

D Recommendations for Pandemic Vaccine Use in a Limited Supply Situation

Priorities for vaccination need to be established during the interpandemic period in order to facilitate planning for an efficient and consistent pandemic immunization strategy. In keeping with the overall goal of pandemic response, the prioritization process must consider the impact the vaccine will have on: 1) reducing morbidity and mortality by maintaining the health services response and by individual protection of high risk groups, and 2) minimizing societal disruption by maintaining the essential services upon which everyone depends. The pandemic vaccine will become available in lots and supply is likely to be limited during the early stage of the pandemic in Canada. Furthermore it is likely that two doses of vaccine will be required to achieve a protective response in the vaccinee. Therefore, when vaccine becomes available it is essential that it be distributed in a pre-defined equitable and consistent manner across all provinces and territories.

The Vaccines Working Group has developed the following recommendations for the use of vaccine in a limited supply situation to provide guidance to PIC and those involved in pandemic planning at the F/P/T and local levels. **The priority groups will need to be reassessed, and possibly altered, as soon as epidemiologic data on the specific pandemic virus becomes available to ensure that they are consistent with the overall goal of the pandemic response.** Once data on the epidemiology of the pandemic becomes available, the PIC will be the lead in the final identification and prioritization of population groups to receive influenza vaccine. These recommendations will be distributed as national guidelines as soon as possible, with the expectation that they will be followed by all jurisdictions in order to ensure a consistent and equitable program.

Recommended Priority Groups

The estimates of population size made for each group are based on 1998 data. Each jurisdiction is encouraged to develop their own estimates for these priority groups as a part of their pandemic planning activities.

Group 1: Health care workers, paramedics/ambulance attendants and public health workers (approximately 600,000)

Rationale: The health care and public health sectors will be the first line of defence in a pandemic. Maintaining the health service response and the vaccine program is central to the implementation of the response plan, in order to reduce morbidity and mortality. Health services workers may be considered in the following work settings for vaccine program planning:

- acute care hospitals
- long term care facilities/nursing homes
- private physicians' offices
- home care and other community care facilities
- public health offices
- ambulance and paramedic services
- pharmacies
- laboratories

Group 2: Essential service providers (approximately one million)

Rationale: The ability to mount an effective pandemic response may be highly dependent on persons, within the groups listed below, being in place to maintain key community services. Those individuals that are essential to the response or to maintaining key community services may vary between jurisdictions. Local plans will likely reflect these differences, however they are likely to include:

- police
- fire-fighters
- the armed forces
- key emergency response decision makers (e.g. elected officials, essential government workers and disaster services personnel)
- utility workers (water, gas, electricity and essential communications systems)
- funeral service/mortuary personnel
- people who work with institutionalized populations (e.g., corrections)
- persons who are employed in public transportation and the transportation of essential goods (such as food)

Vaccine eligibility criteria should be defined based on the work/duties the individual performs rather than position label.

Group 3: Persons at high-risk of severe or fatal outcomes following influenza infection

Rationale: To meet the goal of reducing morbidity and mortality, persons most likely to experience severe outcomes should be vaccinated. For planning purpose we have based this priority group on the high risk groups identified by the National Advisory Committee on Immunization (NACI) for annual vaccine recommendations. Additional groups have also been included based on evidence indicating an elevated risk. For example, during the annual epidemics, young infants experience rates of hospitalization similar to the elderly.

Prioritization of the following subgroups within Group 3 would depend on the epidemiology of influenza disease in the time of a pandemic.

- A: persons in nursing homes, long-term care facilities, homes for the elderly e.g. lodges (approximately 200,000);
- B: persons with high-risk medical conditions living independently in the community (approximately 7 million);
- C: persons over 65 years of age living independently and not included in 3A and 3B (approximately 1 million);
- D: children 6 months to 23 months of age (current vaccines are not recommended for children under 6 months of age);
- E: pregnant women * (approximately 200,000).

*Currently, NACI does not consider pregnant women as a high risk group in its recommendations for annual influenza vaccination. However, in a pandemic, pregnant women may be at elevated risk.

Group 4: Healthy adults (approximately 8.7 million)

Rationale: This group is at lower risk of developing severe outcomes from influenza during annual epidemics but is the major work force and represent the most significant segment of the population from an economic impact perspective. Vaccination of healthy adults would reduce demand for medical services and allow individuals to continue normal daily activities. Simultaneous absence of large numbers of individuals from their site of employment could produce major societal disruption even in non-essential personnel. Medical facilities could also be overwhelmed by demand, even for outpatient services. This might compromise care of those with complications.

Group 5: Children 24 months to 18 years of age

Rationale: This group is at the lowest risk of developing severe outcomes from influenza during annual epidemics but play a major role in the spread of the disease. While children's absence from school might not have the direct economic and disruptive impact of illness in adults, it could have that effect indirectly, since care for ill children would be required.

A decision to vaccinate healthy adults and healthy children (Groups 4 and 5) depends on having an adequate supply of vaccine. A much larger amount of vaccine would need to be used to prevent hospitalization and death than for older persons and those with underlying conditions, because of demographic considerations and differences in risks.

Consideration was given to prioritizing the family members of health care workers, however the decision was made that separating out these individuals would not be logistically feasible or ethically justifiable.

