# NSW Health

Coronavirus (COVID-19) preparedness

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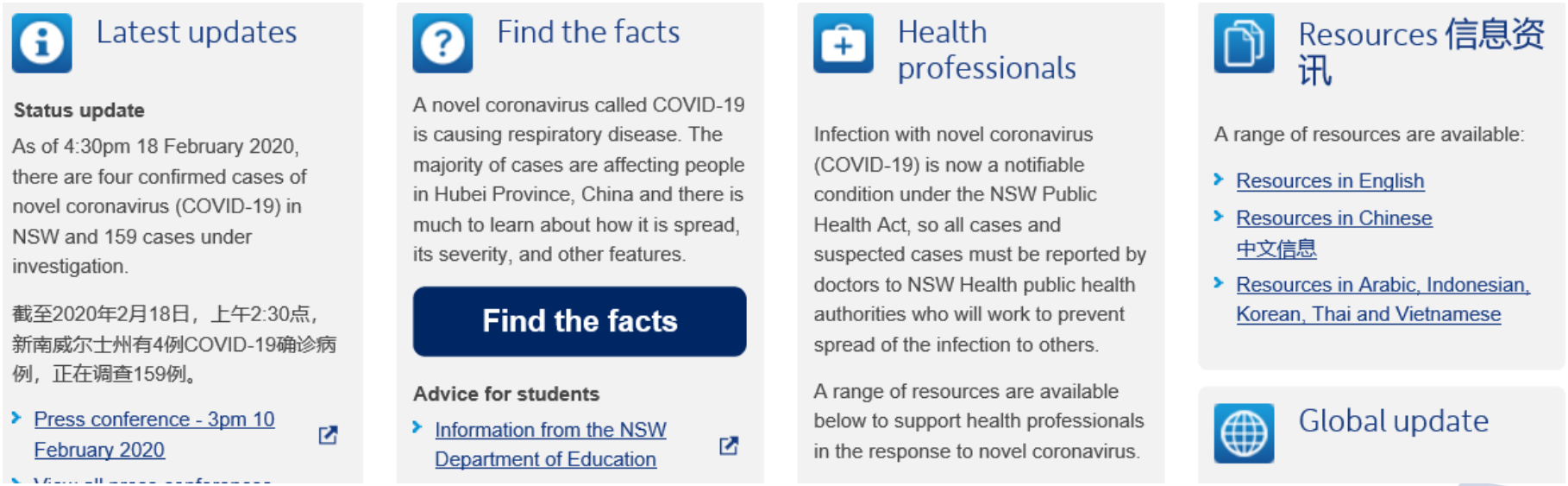
NSW GOVERNMENT | Health

# What is COVID-19 virus?

- COVID-19 (previously called novel coronavirus) is a new strain of a coronavirus that first emerged in Hubei province in China in late 2019
- Coronaviruses are a large family of viruses and can cause the common cold in humans
- Rarely, new strains of coronavirus can jump from animals to humans to cause disease, other examples: SARS (2003) and MERS (2012)

- More information is available on NSW Health webpage: https://www.health.nsw.gov.au/Infectious/diseases/Pages/coronavirus.aspx



# What do we know about COVID-19?

- Predominant Spread by respiratory droplets (e.g. someone coughing) and contact (hands → surfaces → eyes and mouth)

- Spread is similar to seasonal influenza → practicing same precautions to minimise spread of influenza will provide protection against COVID-19:
  - Basic hand hygiene – hand sanitiser/soap and water
  - Cough etiquette – cough into elbow/tissue
  - Stay home if feeling unwell
  - Encouraging face masks for cases
  - In healthcare settings, strict practice of infection control procedures, especially during respiratory procedures (e.g. intubation)

# What do we know about COVID-19?

- Most common symptoms are respiratory symptoms (cough, difficulty breathing) with or without fever
- Cases may be infectious just before symptoms appear, as well as with minimal symptoms
- Majority of cases have milder disease, with some having severe disease
- Severe cases develop pneumonia and respiratory failure
- Deaths have generally occurred in people who are older and who have underlying health conditions - reports of severe disease in children are uncommon

# What do we know about COVID-19?

- Who is at potential risk in Australia should there be sustained community transmission?

- Everyone:
  → population expected to have no immunity as a new virus
  → at least 18 months until vaccine available

- What is the treatment? Supportive
  → no effective treatment at scale
  → existing antiviral medications are being trialed, likely reserved for sickest
  → severe cases can require intensive care
  → supportive treatment in hospital and intensive care can be life saving

# COVID-19: current situation

**Global situation** (to 10 March):

- >113000 cases reported, over 4000 deaths
- China (especially Hubei Province) is the most heavily impacted
- Countries outside China are reporting outbreaks that may indicate local community transmission: Singapore, South Korea, Japan, Iran, Germany, Italy

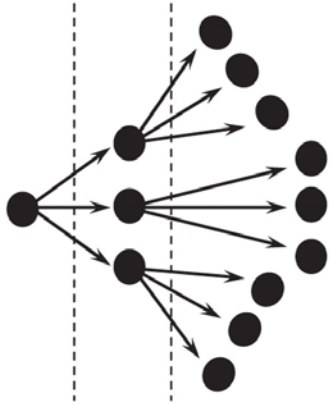
**Australian situation (10 March)**:

- 100 cases of COVID-19, 3 deaths

**NSW**

- 61 cases (as at 7pm, 10/3/20)
- 4 in school students
  - All whom had contact with a returned traveller or other known case
  - No evidence to date of intra-school transmission

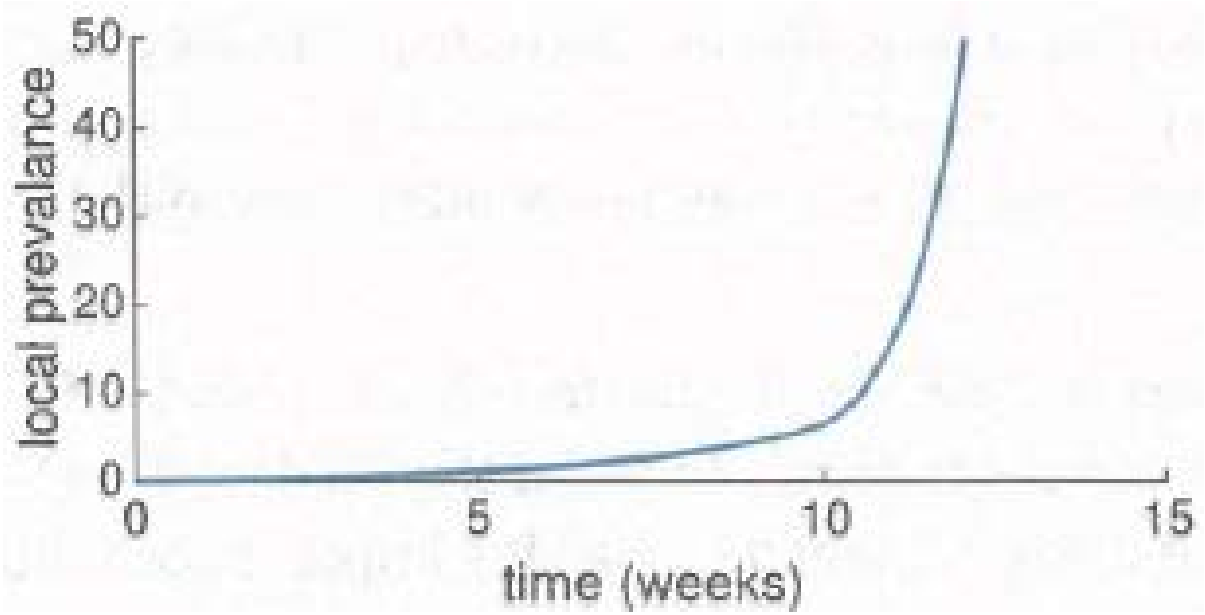
# Understanding disease transmission (epidemiology)



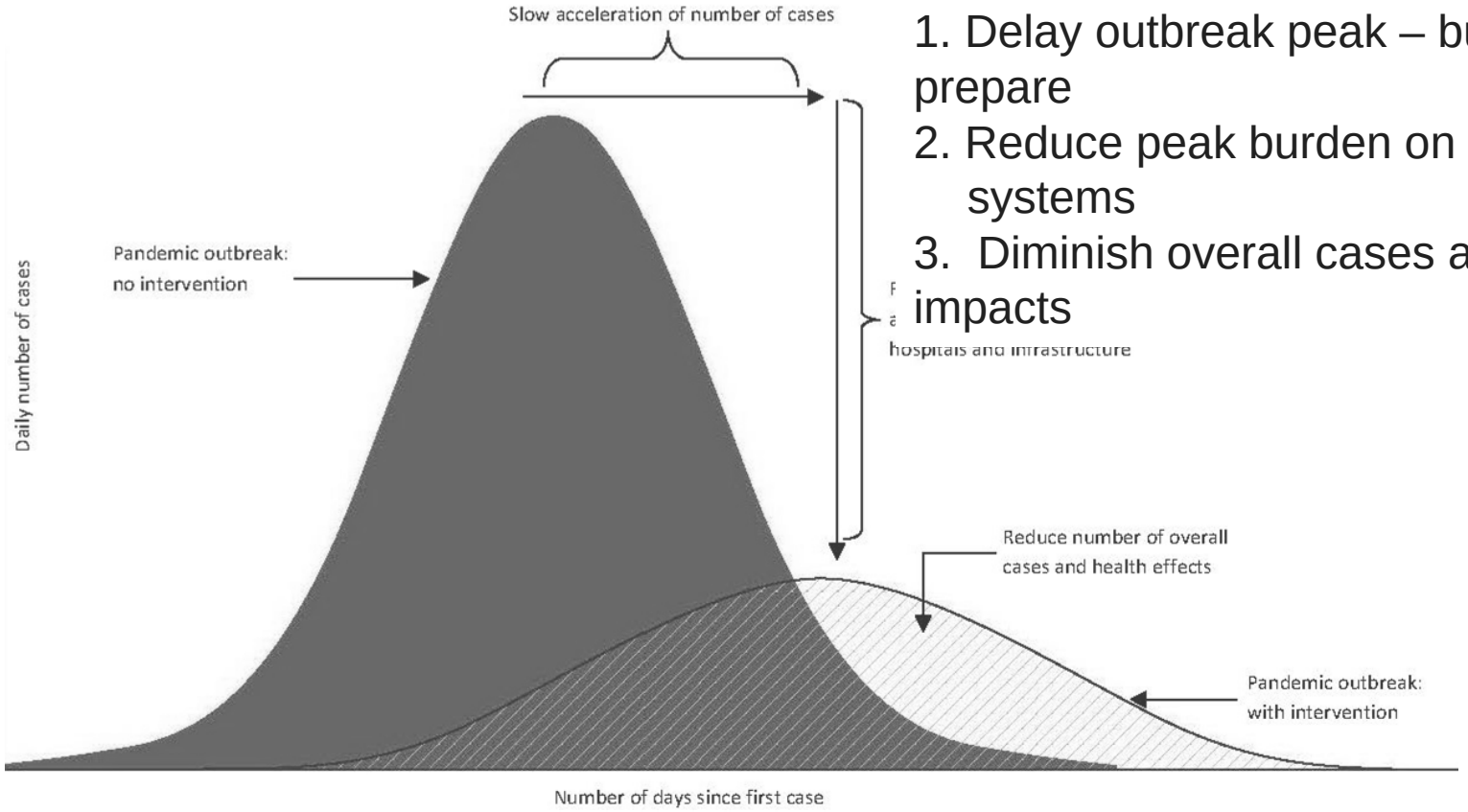
- Estimated 1 case can infect 2 to 3 others

  "$R_0$" (reproductive number)

- Once there is local transmission, there will be an exponential increase in the number of cases



# Pandemic mitigation strategy

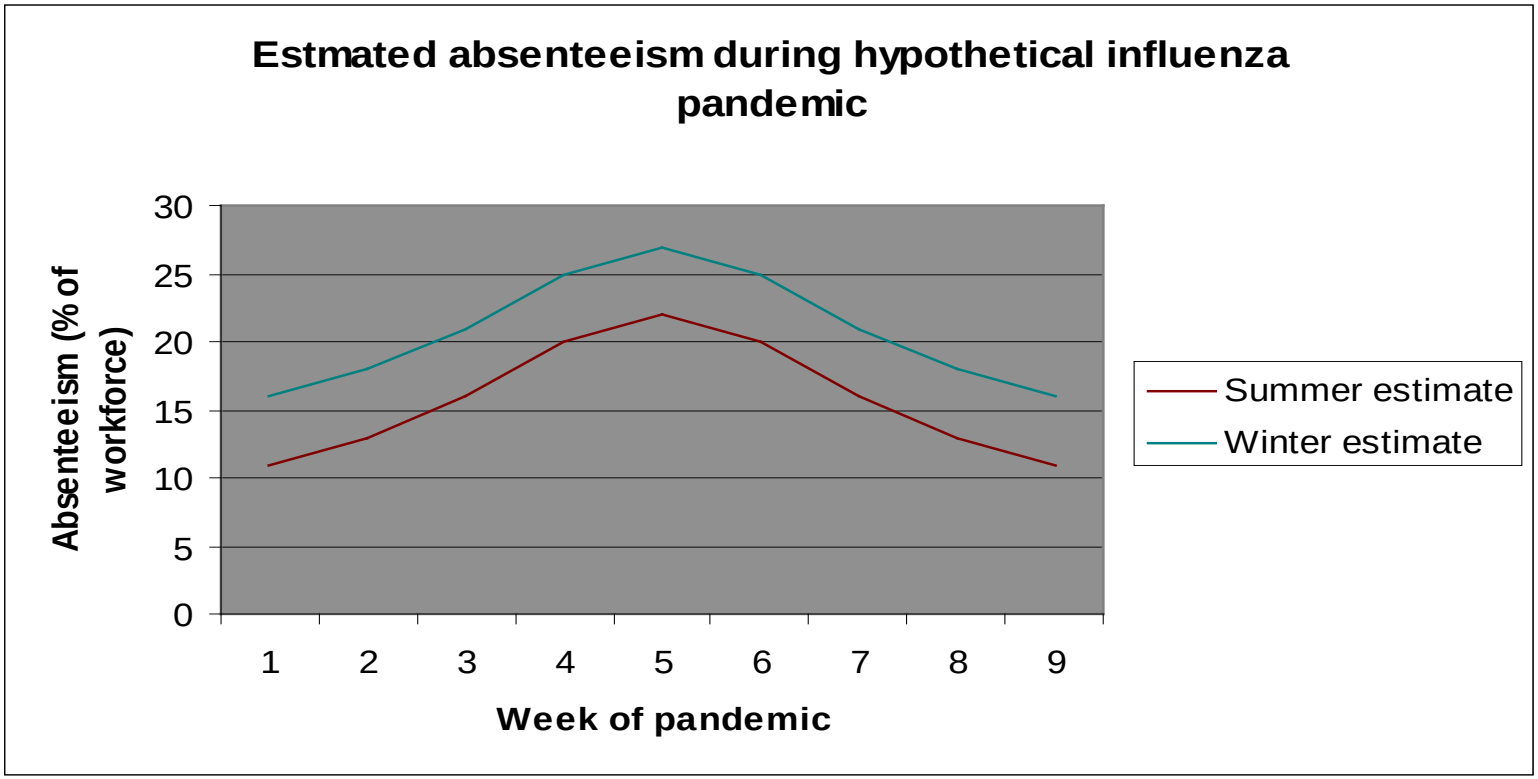



1. Delay outbreak peak – buy time to prepare
2. Reduce peak burden on services / systems
3. Diminish overall cases and health impacts

# Strategic considerations during a pandemic - general

- Whilst Health will be predominantly impacted, pandemics raise challenges across all sectors of government and society and necessitate a whole-of -government response
- Business continuity and surge planning within each agency are critical.
- Public health measures remain effective in reducing the impacts of disease spread; some may be contentious (eg: event cancellation)
- Some public health measures that may have community support are not supported by evidence, depending on when they are applied
- Epidemic may coincide with winter (already heavy influenza burden), and may have multiple waves
- Relations between states/territories/Commonwealth – diversity of views and different experiences as the virus spreads in Australia, but a need to achieve national consistency
- Disease spread is uneven:
    - Disproportionate impact on high density population areas
    - May occur later in rural/regional areas
    - Institutions are vulnerable (eg: corrective centres, residential care facilities)
- People with pre-existing health conditions will be the most impacted

# Workforce considerations




**MODEL ASSUMPTIONS**

1. Pandemic over a period of 8 weeks
2. Overall attack rate 25%
3. Usual absenteeism rate (holidays plus sickness) = 10% in summer, 15% in winter
4. Each case off work for 7 days

**Does not include those who: (i) stay home to look after sick, or, (ii) stay away for other reasons**

# School response – why are schools targets for action?

- Respiratory infections have been observed to spread easily in day-care and school settings and are considered likely to show the same features with COVID-19
- Although children do not seem to be severely affected, they may transmit to each other and then to family members at high risk (eg grandparents)
- School closure, whether proactive or reactive, appears to be moderately effective in reducing the transmission of influenza and in delaying the peak of an epidemic, but this measure is associated with very high economic costs and social impacts
- School closures should therefore be considered only in a severe pandemic and for the shortest duration possible
- Individual school closure can be as effective as entire school-system closure.
- Reactive school closure may reduce the number of people infected significantly (reduce the attack rate by 7-15%)

# What should we all be doing?

- Promotion of hand hygiene
- Encourage staff and students who are unwell not to attend school
- Promote balanced, verified information
- Review business continuity plans
- Discourage staff and students from gathering or socializing in other places if schools are dismissed. They should avoid gathering in places like local restaurants and shopping malls.

Education specific:

- Consider programs that may cause issues
  - Very young children visiting aged care
  - Youth volunteering for aged care (especially being vigilant in not attending if unwell)
  - Overseas travel and student exchange
  - Very large gatherings if insufficient staff may be left to manage students if absenteeism is increased
- Prepare lessons such that they can be delivered remotely in case a student is placed in home quarantine
- Keep contact lists of parents/carers up to date

# What's been happening?

- Cases identified in school students, sometimes when student is already in isolation
- Liaison with the school through Public Health
- Closure of the school whilst close contacts identified through interviews with students, review of school environment, review of time
- Electronic provision of information can assist in early identification of those likely to be close contacts
- Close contacts are generally those in a friendship group or those who spend a significant time in a class with a case
- Rest of school is treated as "casual contacts" ie if they happen to develop symptoms in the next 14 days after last exposure investigated just in case they have COVID-19
- Cleaning involves:
  - Considering where the affected student has been
  - Cleaning at a standard as per usual if a student comes down with an illness (ie the process is standard 2-in-1 cleaning (detergent/disinfectant plus purposeful cleaning))

# What’s next?

- Flexible response proportionate to the risk
- Working with the community to minimize transmission
- Encourage respiratory hygiene with reminder information around the school
- Encourage unwell students to stay home
- Separate those who become sick at school from those who are well. Send sick staff home immediately. Send students who become sick during the school day to a designated space away from others whilst parents come to collect them (minimise mixing in sick bays)
- Support for students affected by COVID-19

# Thank you: questions and discussion

**Additional information**

NSW Health website:
https://www.health.nsw.gov.au/Infectious/alerts/Pages/coronavirus.aspx

FAQs: https://www.health.nsw.gov.au/Infectious/alerts/Pages/coronavirus-faqs.aspx

Twitter: @NSWHealth

Facebook: https://www.facebook.com/NewSouthWalesHealth/

YouTube NSW Health: https://www.youtube.com/user/NewSouthWalesHealth/videos

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