

## Part 4: PROTECT Phase Assumptions for Healthcare Professionals

The following assumptions (from AHMPPI 2008) have been altered in light of new evidence on the pandemic (H1N1) 2009 virus:

- Assumption 2. Attack rate
- Assumption 8. Presenting symptoms
- Assumption 9. Health impact of pandemic influenza
- Assumption 16. Hospitalisation and ICU admission

The remaining assumptions are the same as outlined in AHMPPI 2008

The assumptions and the response implications outlined below are based on currently available evidence about pandemic (H1N1) 2009. These assumptions will be continually reviewed by the Chief Medical Officer’s Scientific Pandemic Advisory Group and revised in light of new and emerging evidence.

Assumption table 2 - Attack rate	
Current assumption(s)	2.1 A clinical attack rate of 20% is assumed (the proportion of people who have symptoms of the disease over a time period. The H1N1 virus appears to be more contagious than seasonal influenza (seasonal influenza attack rate 5-15%).
	2.2 The attack rate in children is higher than in adults.
	2.3 The attack rate is likely to be higher in closed settings such as schools and institutions.
Response implications	2.1 Interventions to reduce transmission such as isolation for people who are sick are important measures.
	2.2 It will be important to continue to monitor the differences in the rate of accumulation of cases in children compared with adults. Robust estimates of age specific attack rates may be useful in supporting decision making with regards to use of pandemic (H1N1) 2009 vaccine.
	2.3 It will be important to identify vulnerable individuals, those for whom pandemic (H1N1) 2009 may be severe to allow early detection and treatment with antivirals if they met the case definition. It will be important to collect data to assess attack rates in vulnerable population groups to allow tailoring of public health interventions.
Evidence base	2.1- 2.3 Based on data on pandemic (H1N1) 2009 from Australia and overseas (USA, Canada, UK). While this is the current assumed attack rate, virulence can change overtime as seen from past pandemics, through waves of national and international pandemics. This will need to be monitored.

PROTECT PHASE – ANNEX TO THE AHMPPI

Assumption table 8 - Presenting symptoms	
Current assumption(s)	<p>There is a spectrum of illness from mild to very severe. The symptoms of pandemic (H1N1) 2009 infection in people are similar to the symptoms of human seasonal influenza infection and include fever, fatigue, lack of appetite, coughing, sore throat, joint pain, headache and rhinorrhea.</p> <p>Some people with pandemic (H1N1) 2009 infection have also reported vomiting and diarrhoea. Dehydration has also been a feature of some hospitalised patients in the USA.</p> <p>There have been a few documented cases without fever.</p>
Response implications	<p>It is important to understand the spectrum of presenting symptoms to allow modifications to case (surveillance and clinical) definitions to ensure the appropriate levels of sensitivity and specificity.</p> <p>It will be important to establish the frequency of atypical presentations as amendments, particularly to the clinical case definitions, may be required.</p>
Evidence base	<p>Based on extensive studies of seasonal influenza and previous pandemics indicate that influenza is predominately a respiratory disease.</p> <p>Also based on current data on pandemic (H1N1) 2009 from Australia and overseas (USA, Canada, and UK).</p>

Assumption table 9 - Health impact of pandemic influenza	
Current assumption(s)	<p>9.1 The current assumption is that the clinical case fatality rate would be similar to seasonal influenza at 0.14%. However, in contrast to seasonal influenza, deaths overseas from pandemic (H1N1) 2009 have been in younger people.</p> <p>9.2 There is a spectrum of illness from mild to severe.</p> <p>9.3 Vulnerable people (see Part 2.1, Table 1) are likely to experience higher complications than those without underlying health problems.</p>
Response implications	<p>9.1 – 9.3 Data on health service usage needs to be closely monitored, so that services are optimised as required.</p> <p>9.2 Certain specialist health services may be required to ensure that the specific needs of these groups can be best met.</p> <p>9.3 Planning for paediatric cases needs to be undertaken. Obstetric and neonatal services are also likely to be in high demand and planning should ensure that these services can be optimised.</p>

PROTECT PHASE – ANNEX TO THE AHMPPI

Evidence base	9.1 – 9.2 Based on data on pandemic (H1N1) 2009 from Australia and overseas (USA, Canada and UK). 9.3 based on data from overseas. Pandemic (H1N1) 2009 data from Canada on Indigenous communities. Data on deaths in the USA (93% with underlying chronic illness, 40% of hospitalised cases in USA have been asthmatic). Hospitalisation rates in Canada (64% with co-morbidity).
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Assumption table 16 - Hospitalisation and ICU admission	
Current assumption(s)	The current assumption is that the hospitalisation rate will be between 1 and 2%. Hospitalisation will occur more frequently in the young and in vulnerable groups. The current assumption for ICU admissions is 10% of those hospitalised.
Response implications	16.1- 16.2 Despite a similar hospitalisation rate, the number of cases requiring hospitalisation will be higher than seasonal flu as the clinical attack rate is higher. Surge planning is required. Identification of severe cases and people who are likely to suffer severe disease will be important. It will be important to collect data on hospitalisation and ICU admissions to ensure that the health system can be optimised.
Evidence base	16.1 Hospitalisation rate and ICU admissions based on Australian data on pandemic (H1N1) 2009. Also based on USA data on age distribution for hospitalisation.