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the VOICE for  
registered nurses,  
nurse practitioners  
and nursing students  
in Ontario

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# Health System Transformation & COVID-19 COVID-19 Vaccine Distribution: Progress to Date

Jan 11, 2021  
2-4 p.m.

# Agenda

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<b>Welcome &amp; setting the stage</b>	<b>Dr. Doris Grinspun, RNAO CEO</b>
<b>Critical updates and the approach and progress of COVID-19 vaccination</b>	<b>Dr. Dirk Huyer, Chief Coroner for Ontario Member of the COVID 19 Vaccine Distribution Task Force and colleagues from the Ministry of Health</b>
<b>Questions and answers</b>	<b>All</b>
<b>Final comments and calls to action</b>	<b>Dr. Doris Grinspun, RNAO CEO</b>

# How to participate today

- Use the chat box to comment and ask questions
- Please note: this session will be recorded

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# **WELCOME & SETTING THE STAGE**

# RNAO has been speaking out

- Don't wait until Boxing Day for a lockdown
- Aggressive action on the Second wave
- Implement [#4Hours4Seniors](#) now!
- [National standards](#) for LTC
- Uphold public health measures
- Ban evictions
- [A just recovery for all](#)



Visit RNAO's  
[COVID-19](#)  
[Press room](#)

# We urge Premier Ford for immediate action

- An immediate and complete lockdown with curfew, similar to Quebec
- ✓ No reopening of schools on January 11, as scheduled
- Increased support for vulnerable populations
- Full speed ahead, 24x7, with vaccination in long-term care homes

# Dirk Huyer MD



Dirk Huyer, MD  
Chief Coroner for Ontario  
Member of the COVID 19  
Vaccine Distribution Task Force

# Ontario's COVID-19 Vaccine Distribution: Progress To Date

January 11, 2020



# Purpose

To provide an overview of:

1. COVID-19 Vaccine Landscape
2. Ontario's COVID-19 Vaccine Distribution Implementation Plan
3. Progress and Planning to Date

# 1. COVID-19 Vaccine Landscape

# mRNA Vaccines

## WHAT ARE RNA VACCINES AND HOW DO THEY WORK?

### WHAT ARE RNA VACCINES?

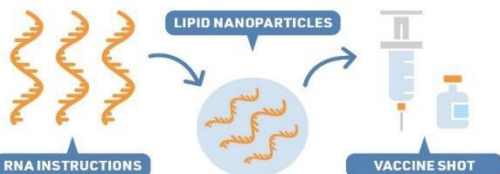
#### SARS-CoV-2

**Viral RNA**  
The virus's genetic material. Contains instructions for making proteins.

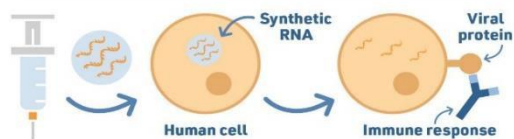


**Spike protein**  
Protein which helps the virus penetrate cells and initiates an infection.

The genetic code of the SARS-CoV-2 virus is made up of RNA. Scientists isolated the part of this genetic code that contains the instructions for making the virus's spike protein.



Synthetic RNA which codes for the virus spike protein is packed in lipid nanoparticles (very small fat droplets). This stops our bodies' enzymes breaking it down and helps our cells take it in.



Once the synthetic RNA is inside one of our cells, the cell follows the RNA instructions to produce the virus spike protein. Its production then triggers an immune response in our bodies.



### RNA VACCINES: BENEFITS AND CHALLENGES

#### VACCINE PRODUCTION

RNA is easy to make in a lab, so RNA vaccines can be developed quicker than other vaccines.

#### SAFETY OF THE VACCINES

RNA can't cause infection and is broken down by normal processes in our cells. An RNA vaccine hasn't been licensed for use in humans before but they've been under development for several years for other viruses, including influenza, HIV, and Zika.

#### STORAGE AND TRANSPORT

Some RNA vaccines must be stored at low temperatures to remain stable, which makes storage and transport more challenging.

### RNA VACCINES FOR COVID-19

Several proposed vaccines for COVID-19 are RNA vaccines. They can be based on two different types of RNA.

#### mRNA vaccines

Moderna  
Pfizer & BioNTech  
CureVac

#### saRNA vaccine

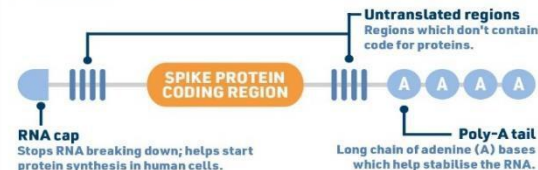
Imperial College  
Arcturus

### mRNA AND saRNA: WHAT'S THE DIFFERENCE?

The structures of mRNA and saRNA are similar but have a key difference, as the diagrams below show.

#### mRNA

mRNA stands for messenger ribonucleic acid



#### saRNA

saRNA stands for self-amplifying ribonucleic acid



As saRNA produces more copies of itself once it's in a cell, it can be given in smaller doses than mRNA vaccines. This makes the cost per dose lower and means higher numbers of doses can be produced from the same volume of vaccine.

# mRNA Vaccines (cont'd)

## Key Facts

### **You cannot get COVID-19 from an mRNA vaccine**

- mRNA COVID-19 vaccines do not contain whole or live SARS-CoV-2 virus, therefore there is no risk of infection

### **mRNA vaccines do not affect or interact with our DNA**

- mRNA never enters the nucleus of the cell, which is where our DNA (genetic material) is kept

### **mRNA vaccines are a new vaccine platform, but not a new technology**

- mRNA therapeutics have been studied for over two decades

***FAQ: Do recipients of the vaccine still need to follow public health guidance (masking and distancing) after receiving the vaccine?***

Yes. There is insufficient evidence at this time on the effectiveness of COVID-19 vaccines in preventing asymptomatic infection and reducing transmission of SARS-CoV-2.

# mRNA Vaccines (cont'd)

## Vaccine Safety

- As for all vaccines, Ontario will investigate adverse events following immunization (AEFIs) and submit these to the Public Health Agency of Canada to ensuring ongoing monitoring of vaccine safety
- All vaccine manufacturers are legally required to submit reports of adverse events and other safety information to Health Canada
- Both manufacturers plan to follow clinical trial participants for at least 2 years after the second dose of the vaccine is given

# mRNA Vaccines (cont'd)

## Common Side Effects

- In general, the side effects observed during the clinical trials are similar to what you might have with other vaccines
- The side effects that followed vaccine administration in clinical trials were mild or moderate. They included things like pain at the site of injection, body chills, feeling tired and feeling feverish
- These are common side effects of vaccines and do not pose a risk to health
- No serious adverse events were detected in either of the two mRNA clinical trials

***FAQ: If the patient gets mild side effects, should they receive the second shot?***

Yes. Mild side effects are common for all vaccines and typically resolve in a few days. It is important to receive both doses. Protection offered by the first dose is lower than the efficacy achieved after the second dose.

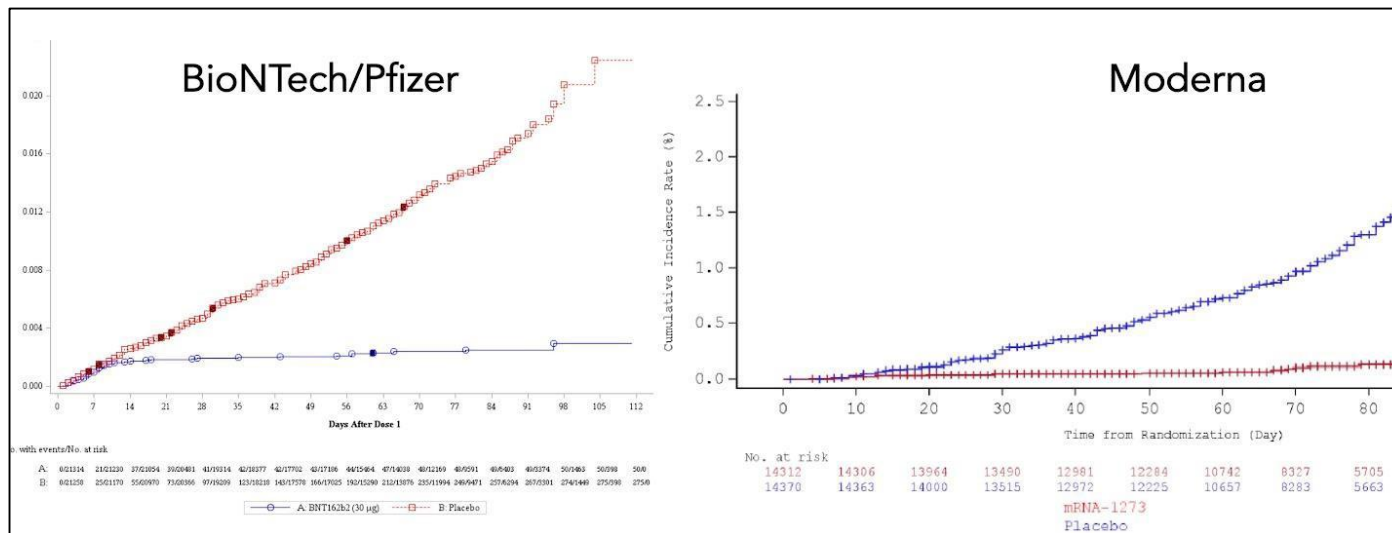
# Approved COVID-19 Vaccines

## BioNTech/Pfizer

- Age indication: 16+
- Schedule: 0, 21 days
- Clinical trial:
  - 44,000 participants
  - 95% efficacy assessed 1 weeks after the 2<sup>nd</sup> dose

## Moderna

- Age indication: 18+
- Schedule: 0, 1 month
- Clinical trial:
  - 30,000 participants
  - 94% efficacy assessed 2 weeks after the 2<sup>nd</sup> dose



# Approved COVID-19 Vaccines (cont'd)

## BioNTech/Pfizer

- More doses available in December (95,000 delivered by December 21); expecting regular shipping starting Jan2021.
- Initially centralized approach: people went to the clinic to get vaccine; vaccine did not come to them; now protocol for movement).
- Best suited for large population centres; will play an important role for vaccinations in urban centres.
- Assumption – 50km is acceptable commuting distance. Some will be farther than 50km even though a distribution site is in their region.
- Due to the allocation of ultra cold freezers, there are currently a fixed number of sites that can administer this product. We are developing protocols to safely move the Pfizer-BioNTech vaccine beyond the point of delivery, and will be rolling out those protocols so that the vaccine can be brought to places like long-term care homes.

## Moderna

- Fewer doses in December (almost 53,000 delivered on December 30); vaccine shipments will arrive in intervals.
- Decentralized model: the vaccine comes to recipients in congregate settings, communities.
- Suitable for all areas but should prioritize higher risk groups who have no other practical means to access a vaccine, as well as northern and remote regions.
- A more stable vaccine, with fewer temperature storage restrictions.
- Based on fridge and distribution model for the province (i.e., for clinics in LTCHs and other high-risk settings).

***FAQ: If the recipient received the Pfizer vaccine for their first dose, can they receive the Moderna vaccine for their second dose?***

No. Currently, no data exist on the interchangeability of COVID-19 vaccines. Both doses should be given with the same vaccine (i.e., dose #1 Pfizer, dose #2 Pfizer or dose #1 Moderna, dose #2 Moderna).



# Approved COVID-19 Vaccines (cont'd)

## *FAQ: Who should not receive the vaccine?*

- The Pfizer-BioNTech and Moderna COVID-19 vaccines are contraindicated in:
  - Individuals who have ever had a severe allergic reaction (i.e. anaphylaxis) to a previous dose of an mRNA vaccine or to any of its components (including polyethylene glycol (PEG) and/or polysorbate, see below) or its container, should not get either mRNA COVID-19 vaccine.
  - Vaccination should be deferred in symptomatic individuals with confirmed or suspected SARS-CoV-2 infection, or those with symptoms of COVID-19.
    - To minimize the risk of COVID-19 transmission, symptomatic individuals who arrive at an immunization clinic/venue, should be instructed to follow current local public health measures, and be encouraged to get tested.
  - Individuals who have received another vaccine (not a COVID-19 vaccine) in the past 14 days.
  - Vaccine should not be offered to individuals who are not in the authorized age group.
- Vaccination Recommendations for Special Populations
  - Breastfeeding or pregnant individuals
  - Individuals with allergies
  - Individuals with autoimmune conditions
  - Individuals who are immunocompromised due to disease or treatment

## **2. Ontario's COVID-19 Vaccine Distribution Implementation Plan**

# Context: Ethical Framework for COVID-19 Vaccine

This Framework will be used to guide decisions about vaccine prioritization, recognizing that the application of these principles will be context-dependent and that other information may be relevant to decision-making.

## Minimize harms and maximize benefits

- Reduce overall illness and deaths related to COVID-19
- Protect those at greatest risk of serious illness and death due to biological, social, geographical, and occupational factors
- Protect critical infrastructure
- Promote social and economic well-being

## Equity

- Respect the equal moral status of human rights of all individuals
- Distribute vaccines without stigma bias or discrimination (1)
- Do not create and actively work to reduce disparities in illness and death related to COVID-19, including disparities in the social determinants of health linked to risk of illness and deaths related to COVID-19 (2)
- Ensure benefits for groups experiencing greater burdens from the COVID-19 pandemic

## Fairness

- Ensure that every individual within an equally prioritized group (and for who vaccines have been found safe and efficacious) has an equal opportunity to be vaccinated.
- Ensure jurisdictional ambiguity does not interfere with vaccine distribution (e.g. Jordan's Principle -3)
- Ensure inclusive, consistent and culturally safe and appropriate processes of decision-making, implementation, and communications

## Transparency

- Ensure the underlying principles and rationale, decision-making processes, and plans for COVID-19 vaccine prioritization and distribution are clear, understandable and communicated publicly

## Legitimacy

- Make decisions based on the best available scientific evidence, shared values and input from affected parties, including those historically under-represented
- Account for feasibility and viability to better ensure decisions have intended impact
- To the extent possible given the urgency of vaccine distribution, facilitate the participation of affected parties in the creation and review of decisions and decision-making processes

## PUBLIC TRUST

Ensure decisions and decision-making processes are informed by the above principles to advance relationships of social cohesion and enhance confidence and trust in Ontario's COVID-19 immunization program

1. See Ontario's [Human Rights Code](#) and specifically Part 1 for Code-protected groups. 2. Consider applying the Ministry of Health's [Health Equity Impact Assessment](#) decision support tool to identify potential health equity impacts. 3. See [Jordan's Principle](#)

# Three-phased Vaccine Implementation Plan

- **Phase One of Ontario's three-phased vaccine distribution implementation plan began on December 15, 2020** at two hospital sites, and increased to 17 additional sites the following week, with the delivery of 90,000 Pfizer-BioNTech doses.
- On December 23, 2020, Health Canada approved Moderna's COVID-19 vaccine – the province received over about 53,000 doses at the end of 2020.
- **The province announced key populations to receive the vaccine first**, including:
  - Residents, staff, essential caregivers, and other employees of congregate living settings (e.g., long-term care homes and retirement homes) that provide care for seniors as they are at higher risk of infection and serious illness from COVID-19;
  - **Health care workers, including hospital employees, other staff who work or study in hospitals, and other health care personnel;**
  - Adults in Indigenous communities, including fly in and communities where risk of transmission is high; and
  - Adult recipients of chronic home health care.
- The province will shift to Phase Two of its vaccination implementation plan, which is expected to begin later in the winter of 2021, when more vaccines become available to Ontario. **During Phase Two vaccinations will continue for health care workers**, long-term care homes, retirement homes, home care patients with chronic conditions, and additional First Nation communities and Indigenous populations, including Métis and Inuit individuals.
- **Ontario will enter Phase Three when vaccines are more widely available** for everyone who wishes to be immunized.

**Plans are underway to develop a prioritization approach for Phase Two and Three.**

# Health Care Worker Prioritization: Context

The approach for prioritization of health care workers **for vaccination in phase 1** has been developed with ministry partners and informed by risk-based data. This includes:

- Working with a bioethicist to develop an **ethical framework to guide the approach** and decision making.
- Using **Public Health Ontario data on risk exposure** of health care sectors / occupations to categorize priority groups.
- Meetings with the **Vaccine Prioritization Sub-Group** (a Sub-Group of the COVID-19 Vaccine Distribution Task Force) to seek input on the approach.
- Consulting with the **operational partners**: Ontario Health, Public Health Units and Ontario Hospital Association to discuss implementation considerations.
- Input provided by **organizations that represent health care workers** across the spectrum of health care sectors and settings.

Health care workers are defined as:

- All paid/unpaid workers and contractors in health care settings (e.g., medical students and cleaning staff in hospitals); and
- All health care and other care workers in non-health care settings (e.g., social workers in correctional facilities).

# Health Care Worker Prioritization: Overview

The following steps will be taken to prioritize health care workers for vaccination in Phase 1:



**1. Prioritize health care sectors (all paid/unpaid workers and contractors) and health care workers that provide care in other settings (e.g., congregate settings; schools)** - All health care workers are priority for phase 1; however, some sectors and settings will receive primary priority (criteria included on the next slide).

- The sector prioritization is a guide for PHUs; PHUs would ultimately determine prioritization within and across the sectors based on local data and needs.



**2. Prioritize communities for access** - Public Health Units (PHUs) are responsible for identifying communities where workers who are practicing in priority health care sectors will receive greater priority access to vaccinations. PHUs will prioritize communities experiencing greater disadvantage due to COVID-19 and/or other structural and socioeconomic factors as well as local staffing criticality.



**3. Prioritize individual workers** - PHUs together with local delivery sites/ institutions/ sectors/ employers, identify priority workers *within* priority health care sectors and settings, if needed. This would include all paid, unpaid and contract workers in health care settings (e.g., cleaners in a hospital); and workers that provide care in other sectors (e.g., school nurse; health workers in shelters). PHUs would engage non-health care settings to identify workers that should be prioritized.

# 1. Prioritize Health Care Sectors and Settings



- All health care sectors and settings, as well as congregate living settings will be prioritized based upon the COVID-19 Vaccine Prioritization Sub-Group guidance document.
  - This includes all paid/unpaid workers and contractors in health care sectors, and health care and other care workers that provide care in other settings.
- The following criteria will be used for prioritization:
  - Worker risk of exposure to COVID-19 (based on Public Health Ontario data, including the Public Health Ontario's Occupational Exposure to COVID-19 Risk Tool).
  - Risk of severe disease and outcomes from COVID-19 to population served.
  - Criticality of the sector.
- PHUs will further prioritize communities and individual staff in these sectors in steps 2 and 3.

## 2. Prioritize Communities for Access



- PHUs are responsible for identifying **communities** within their region where workers (i.e., from priority sectors identified in Step 1) will be prioritized for COVID-19 vaccinations.
- There should be a transparent and inclusive decision-making process at the PHU-level, including a diverse group set-up for prioritization decision-making, involving the communities impacted.
- Vaccines would be directed to workers serving priority communities/locations identified by PHUs using local data – to allow for flexibility to tailor vaccine roll-out to local circumstances.
- To identify priority communities for worker vaccination (in alignment with the *Ministry's High Priority Communities Strategy*), PHUs will consider:
  - Communities with a high-prevalence of COVID-19;
  - Communities at risk due to structural factors (e.g., racism) and other socio-economic factors (e.g., low-income communities);
  - Local staffing criticality.
- PHUs will build on existing relationships in High Priority Communities where testing clinics and Community Ambassadors are established to support local vaccination of priority populations.

### Potential Data Sources to support PHU decision making

- The Ministry provides weekly reports identifying High Priority Communities
- PHO has offered to create individual reports for PHUs, identifying the number of workers in each sector as well as equity considerations for each sector
- Internal PHU data (e.g., Case and Contact Management/ Outbreak information)
- ICES information on high-risk neighborhoods (e.g., using material deprivation)





### 3. Prioritize Individual Workers

#### Prioritization *within* Priority Sectors is Based on Occupational and Individual Risk

- PHUs, with local partners to further prioritize *within* each priority sector (e.g., at the organization-level).
- Priority should be given to:
  - Those who provide direct and more frequent or sustained care, or whose presence in those environments is more direct, frequent, or sustained (versus health care workers who can work from home/remotely); and
  - Those who are  $\geq 60$  or who consider themselves to be at higher risk due to biological, social, or geographical factors.
- If all else is equal and there continues to be more demand than supply, vaccines should be allocated via random allocation (e.g., via a random number generator) to ensure fair allocation to individuals within equally prioritized groups
- All paid/unpaid workers and contractors (including administration, students, volunteers) should be included in the prioritization.
- There should be consideration for adverse effects from the vaccine and therefore vaccinations should be staggered to avoid operational impacts on a whole worker group.
- Larger organizations (e.g., hospitals) may choose to apply a **prioritization risk matrix** to further prioritize based on individual risk.

# Health Care Worker Prioritization: Decision Tree



# Health Care Worker Prioritization: Risk Matrix

- Provides a risk matrix and priority-setting guidance to help inform prioritization of health care workers.
- Offers flexibility to adapt prioritization to local circumstances based on best available data.
- Vaccination sites could use this guidance as they undertake local prioritization of the vaccine among health care workers.

## Risk Matrix

Patient population/exposure risk		Risk of exposure to SARS-CoV-2 within a health care setting based on health care worker role/responsibility		
		Low Risk	Moderate Risk	High Risk
Risk of severe disease or outcomes from COVID-19 among patient population served <sup>1</sup>	Low Risk	1	2	3
	Moderate Risk	2	3	4
	High Risk	3	4	5

\*Consider those who provide direct and more frequent or sustained care, or whose presence in such environments is more direct, frequent, or sustained, in addition to those with more limited access to PPE.

Criticality		Existing health system capacity and redundancy		
		High	Moderate	Low
Essentiality to critical health system capacity	Low	0	.25	.50
	Moderate	.25	.50	1
	High	.50	1	2

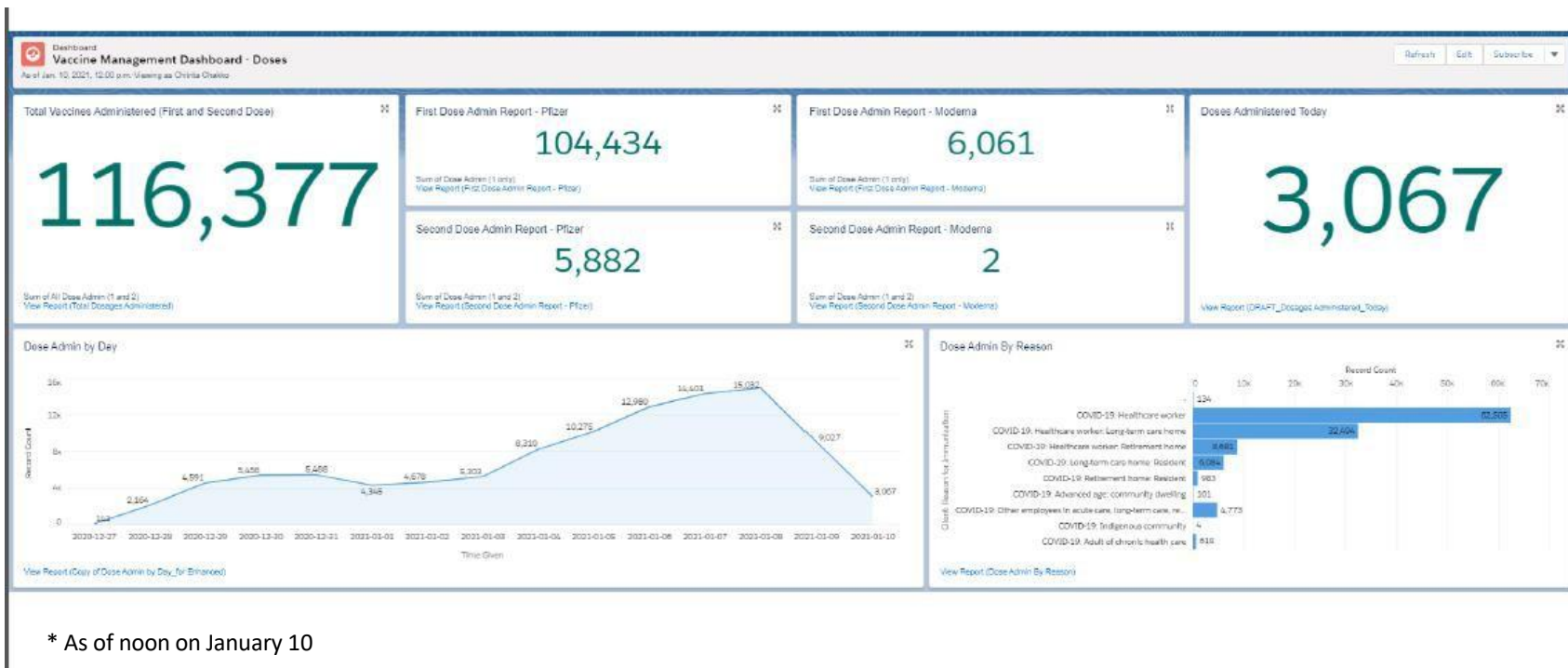
\*Consider those who cannot work remotely or virtually and who work in areas with limited or reduced capacity as well as little or no redundancy.

## Priority Score

Key Prioritization Consideration	Score
Transmission/exposure risk	/5
Criticality	/2
<b>Total</b>	<b>/7</b>

## **3. Progress and Planning to Date**

# Vaccine Administration – Progress to Date



# Appendices

# Vaccine Planning – BioNTech/Pfizer

## Pfizer doses administered as of January 5, 2021

- Approximately 95,000 doses received
- Over 50,000 doses administered

## Pfizer deliveries confirmed for January

- **Week of Jan 4:** approximately 50K doses
- **Week of Jan 11:** approximately 80K doses
- **Week of Jan 18:** approximately 80K doses
- **Week of Jan 25:** approximately 80K doses

## Expand to additional sites

- Expansion of delivery sites to additional 7 hospitals and 2 public health units by end of January, determined by data-driven analysis
  - Jan 4 – 19 hospitals and 1 PHU
  - Jan 11 & 18 – 22 hospitals and 1 PHU
  - Jan 25 – 26 hospital sites and 2 PHUs
- Recipients: Long-term care home and high-risk retirement home staff, and essential caregivers as priority, as well as hospital workers
- We are developing protocols to safely move the Pfizer-BioNTech vaccine beyond the point of delivery, and will be rolling out those protocols so that the vaccine can be brought to places like long-term care homes. Ottawa started piloting this last week.

# Vaccine Planning - Moderna

- Approximately 53,000 doses arrived the week of December 28, 2020.
- Next delivery January 11, 2021 – approximately 56,000 doses.
- Deliveries expected every three weeks.
- Delivery to Toronto, Peel, York, and Windsor-Essex with a focus on delivering LTC home residents in January.
- These four regions will be focusing on vaccinating LTC residents, staff and essential caregivers within their regions by January 21, 2021.
- Expansion to additional 3 PHUs the week of January 11, 2021.



# QUESTIONS & ANSWERS

# Next Webinar

**Health System Transformation and COVID-19**  
**Monday Feb. 8, 2021 from 2:00 - 4:00 p.m. ET**

