

AMA Forum: What you need to know about the Novel Coronavirus

This briefing was given by Prof Allen Cheng to the Australian Chinese Medical Association of Victoria and was current as of 4pm February 1st 2020 AEDST.

**For up-to-date advice on Victorian Guidelines
visit <https://www.dhhs.vic.gov.au/novelcoronavirus>
For more information on ACMAV visit <https://acmav.org>**

Today

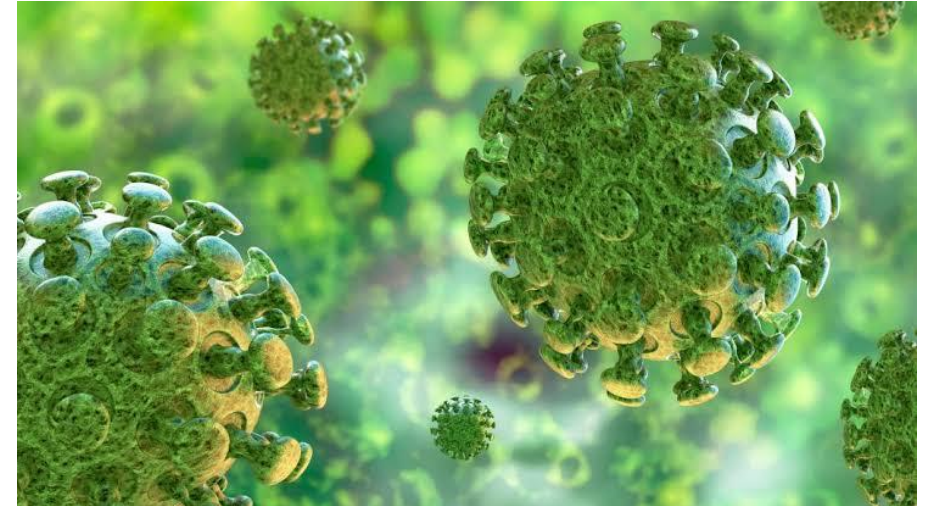
- Dr Allen Cheng, ID Physician, Alfred Health
- Dr Jason Kwong, ID Physician, Austin Health
- Dr Jason Chuen, ACMAV
- Dr Lyn-Li Lim, Epworth/VICNISS
- Dr Annaliese Van Diemen, Deputy CHO, DHHS
- Dr Katie Cronin, ID Physician/Microbiologist, DHHS
- Dr Brett Sutton, CHO, DHHS
- Dr Julian Rait, AMA-V

Brief outline

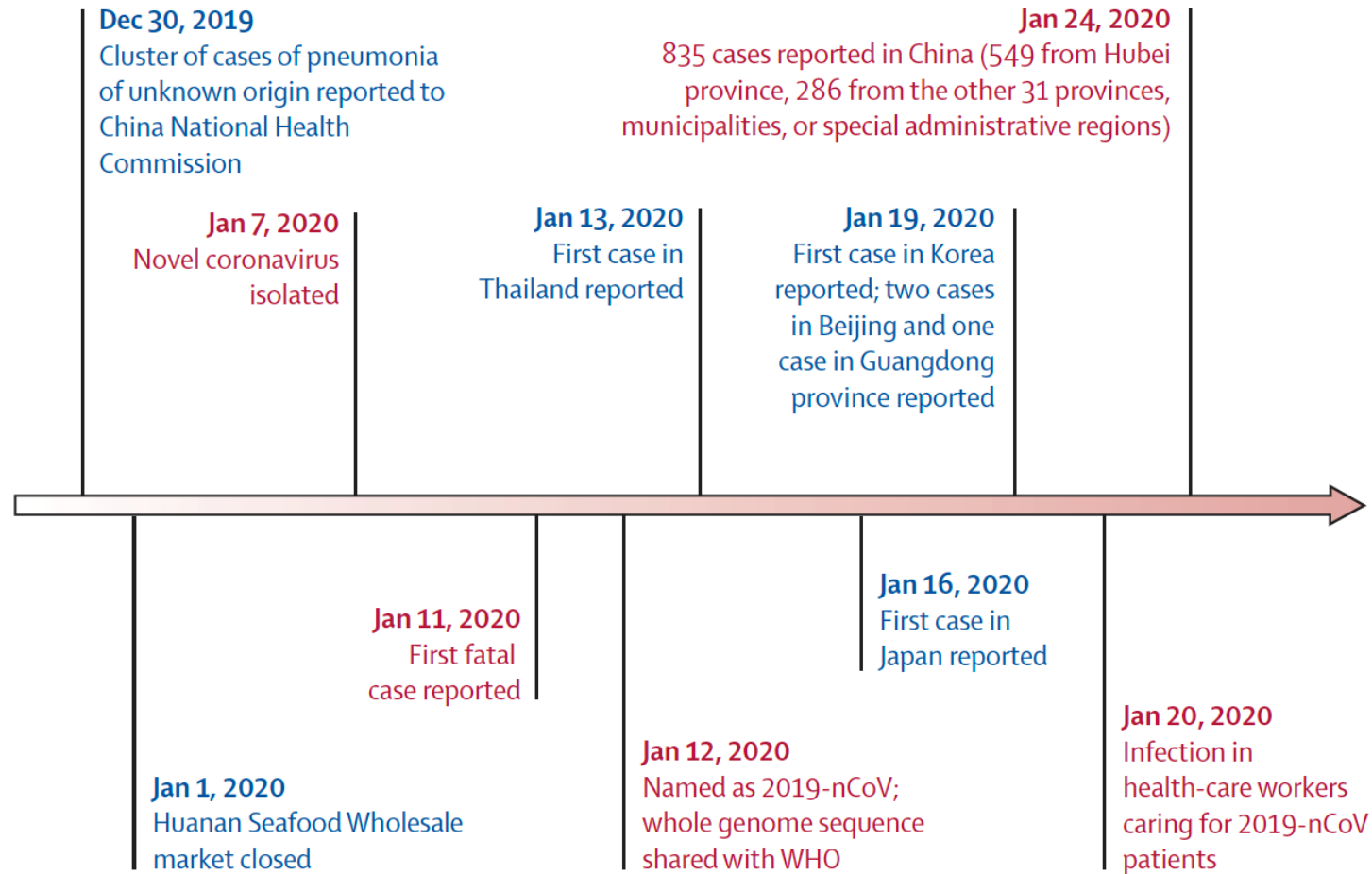
- About coronaviruses
- What's happened?
- What's R_0 and CFR and why does it matter?
- Victorian and Australian public health responses
- What if I see a patient with suspected nCoV?
- How to I protect myself?
- What do I tell patients who intend to travel overseas?

What are Coronaviruses?

- Derived for the Latin corona
 - Meaning crown or halo
 - Enveloped RNA viruses
- Group of viruses
 - Cause disease in mammals including humans and bats (zoonotic)
- Includes
 - Common cold viruses (HCoV-229E, NL63, OC43, HKu1)
 - SARS – CoV (bat and civet transmission)
 - MERS – CoV (bat and camel transmission)



2019-nCoV: 2019 novel coronavirus acute resp disease

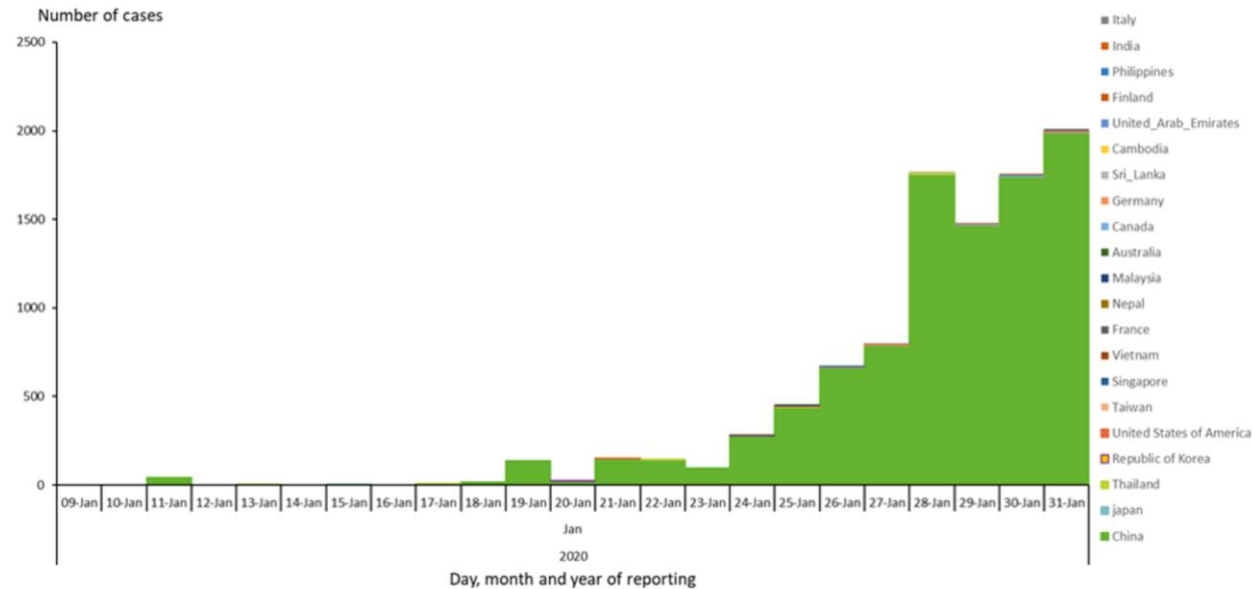




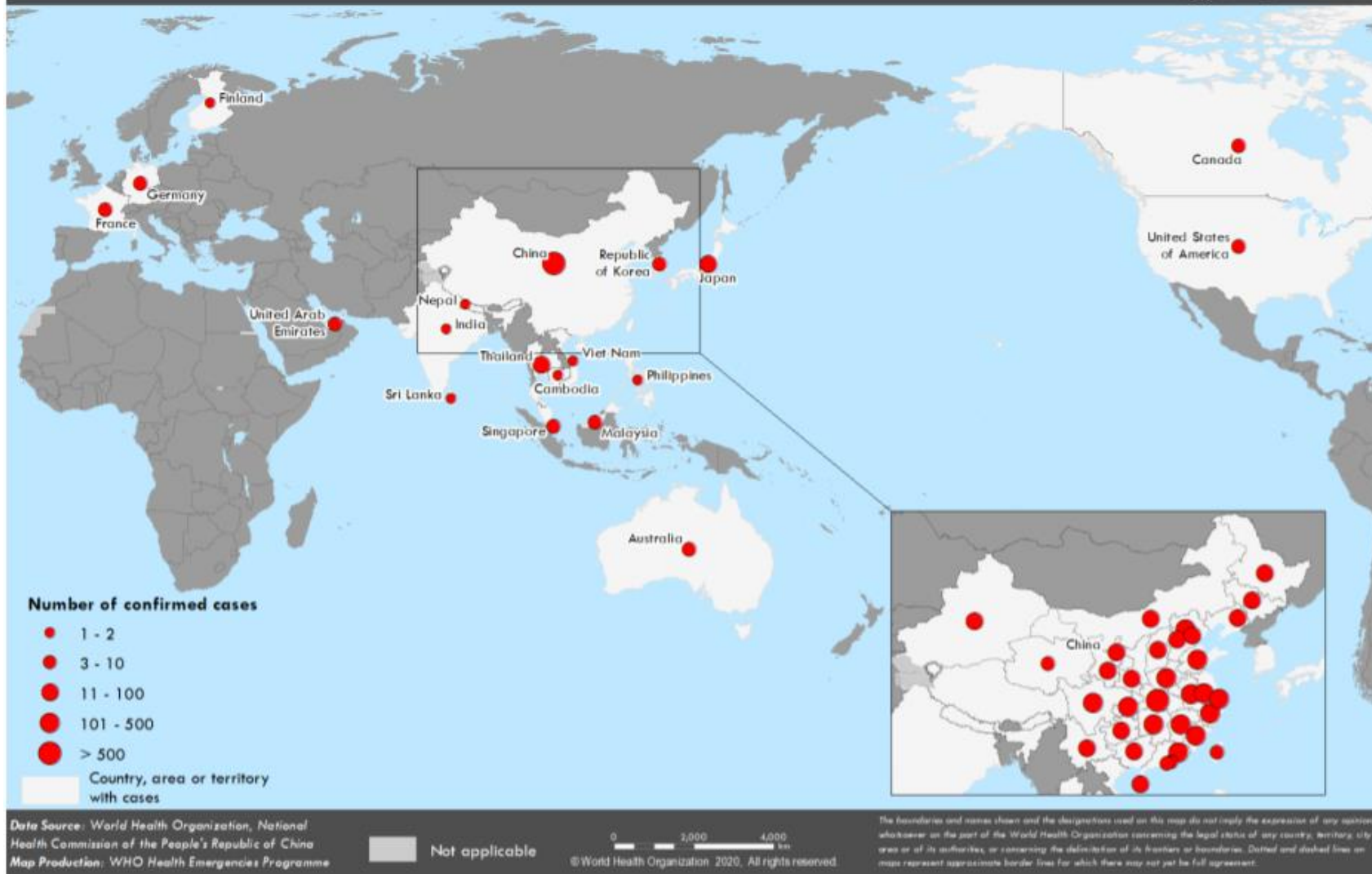
Current situation

- Rapidly evolving
- China
 - 9658 confirmed cases (mainland)
 - 213 deaths
 - Likely underascertainment – plausible estimates of ~100,000
- Outside China
 - 15 countries
 - 90 confirmed cases

- Australia
 - First case at Monash Medical Centre (24 Jan)
 - Currently 9 cases in Australia – 4 in Victoria

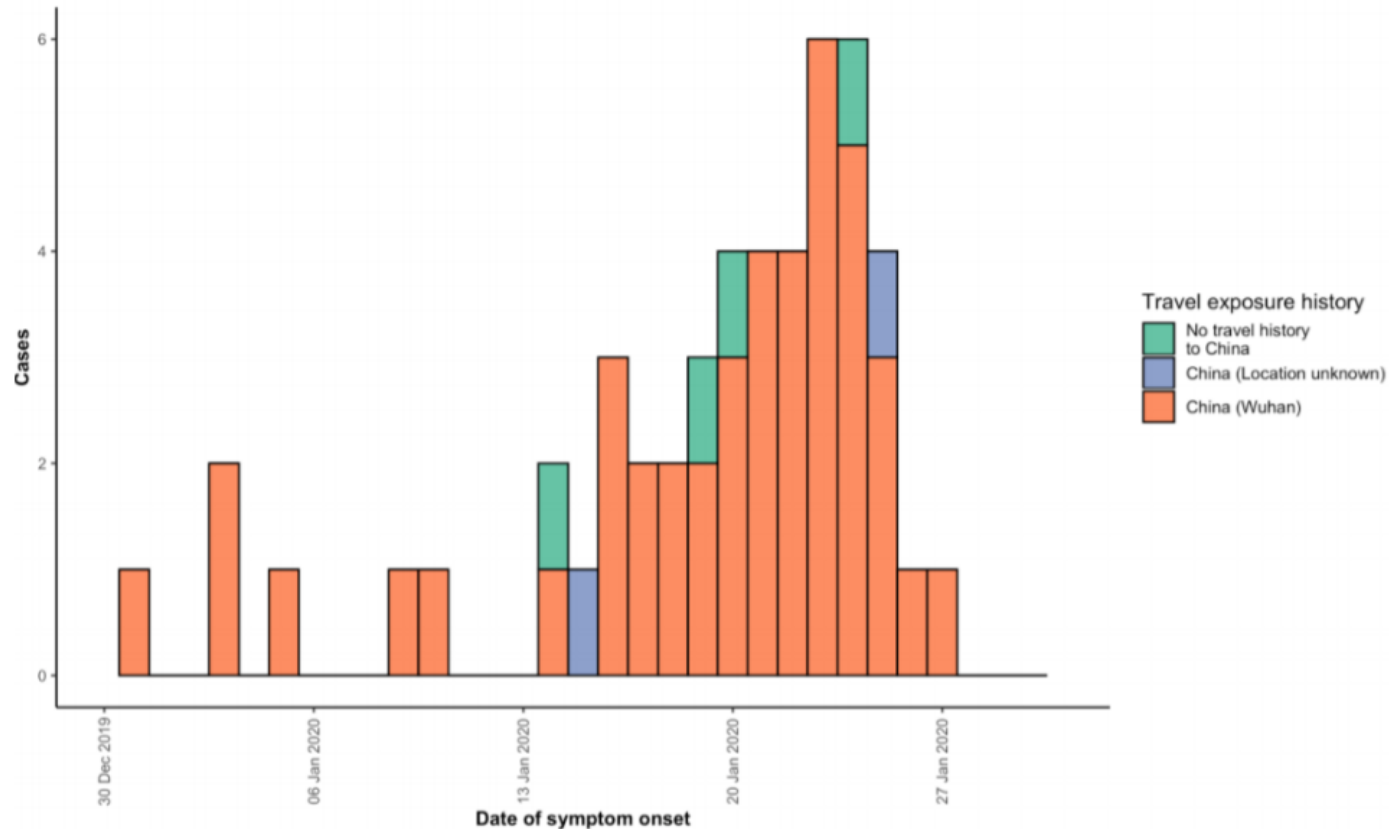


Distribution of 2019-nCoV cases as of 30 January 2020



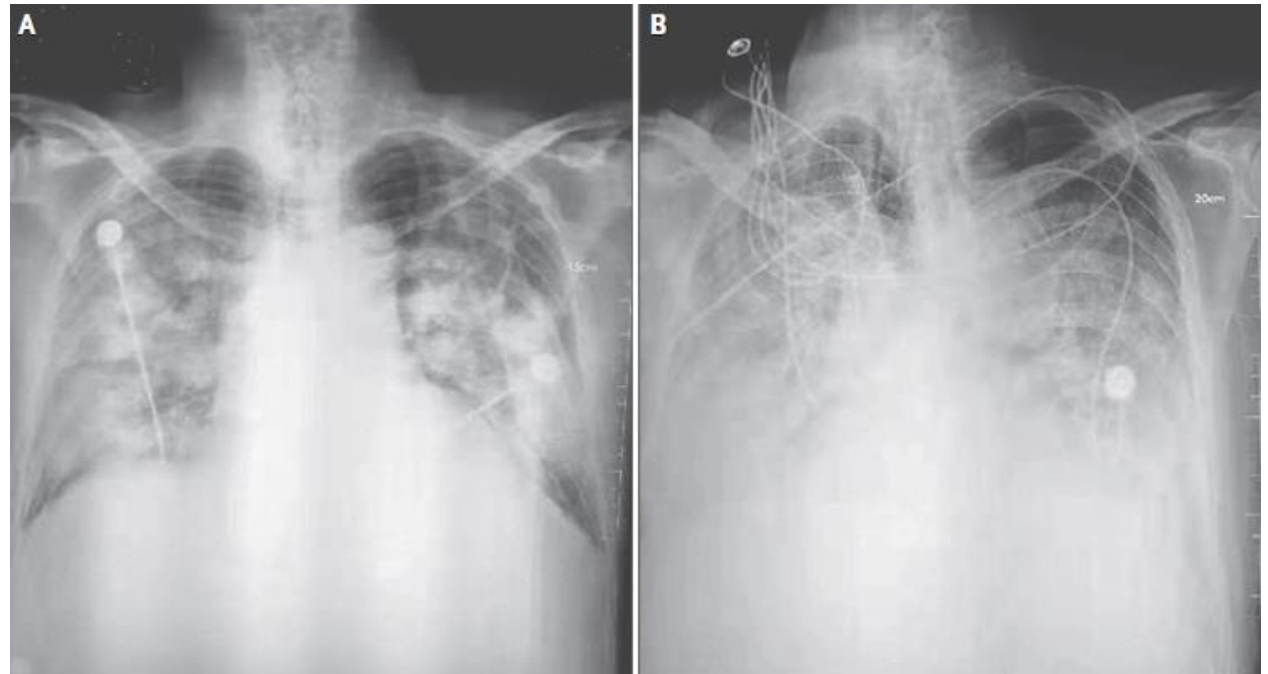
Epidemic curve by date of onset of 2019-nCoV cases identified outside of China, 30 January 2020

Figure 2: Epidemic curve by date of onset of 2019-nCoV cases identified outside of China, 30 January 2020



Clinical

- Incubation period: 4-10 days, upper limit 14 days
- Fever, cough, shortness of breath
 - Diarrhoea
 - Lymphopenia
- Chest x-ray findings
- Severe cases
 - Dyspnoea
 - Multi-organ failure

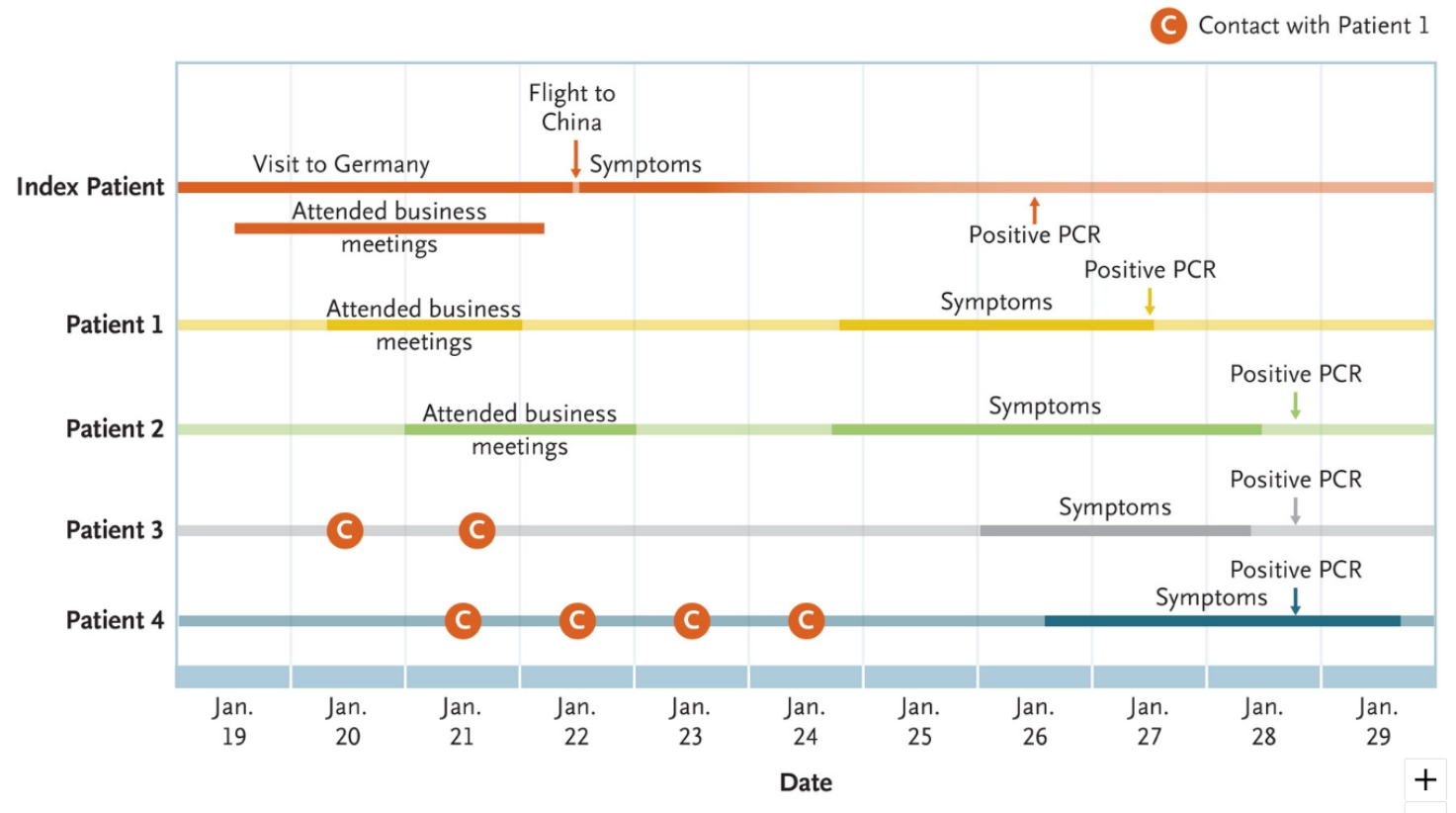


Transmission

- Evolving story
- Contact and droplet predominantly
 - “Aerosol generating procedures”
- Currently human-to-human mainly in Hubei and in hospitals
 - Likely to increase
- Questions around transmissibility pre-symptoms

German cases (NEJM) – pre-symptomatic transmission?

- Index: Chinese employee
- Contact with two cases pre-symptoms
- Patient 1: contact with two further cases
- Appears to be rare



Basic Reproductive Number (R0)

Disease	Transmission	R ₀
Measles	Airborne	12 - 18
Diphtheria	Saliva	6 - 7
Smallpox	Airborne droplet	5 - 7
Polio	Faecal-oral	5 - 7
Rubella	Airborne droplet	5 - 7
Mumps	Airborne droplet	4 - 7
Pertussis	Airborne droplet	5 - 6
SARS	Airborne droplet	2 - 5
2019-nCoV	Airborne droplet	2 - 4
Influenza (1918 pandemic)	Airborne droplet	1.5 – 2.5

Case fatality ratio

Disease	Mortality
1918 influenza pandemic	5%
SARS	10-15%
MERS	30-35%
Avian influenza	50-60%
Ebola	> 60%
2019-nCoV	~ 3-7% (est)

Australian response

- Established system of co-ordination
- Australian Health Protection Principal Committee
 - Chief Medical Officer (Dr Brendan Murphy) + all state/territory CHOs
- Communicable Disease Network of Australia
 - All heads of Communicable Diseases Branches + experts
- National Incident Response
- National Guidelines (SoNG)
- International Health Regulations - PHEIC

Self-isolation

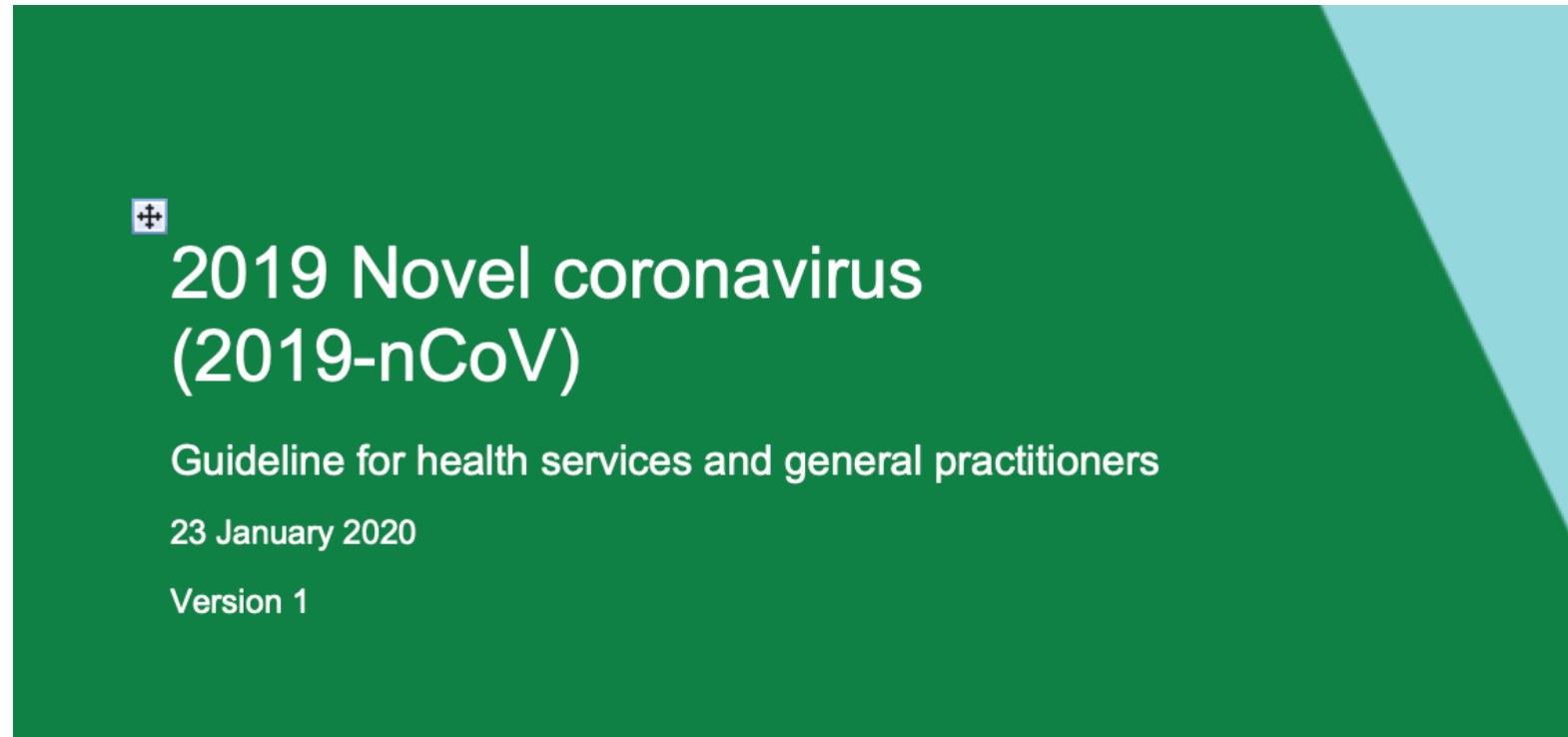
- Required for
 - Returning travellers from Hubei* province
 - Persons who have had close contact with confirmed case
 - Persons who have been in hospitals in China
- 14 days after last exposure
- Guidance provided for various settings – hotels, aged care, universities

Victorian response

- Chief Health Officer – Dr Brett Sutton
- Deputy CHO – Dr Annaliese Van Diemen
 - Incident Management Team
 - Authorisation of testing
 - Case and contact follow up
- VIDRL – testing and research
- Extensive information on DHHS website
 - Public and health professionals
 - Resources, including Chinese language

Management

Follow State, National and International guidelines



Contact, droplet, and airborne precautions

STOP **Visitors**
See a nurse for information before entering the room

For all staff
Contact Precautions
in addition to Standard Precautions

Before entering room

- 1 Perform hand hygiene
- 2 Put on gown or apron
- 3 Put on gloves

On leaving room

- 1 Dispose of gloves
- 2 Perform hand hygiene
- 3 Dispose of gown or apron
- 4 Perform hand hygiene

STOP **Visitors**
See a nurse for information before entering the room

For all staff
Airborne Precautions
in addition to Standard Precautions

Before entering room

- 1 Perform hand hygiene
- 2 Put on N95 or P2 mask
- 3 Perform a fit check of the mask

On leaving room

- 1 Dispose of mask
- 2 Perform hand hygiene

Keep door closed at all times

STOP **Visitors**
See a nurse for information before entering the room

For all staff
Droplet Precautions
in addition to Standard Precautions

Before entering room

- 1 Perform hand hygiene
- 2 Put on a surgical mask

On leaving room

- 1 Dispose of mask
- 2 Perform hand hygiene

Droplet precautions

- Surgical mask
- Eye protection
- Gloves
- Gown
- Hand hygiene



- Sufficient for “routine” patient care
- Mask on patient



Airborne precautions

- P2 mask
- Eye protection
- Gloves
- Gown
- Hand hygiene
- “Coach” colleagues
- Aerosol generating procedures
 - Nasopharyngeal swab
 - Intubation
 - Bronchoscopy
- Avoid nebulisers



How do I prepare?

- Systems to identify patients
 - Education of staff
 - Screening questions for staff
 - Website
 - Signage in English and Chinese
- Keep up to date with current advice (DHHS website)

若你有发烧并伴有咳嗽、
喉咙痛或气短等症状，
并且在过去的一个月中去过海外，
请立即通知工作人员。



What do I need?

- Space
- PPE – masks, gowns, gloves
- Alcohol hand gel
- Swabs
- Disinfectant wipes
- GP “quick guide” – DHHS website
- Surgical masks –
 - Commonwealth stockpile
- P2 masks
 - Victorian stockpile
- Being distributed by DHHS to PHNs
- Case numbers expected to increase

Who might have nCoV?

- Clinical
 - Acute respiratory symptoms
 - (with or without fever)

AND

- Epidemiological
 - Travel to Hubei*
 - Contact with hospital in China
 - Contact with known case

What do I do then?

- Put mask on patient
- Place in single room and close door
- PPE for staff entering room
- Assess patient
- Call DHHS to discuss
 - 1300 651 160

How to I take a swab?

- Put on P2 mask and PPE
- Hand hygiene
- Flocked swab, flat to base of nose to back
- Send to usual pathology provider (call ahead)
- Send home/hospital
- Clean with wipes
- 30 minute room rest
- Nasopharygeal swabs x2
- Sputum if possible
- Call ahead to ED if requires hospitalisation

Pre-travel advice

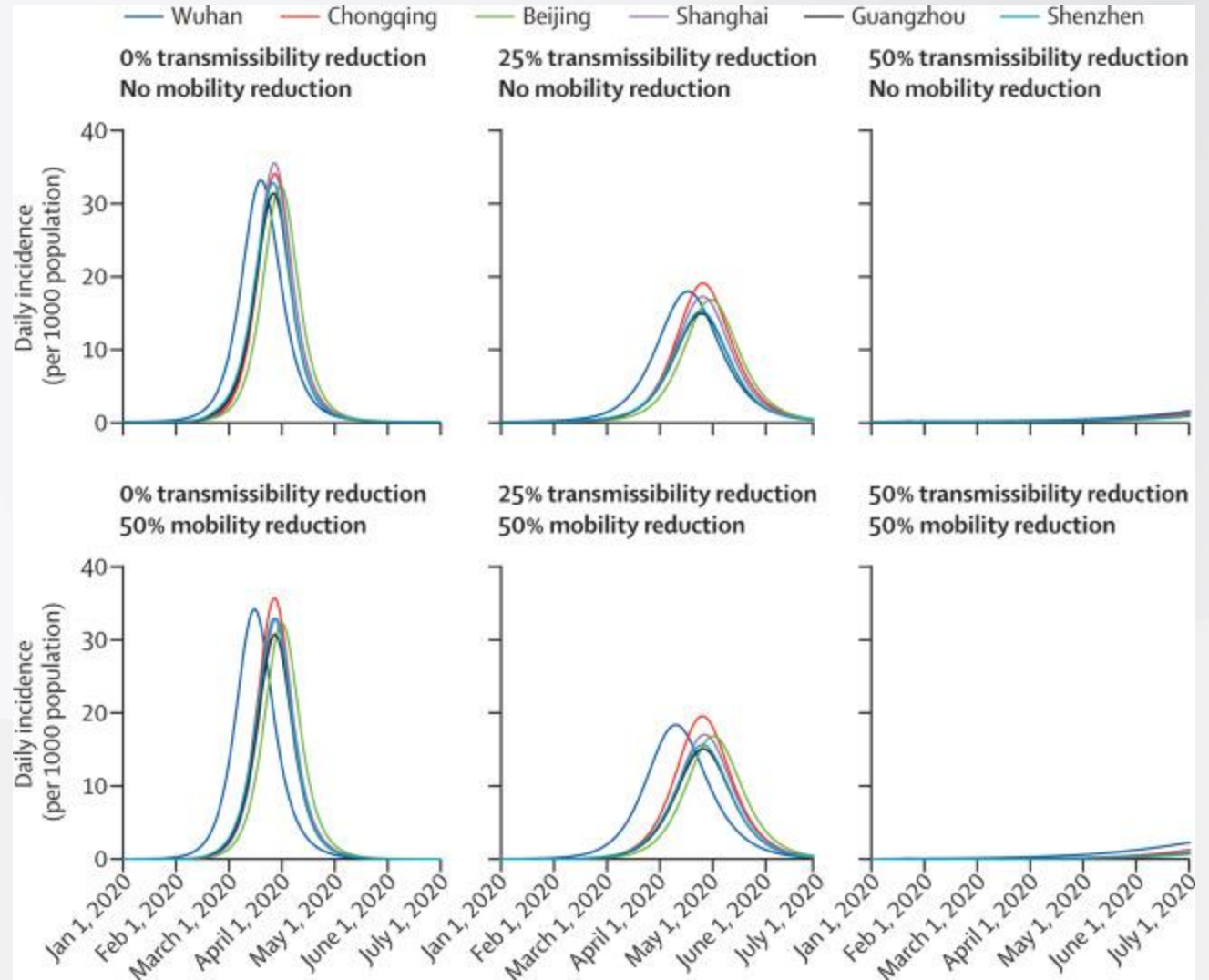
- Risk assessment
- Smart Traveller for official warnings
- Travel insurance
 - Call before cancelling
 - Check exclusions
- Personal hygiene
- Flu vaccine

What happens next?

- Control at source
- Established transmission in China
- Established transmission in other countries
- Established transmission in Australia
 - Australian Health Management Plan for Pandemic Influenza
 - “Menu of options” – border, personal measures, social distancing, impact mitigation and business continuity, (vaccines/antivirals)

Outbreak modelling

- Likely spread to major cities
- Effective control = longer outbreak
- May see very high numbers in 1-2 months



Misinformation



Official sources

- Australian Department of Health
- Victorian Department of Health and Human Services
- World Health Organization situation reports
- US Centers for Disease Prevention and Control (CDC)
- China Centre for Disease Control
- European Centre for Disease Prevention and Control (ECDC)

For further information, visit
<https://dhhs.vic.gov.au/novelcoronavirus>

Public Coronavirus hotline: **1800 675 398**
Medical public health hotline: **1300 651 160**

Acknowledgements

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