

NSRA Pandemic Influenza planning assumptions compared with WN-CoV SAGE secretariat

1 st Order Assumptions	Pan-Flu reasonable worst case scenario (source: 2019 NSRA, which uses 2016 population estimate)	Confidence intervals	WN CoV current estimate	Confidence intervals
Incubation period	Short incubation period – 1-3 days.		Range remains 2 to 14 days, with average of 5 days.	
CFR	2.5%		Unlikely to be higher than SARs. Current internal estimate is 1-3%	
Basic Reproductive Rate (R₀)	No number included in planning assumptions		Estimated 2-3 in Wuhan Unknown in other Chinese regions & internationally	
Doubling rate	No number included in planning assumptions		3 to 5 days	
Duration of illness	Assumes normal flu profile - most people back to normal activities in 7-10 days		Median of 15 to 18 days, but great uncertainty around this. Longest time so far appears to be 41 days.	
Duration of infectivity	Adults are infectious for up to 5 days from the onset of symptoms. Longer periods have been found, particularly in those who are immunosuppressed. Children may be infectious for up to 7 days. Some people can be infected, develop immunity, and have minimal or no symptoms but may still be able to pass on the virus.		Around 2 weeks but could be longer. Average possibly 7 days. Duration of infectivity will vary depending on severity of individual cases.	
Transmission	Sustained human-to-human transmission. There are a number of asymptomatic cases.		Human-to-human transmission outside China has occurred. Sustained human-to-human transmission outside China cannot be ruled out, but there is as yet no definitive evidence of a sustained outbreak/epidemic elsewhere. Asymptomatic transmission cannot be ruled out and transmission from mildly symptomatic individuals is likely.	
Waves/ Duration	The pandemic will come in multiple waves (up to 3), each approximately 15 weeks long with the peak at week 6 and 7 of each wave.			

2 nd Order Assumptions	Pan-Flu	Confidence intervals	WN CoV	Confidence intervals
Population with illness	50% of population is infected and experience symptoms during one or more waves. Actual number of infected people will be higher as there are a number of asymptomatic cases.		Unknown	
Workforce absences	17-20% in the peak weeks. Anticipated that 50% of workforce may require time off at some stage over the entire period of a pandemic. An average absence duration of about 3.5% of a working year (roughly 1.5 weeks per person absent from work).		Unknown	
Numbers requiring assessment at health services	30% (9,840,000) of those that are symptomatic would require assessment by health services		Unknown	
Hospital cases	4% (1,312,000) of symptomatic patients requiring hospital care, i.e. average six-day length of stay		Unknown	
Hospital critical care	25% (328,000) of the hospital cases, i.e. 1% of all symptomatic patients, require the highest level of critical care (require intensive care for 10 days)		Unknown	
Excess deaths	820,000		Unknown	
Clinical Counter measures	<ul style="list-style-type: none"> • Antivirals (AV) • Antibiotics (AB) • Pre-pandemic vaccine (PPV) 		Unknown	
Vaccine Development	It is likely to take at least four to six months after a novel virus has been identified and isolated for an effective pandemic influenza vaccine to become available from manufacturers.		Unknown	
Interventions to stop spread:				

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1. School Closures	Assumed that schools have not been closed			
2. Border control measures	Evidence shows that border control measures are largely ineffective because the duration of most passenger flights is considerably shorter than the incubation period of the illness			