-dose systemic corticosteroids (refer to the [CIG](#) for suggested definition of high dose steroids), alkylating agents, antimetabolites, or tumor-necrosis factor (TNF) inhibitors and other biologic agents that are significantly immunosuppressive (See Table 1).
- For individuals with one of the above immune compromising conditions who have not initiated a COVID-19 vaccine series, individuals in the authorized age group should be immunized with a primary series of three doses of an authorized mRNA vaccine ([NACI, 2021](#)).
 - The Ontario recommended interval between the last dose of the initial primary series and the third dose is at least two months (56 days). As per NACI, the minimum interval should be 28 days; however, an interval longer than the minimum 28 days between doses is likely to result in a better immune response. Exact timing should be decided with the treating provider in order to optimize the immune response from the vaccine series and minimize delays in management of their underlying condition. Additionally, the interval should consider risk factors for exposure (including local epidemiology and circulation of variants of concern) and risk of severe disease from COVID-19 infection. Some immunocompromised individuals may still be susceptible after the 1 or 2-dose primary series, so their period of susceptibility until receipt of the additional dose will also increase if the interval between doses is increased.

³ Active treatment for patients receiving B-cell depleting therapy includes patients who have completed treatment within 12 months

- For guidance on the timing of vaccination for transplant recipients and those requiring immunosuppressive therapies, for a more fulsome list of conditions leading to primary immunodeficiency, and for further information on immunosuppressive therapies, refer to [Immunization of Immunocompromised Persons in the Canadian Immunization Guide \(CIG\), Part 3 – Vaccination of Specific Populations](#).
- To protect those who are immunocompromised, it also is strongly recommended that all people that come into close contact (e.g. healthcare workers and other support staff, family, friends, caregivers) with these individuals complete a full two-dose vaccine series (i.e. “ring vaccination”). Immunocompromised individuals and those that come into close contact with them should also continue to follow recommended public health measures for prevention and control of SARS-CoV-2 infection and transmission.

Table 1: List of Immunosuppressant Medications for Third Doses

*This list may not be comprehensive; health care providers may identify patients on other medications that are significantly immunosuppressive. Prescriptions for the below immunosuppressant medications can be presented for third doses as needed. If an individual presents a prescription of a medication that is not listed in Table 1, they should be directed to their health care provider to receive a referral from/letter for a third dose of the COVID-19 vaccine.

Class	Generic Name(s)	Brand Name(s)
Steroids (>20 mg per day of prednisone or equivalent for at least 2 weeks) ⁴	• prednisone	
	• dexamethasone	• Decadron
	• methylprednisolone	• DepoMedrol • SoluMedrol • Medrol

⁴ As the dosing information may not be included on the patient's prescription, confirmation of the dosage from the individual presenting their prescription is sufficient.

Class	Generic Name(s)	Brand Name(s)
Antimetabolites	• cyclophosphamide	• Procytox
	• leflunomide	• Arava
	• methotrexate	• Trexall • Metoject • Otrexup • Rasuvo • Rheumatrex
	• azathioprine	• Imuran
	• 6- mercaptopurine (6-MP)	• Purinethol
	• mycophenolic acid	• Myfortic
	• mycophenolate mofetil	• Cellcept
Calcineurin inhibitors/mTOR kinase inhibitor	• tacrolimus	• Prograf • Advagraf • Envarsus PA
	• cyclosporine	• Neoral • Gengraf • Sandimmune
	• sirolimus	• Rapamune
JAK (Janus kinase) inhibitors	• baricitinib	• Olumiant
	• tofacitinib	• Xeljanz
	• upadacitinib	• Rinvoq
Anti-TNF (tumor necrosis factor)	• adalimumab	• Humira • Amgevita • Hadlima • Hulio • Hyrimoz • Idacio
	• golimumab	• Simponi
	• certolizumab pegol	• Cimzia
	• etanercept	• Enbrel • Brenzys • Erelzi

Class	Generic Name(s)	Brand Name(s)
Anti-TNF (tumor necrosis factor)	<ul style="list-style-type: none"> • infliximab 	<ul style="list-style-type: none"> • Remicade • Avsola • Inflectra • Remsima • Renflexis
Anti-Inflammatory	<ul style="list-style-type: none"> • Sulfasalazine 	<ul style="list-style-type: none"> • Salazopyrin • Azulfidine
	<ul style="list-style-type: none"> • 5-Aminosalicylic Acid (ASA)/mesalamine 	<ul style="list-style-type: none"> • Pentasa
Anti-CD20	<ul style="list-style-type: none"> • Rituximab 	<ul style="list-style-type: none"> • Rituxan • Ruxience • Riximyo • Truxima • Riabni
	<ul style="list-style-type: none"> • ocrelizumab 	<ul style="list-style-type: none"> • Ocrevus
	<ul style="list-style-type: none"> • ofatumumab 	<ul style="list-style-type: none"> • Kesimpta
IL-1 RA (interleukin-1 receptor antagonist)	<ul style="list-style-type: none"> • anakinra 	<ul style="list-style-type: none"> • Kineret
	<ul style="list-style-type: none"> • canakinumab 	<ul style="list-style-type: none"> • Ilaris
Anti-IL6	<ul style="list-style-type: none"> • tocilizumab 	<ul style="list-style-type: none"> • Actemra
	<ul style="list-style-type: none"> • sarilumab 	<ul style="list-style-type: none"> • Kevzara
Anti-IL12/IL23	<ul style="list-style-type: none"> • ustekinumab 	<ul style="list-style-type: none"> • Stelara
Anti-IL17	<ul style="list-style-type: none"> • secukinumab 	<ul style="list-style-type: none"> • Cosentyx
	<ul style="list-style-type: none"> • ixekizumab 	<ul style="list-style-type: none"> • Taltz
Anti-IL17R	<ul style="list-style-type: none"> • brodalumab 	<ul style="list-style-type: none"> • Siliq
Anti-BLyS	<ul style="list-style-type: none"> • belimumab 	<ul style="list-style-type: none"> • Benlysta
Anti-IL23	<ul style="list-style-type: none"> • guselkumab 	<ul style="list-style-type: none"> • Tremfya
	<ul style="list-style-type: none"> • risankizumab 	<ul style="list-style-type: none"> • Skyrizi
Selective T-cell costimulation blocker	<ul style="list-style-type: none"> • abatacept 	<ul style="list-style-type: none"> • Orencia
S1PR (sphingosine 1-phosphate receptor) agonist	<ul style="list-style-type: none"> • fingolimod 	<ul style="list-style-type: none"> • Gilenya
	<ul style="list-style-type: none"> • siponimod 	<ul style="list-style-type: none"> • Mayzent
	<ul style="list-style-type: none"> • ozanimod 	<ul style="list-style-type: none"> • Zeposia
Phosphodiesterase inhibitors	<ul style="list-style-type: none"> • Apremilast 	<ul style="list-style-type: none"> • Otezla
Anti-integrin	<ul style="list-style-type: none"> • vedolizumab 	<ul style="list-style-type: none"> • Entyvio

Booster Doses for Specific Populations

1. Vulnerable Older Adults in Congregate Settings

Rationale:

- The potential impact of the risk of transmission of the Delta variant of concern in vulnerable older adult populations who live in high risk settings (i.e. congregate living with other vulnerable, high-risk adults) has been assessed, particularly in the context of emerging literature on the reduced immune response and the more rapid waning of antibody responses in this population. These individuals are at increased risk for severe disease because of their age and underlying medical conditions and are at a higher risk of exposure due to their daily interactions with staff and residents in a congregate living environment ([NACI, 2021](#)).
- Older Ontarians residing in congregate living settings were prioritized for the COVID-19 vaccine when the vaccines were first authorized; therefore, many completed their COVID-19 vaccination series early in the vaccine roll-out, leaving more time for waning should it occur. As well, many received their vaccines using the manufacturers' recommended interval. Evidence to date suggests that, compared to longer intervals, shorter intervals between first and second doses result in lower immune responses and therefore may also result in more rapid waning of protection, including against variants of concern ([NACI, 2021](#)).
- Vaccines have been effective against COVID-19 in Long Term Care Homes in the 3-4 months after vaccination, but outbreaks are still occurring. In these outbreaks, fully vaccinated residents are being infected, and in some instances leading to severe illness and death. Offering a booster dose of COVID-19 vaccine to this population is intended to help increase protection and prevent outbreaks among this vulnerable population.
- There are currently no data available on the use of booster doses in LTCH residents or seniors living in other congregate settings. Studies on mRNA booster doses are underway, and early data in older adults shows a safety profile comparable to the second dose of the primary series, evidence of boosted immune responses and of increased short-term vaccine

effectiveness, See NACI's rapid response on [booster dose in long-term care residents and seniors in other congregate settings](#) for more information.

Recommendation:

At this time a booster dose of an mRNA COVID-19 vaccine will be offered for the following groups:

- Residents of Long-Term Care Homes (LTCH), Retirement Homes (RH), Elder Care Lodges, and older adults living in other congregate settings⁵ (e.g. assisted-living facilities, chronic care hospitals, naturally occurring congregate retirement settings/congregate senior's apartment buildings, older adults living in congregate settings for people with developmental disabilities, mental health and addictions issues, etc.).

The recommended interval for residents of LTCH, RH and Elder Care Lodges and older adults living in other congregate settings is ≥ 6 months (168 days) after the second dose. This is consistent with [NACI's recommendation](#). Practically, some residents may receive shorter intervals due to operational considerations when boosting entire facilities.

To protect the vulnerable older adults in congregate settings, it is strongly recommended that all people that come into close contact (e.g. healthcare workers and other support staff, family, friends, caregivers) with them complete a full two-dose vaccine series (i.e. "ring vaccination") and also continue to follow recommended public health measures for prevention and control of SARS-CoV-2 infection and transmission.

2. Older Adults in the Community

Rationale:

- Older adults are more likely to experience severe illness, hospitalization, and death from COVID-19 infection, due to their age and underlying medical conditions. Among the fully vaccinated, older age groups (80 years of age and over with the highest, followed by those aged 70 to 79) have the highest hospitalization and mortality rates from COVID-19 compared to younger age groups who are fully vaccinated ([NACI, 2021](#)).

⁵ Public Health Units can use their discretion, in collaboration with partner Ministries as needed, to determine eligible congregate settings.

- There is evidence that demonstrates waning immunity over time after a primary COVID-19 vaccine series in the older adult population. See NACI's [interim guidance on booster COVID-19 vaccine doses in Canada](#) for more details.
- Older adults were prioritized for the COVID-19 vaccine when the vaccines were first authorized; therefore, many completed their COVID-19 vaccination series early in the vaccine roll-out, leaving more time for waning should it occur. As well, many received their vaccines using the manufacturers' recommended interval. Evidence to date suggests that, compared to longer intervals, shorter intervals between first and second doses result in lower immune responses and therefore may also result in more rapid waning of protection, including against variants of concern ([NACI, 2021](#)).

Recommendation:

At this time a booster dose of an mRNA COVID-19 vaccine will be offered for the following groups:

- All Ontarians aged 70 and older

The recommended interval for individuals aged 70+ is ≥ 6 months (168 days) after the second dose.

3. Health Care Workers**Rationale:**

- Health care workers are at an increased risk of COVID-19 infection due to their ongoing interactions and potential exposures to patients that are or may be infected with COVID-19 and can pose increased risk of transmission to vulnerable populations if infected.
- Health care workers are essential for maintaining health system capacity to minimize serious illness and overall deaths in Ontario while minimizing societal disruption as a result of the COVID-19 pandemic.
- Health care workers were prioritized early in Ontario's COVID-19 immunization program, leaving more time for waning should it occur, and many received their second doses at the product monograph interval. Evidence to date suggests that shorter intervals between doses results in lower antibody titres which may wane to below protective levels over time. While individuals who received their second dose in the primary COVID-19 vaccine series at a

shorter interval from the first dose were well protected in the short-term, they may have produced lower antibody levels, which may decrease over time compared with those who had a longer interval between doses ([NACI, 2021](#)).

- Optimizing the protection of healthcare workers can help to balance any disproportionate burden of those taking on additional risks to protect the public, thereby upholding the ethical principle of reciprocity ([NACI, 2021](#)).

Recommendation:

At this time a booster dose of an mRNA COVID-19 vaccine will be offered for the following groups:

- Health Care Workers who received their second dose of the COVID-19 vaccine at least 6 months (168 days) ago.
 - Health Care Workers include:
 - Any [regulated health professionals](#) and any staff member, contract worker, student/trainee, registered volunteer, or other designated essential caregiver currently working in-person in a health care organization, including workers that are not providing direct patient care and are frequently in the patient environment (i.e. cleaning staff, research staff, other administrative staff).
 - Workers providing healthcare service or direct patient service in a congregate, residential or community setting outside of a health care organization.
 - See Appendix B for specific examples of health care workers.

The recommended interval for health care workers is ≥ 6 months (168 days) after the second dose.

A reduced post-vaccination observation period of at least 5 minutes up to 15 minutes may be considered for the administration of booster doses of COVID-19 vaccine to healthcare workers who are being vaccinated in healthcare settings, if past experience with the two previous COVID-19 vaccine doses was uneventful and other relevant [conditions](#) are met, as outlined in the NACI 2020-2021 influenza vaccine advice (as appropriate to the healthcare setting).

4. First Nations, Inuit and Métis Adults

Rationale:

- First Nations, Inuit and Métis populations have been disproportionately affected by COVID-19 in Canada and have experienced higher rates of COVID-19 infection due to a number of intersecting inequities and factors related to the social determinants of health. Immunization of individuals in this population has the potential to reduce or prevent the exacerbation of intersecting health and social inequities ([NACI, 2021](#)).
- Remote or isolated communities may not have ready access to sufficient health care infrastructure, therefore, their risk for severe outcomes, including death, and societal disruption is proportionally greater than in other communities ([NACI, 2021](#)).
- First Nations, Inuit and Métis populations were eligible to receive their first and second doses early in the vaccination roll out, leaving more time for waning should it occur. This population was also eligible for the shortened product monograph interval and evidence to date suggests that, compared to longer intervals, shorter intervals between first and second doses result in lower immune responses and therefore may also result in more rapid waning of protection, including against concern.
- As per [NACI](#), whether or not booster dose vaccine programs are needed in distinct Indigenous communities should be determined by Indigenous leaders and communities, and with the support of public health partners in accordance with the United Nations Declaration on the Rights of Indigenous Peoples.

Recommendation:

At this time a booster dose of an mRNA COVID-19 vaccine will be offered for the following groups:

- First Nations, Inuit and Métis adults, including non-Indigenous household members

The recommended interval for First Nations, Inuit and Metis adults and their non-Indigenous household members is ≥ 6 months (168 days) after the second dose.

5. Recipients of a Viral Vector Vaccine or Series (primary series completed with only viral vector vaccines)

Rationale:

- Vaccine effectiveness against severe COVID-19 outcomes with all vaccine types (including viral vector) remains high, but it is currently unclear to what extent the duration of protection may vary by vaccine product.
- In general, vaccine effectiveness against symptomatic SARS-CoV-2 infection and severe COVID-19 outcomes has consistently been somewhat lower with viral vector vaccines compared to mRNA vaccines. Emerging data on effectiveness suggests that vaccine protection against infection and symptomatic disease decreases more quickly with viral vector vaccines in comparison to mRNA vaccines, whereas the difference is less pronounced for severe disease. These individuals may become susceptible to infection sooner than people who received a primary series that included at least one dose of an mRNA vaccine ([NACI, 2021](#)).
- While there is limited evidence on duration of protection following a mixed viral vector and mRNA COVID-19 vaccination schedule, to date data from two studies indicate that vaccine effectiveness for those who received a mixed schedule of AstraZeneca/COVISHIELD followed by an mRNA vaccine is similar compared to those who received a complete series of mRNA vaccines ([NACI, 2021](#)). At this time individuals who received a mixed series of viral vector and mRNA vaccines are not eligible for a booster dose.

Recommendation:

At this time a booster dose of an mRNA COVID-19 vaccine will be offered for the following individuals:

- Individuals who received two doses of AstraZeneca/COVISHIELD COVID-19 vaccine
- Individuals who received one dose of Janssen/Johnson & Johnson COVID-19 vaccine

The recommended interval for these individuals is ≥ 6 months (168 days) after the completion of the primary series.

Appendix A: List of Immunosuppressive Medications in Alphabetical Order

#	Cosentyx	Idacio	ofatumumab	Sarilumab
5-	cyclophospha	llaris	Olumiant	Secukinumab
Aminosalicylic	mide	Imuran	Orencia	Siliq
Acid	cyclosporine	Inflectra	Otezla	Simponi
(ASA)/mesala	D	infliximab	Otrexup	Siponimod
mine	Decadron	ixekizumab	ozanimod	sirolimus
6-	(>3mg/day)	K		Skyrizi
mercaptapurin	DepoMedrol	Kesimpta		Solumedrol(>1
e (6-MP)	(>16mg/d)	Kevzara	P	6mg/d)
	dexamethason	Kineret	Pentasa	Stelara
	e (>3mg/d)		prednisone	sulfasalazine
A		L	(>20mg/d)	
Abatacept	E	Leflunomide	Procytox	T
Actemra	Enbrel		Prograf	tacrolimus
adalimumab	Entyvio	M	Purinethol	Taltz
Advagraf	Envarsus	Mayzent		tocilizumab
Amgevita	Erelzi	Medrol	R	tofacitinib
anakinra	etanercept	(>16mg/d)	Rapamune	Tremfya
apremilast		methotrexate	Rasuvo	Trexall
Arava	F	methylprednis	Remicade	Truxima
Avsola	fingolimod	olone(>16mg/	Remsima	
azathioprine		d)	Renflexis	U
Azulfidine	G	Metoject	Rheumatrex	upadacitinib
	Gengraf	mycophenolat	Riabni	ustekinumab
B	Gilenya	e mofetil	Rinvoq	
baricitinib	golimumab	mycophenolic	risankizumab	V
belimumab	guselkumab	acid	Rituxan	vedolizumab
Benlysta		Myfortic	Rituximab	
Brenzys	H		Riximyo	X
Brodalumab	Hadlima	N	Ruxience	Xeljanz
	Hulio	Neoral		
C	Humira		S	Z
canakinumab	Hyrimoz	O	Salazopyrin	Zeposia
Cellcept		Ocrelizumab	Sandimmune	
certolizumab	I	Ocrevus		
Cimzia				

Appendix B: List of Health Care Workers Eligible for Booster Doses

[Regulated health professionals](#) and any staff member, contract worker, student/trainee, registered volunteer, or other designated essential caregivers currently working in-person in a health care organization, including workers that are not providing direct patient care and are frequently in the patient environment (i.e. cleaning staff, research staff, other administrative staff) are included in the below:

- **All hospital and acute care staff including:**
 - Critical Care Units, Emergency Departments and Urgent Care Departments, COVID-19 Medical Units, Code Blue Teams, rapid response teams
 - General internal medicine and other specialists, Surgical care, Obstetrics
- **All patient-facing health care workers/staff involved in the COVID-19 response:**
 - COVID-19 Specimen Collection Centers, COVID-19 Isolation Centers
 - Mobile Testing Teams, COVID-19 Laboratory Services, Teams supporting outbreak response (e.g., IPAC teams supporting outbreak management, inspectors in the patient environment)
 - COVID-19 vaccine clinics and mobile immunization teams
 - Current members of Ontario's Emergency Medical Assistance Team (EMAT)
- **Medical First Responders** (ORNGE, paramedics, firefighters providing medical first response, police and special constables providing medical first response as part of their regular duties).
- **Health care workers and designated essential caregivers in congregate settings** (assisted living, correctional settings, shelters, LTCHs/RHs, supportive housing, hospices and palliative care settings, etc.)
- **Home and community health care workers, providing in-person care, including:**
 - Needle exchange/syringe programs & supervised consumption and treatment services

- Indigenous health care service providers including but not limited to: Aboriginal Health Access Centers, Indigenous Community Health Centers, Indigenous Interprofessional Primary Care Teams, and Indigenous Nurse Practitioner-Led Clinics
- Community health centres, chronic homecare, birth centres, dentistry and dental hygiene, Pharmacies, Primary care, Walk-in clinics, gynecology/obstetrics, Midwifery, Nurse practitioner-led clinics/Contract nursing agencies, Otolaryngology (ENT), medical and surgical specialities, medical transport, laboratory services, independent health facilities, health care providers in developmental services, mental health and addictions services.
- Health care workers in schools/daycare/campus, sexual health clinics, community diagnostic imaging, dietary/nutrition, audiology, naturopathy, holistic care, chiropractic, chronic pain clinics, kinesiology/physiotherapy, occupational therapy, psychiatry, acupuncture, registered massage therapy, psychotherapy, social work, public health