Saskatchewan Health Authority

Saskatchewan Vulnerable Populations COVID- 19 Vaccination Subgroup Report

January 14, 2021

Introduction

With the arrival of the COVID-19 vaccine, Saskatchewan has convened a COVID-19 Vaccine Clinical Expert Committee to review the evidence as well as federal and provincial guidance around vaccine sequencing. The National Advisory Committee on Immunizations (NACI) defines the goal of the pandemic response is to "minimize serious illness and overall deaths while minimizing societal disruption as a result of the COVID-19 pandemic".[1] With this in mind, the committee was tasked to develop criteria for sub-prioritization of vulnerable populations.

Key principles that guide our Saskatchewan immunization strategy are outlined in the NACI recommendations. These include the need to:

1) protect those most vulnerable
2) protect healthcare capacity
3) minimize spread
4) protect critical infrastructure [1]

NACI guidelines

Priority for early COVID-19 vaccination will be given to the following populations:

- residents and staff of shared living settings who provide care for seniors
- adults 70 years of age and older, with order of priority:
    1. beginning with adults 80 years of age and older
    2. decreasing the age limit by 5-year increments to age 70 years as supply becomes available
- adults in Indigenous communities

Definition of Vulnerable Populations: Those at high risk for severe illness and death, those most likely to transmit to those at high-risk, and those in living or working conditions with elevated risk for infection or disproportionate consequences.

Guiding Principles

- Protect those most vulnerable to severe illness first.
    - populations at highest risk of exposure, infection, hospitalization, and death from COVID-19

[1] NACI reference

- Reduce the extra burden COVID-19 is having on people already facing disparities including those related to the social determinants of health along with geographic and social isolation (see appendix for definitions).
- Our actions and decisions will reflect our commitment to Reconciliation, "an ongoing process of establishing and maintaining respectful relationships"[2], in support of closing the gap in health outcomes between Indigenous and non-Indigenous peoples. We commit to continuing to find constructive ways of implementing the Truth and Reconciliation Commission's Calls to Action relevant to health and healthcare.
- Key populations for early COVID-19 immunization are not mutually exclusive.
- Scientific review should provide the evidence and data on risk of COVID-19 severe morbidity and mortality for different population groups, which underpins sequencing decisions.
- Sequencing of key populations and sub-prioritization within key populations will be based on a population-based risk-benefit analysis: taking into consideration risk of exposure, risk of transmission to others, risk of severe illness and death, and the safety and effectiveness of vaccine(s) in key populations, vaccine supply: number of available vaccine types, number and timing of available doses, and number of doses required.

[2] Truth and Reconciliation Commission of Canada (2015). Honouring the Truth, Reconciling for the Future: Summary of the Final Report of the Truth and Reconciliation Commission of Canada. p.16

Saskatchewan Health Authority

Vaccine Sequencing Recommendations

Background for recommendations

Population	**Rationale including, where possible, rates of infection/hospitalization/death**
LTC/PCH	See table 1 below
Residents over 40 in the Far North	
General population age > 80	See table 1 below
General population age > 70	See table 1 below
Indigenous Populations age > 60	See table 1 below
Congregate living situations[3] ➢ homeless and other emergency shelters ➢ group homes ➢ mental health residential care ➢ correctional institutions ➢ seniors' assisted living	NACI equity matrix, literature review, and community/practitioner experience indicate that populations whose "place of residence" is remote, overcrowded and/or they are homeless or institutionalized would be key groups for early COVID immunization. Most likely source of exposure in the two periods ending December 21, 2020[4]: • Correctional facilities: 85 people representing 10% of cases with most likely source of exposure identified • LTC/PCH/retirement home: 48 people representing 6% of cases with most likely source of exposure identified • Outreach program/shelter/group home: 44 people representing 5% of cases with most likely source of exposure identified Most likely source of exposure in the two periods ending January 4, 2021[2]: • Correctional facilities: 134 people representing 20% of cases with most likely source of exposure identified • LTC/PCH/retirement home: 40 people representing 6% of cases with most likely source of exposure identified

[3]Factors for consideration of congregate living environments associated with higher rates of COVID-19 infection

- Residents and staff of shared living situations for seniors
  - Characteristics with more outbreaks = large resident capacity, home that are co-located with long term care facility, large corporate owned chains, offered many services onsite, increased regional incidence and higher community level ethnic concentration (combined proportions non-white and non-indigenous residents and immigrants arriving in Canada within last 5 years)
  - Homes with > 100 residents had 5x increase in risk of outbreak
  - Homes that offer 9 or more services had 2x risk of outbreak
  - Homes co-located with a LTC facility had 2x risk of outbreak
- Non LTC/PCH or Assisted Living Congregate Living Situations
  - Physical factors in settings associated with outbreaks**
    - Higher population density
    - Accepting new residents
    - High turnover
    - No physical distancing in sleep areas

[4] SK Public Health Data for Action v4, e-mail communication, January 10 2021

	• Outreach program/shelter/group home/unspecified communal or crowded living: 3 people representing 1% of cases with most likely source of exposure identified Issues of concern related to COVID-19 epidemic transmission risk in SK sub-zones[2]: • isolation for vulnerable populations • congregate living facilities Recommended public health action based on SK epidemiology[2]: • Increase preventative action (active case finding/testing, strict adherence to NPIs) in all congregate living facilities in SK – shelters, corrections, LTC/PCH
Medically vulnerable	Oncology (literature review) • Solid Tumor Mortality: 20.8% • Thoracic Malignant Mortality: 33% Malignant Hematology • Mortality Risk 31-53% Organ Transplants • Mortality SOT: 35.8% • Mortality BMT: 35% Dialysis • Mortality: 28%
Other socially vulnerable populations[5,6] ➢ populations who are precariously housed including overcrowding and couch-surfing ➢ populations who are socially isolated ➢ other racialized or marginalized populations	Community and practitioner experience indicate that these groups are at higher risk for communicable disease outbreaks, including elevated risks for infection and adverse health impacts. It is recognized that these are traditionally hardly reached populations for immunization programs. Issues of concern related to COVID-19 epidemic transmission risk in SK sub-zones[2]: • isolation for vulnerable populations • large households transmission NACI acknowledges that racialized and marginalized populations in Canada have been disproportionately affected by COVID-19, and that

[5] Assessment of local risk [including "COVID-19 epidemic transmission risk by SK zone"] and knowledge of community members and resources will inform who these individuals are and where they are incorporated into the sequencing.

[6] In the context of COVID-19, a socially vulnerable population is a group of people that is at greater risk of exposure, infection, and adverse outcomes due to its individual, social, and cultural characteristics relative to the larger population. Social vulnerability is also represented as the social, economic, demographic, and environmental characteristics that influence an individual, group, or community's ability to respond to, cope with, recover from, and adapt to crisis, rapidly changing circumstances, and/or unusually stressful conditions.

	systemic barriers to accessing necessary supportive care for COVID-19 also exist in urban settings related to factors such as poverty, systemic racism and homelessness.
Essential services workers (e.g., emergency workers, grocery/transit staff, teachers) and others who cannot work virtually as the economy re-opens and have high social contact (with limited IPC measures)	NACI equity matrix indicates this as a key group for early COVID immunization.

Saskatchewan Health Authority

Table 1: Focused Vulnerable Population Hospitalization and Case Fatality Rates

Population	Hospitalization rate	Case fatality rate
LCT	7%	14%
Age 80	21	13
Indigenous > 80	50	30
Indigenous 70-79	15.8	3.5
Age 75-79	18	6
Age 70-74	14	3
Indigenous 60-69	9.4	4.3

Recommended Sequence

Saskatchewan.ca notes in "phase I": "Immunization targeted to priority populations, including long-term care residents, health care workers, and vulnerable populations" and that **Saskatchewan's framework** is:

- LTC/PCH residents and staff
- HCW in emergency departments, intensive care units, COVID-19 wards and COVID testing and assessment staff
- Residents 80 years and older in all communities, followed by 79-75, and 74-70 in community as supplies allow
- Residents over the age of 50 living in remote/Northern Saskatchewan

Building on this framework and as additional COVID-19 vaccine(s) and supplies become available, the following recommendations are intended to guide the sequence of delivery. Populations included in the same box are sequenced in parallel to each other. Assessment of local risk (e.g., attack rates, community transmission rates) and knowledge of local community members and resources will inform local delivery.

Phase	**HCW**	**Vulnerable Populations**	**Community-wide**
Phase 1	• HCW of congregate living settings for older adults (long term care and personal care homes) • Adult ICU • Emergency department • Respiratory Therapy • Covid-19 designated wards • Code blue and trauma teams • Covid-19 assessment and testing centers	LTC/PCH residents and staff Residents of First Nations Communities over the age of 40 Age > 80 and Indigenous adults age >60 Age > 70 and Indigenous Adults age > 50	

Saskatchewan
Health Authority

	• EMS, road and air transport teams • All HCW over age 70	Planned or post solid organ and bone marrow/stem cell transplant Patients on Dialysis	
Phase 2a	• HCW of congregate living situations for vulnerable adult populations • Anesthesia / Operating Rooms • All other critical care • Hemodialysis • Vaccination team • Radiology technicians • ECG/echo • Phlebotomy and lab workers handling COVID specimens • Home care (direct care providers)	Residents and staff of shared living situations [language from NACI guidelines] for seniors not included above ➢ seniors' assisted living Residents and staff of other shared living settings[2] ➢ homeless shelters and other emergency shelters ➢ group homes ➢ mental health residential care ➢ non-federally regulated correctional institutions ➢ Congregate Living Arrangements Medically vulnerable populations ➢ Malignant Hematology patients on active treatment ➢ Solid Tumor Oncology patients on active treatment	
Phase 2b	All other direct clinical care including: ‣ physicians ‣ RN and LPN ‣ therapists (physical, occupational, speech) ‣ Ward clerks ‣ Outpatient clinic staff ‣ mental health providers ‣ Patient registration ‣ Housekeeping/environmental services ‣ Dietary staff ‣ Security	We recommend further engagement with Indigenous partners for additional sequencing of Indigenous populations in the province. We recommend further engagement with community partners for additional sequencing of socially vulnerable populations in the province.	We recommend further exploration of essential workers who face additional risks to maintain services for the functioning of society [language

	‣ Social workers & Case managers ‣ CPAS ‣ Chaplain staff ‣ Dentists and dental clinics (direct care providers) ‣ Pharmacists and pharmacies (direct care providers) ‣ community based health workers on First Nations Communities ‣ Traditional/cultural workers		from NACI guidelines]
Phase 2c	HCW not included above	Outreach as part of general population roll-out	General population