The COVID-19 Pandemic:
Public Health Response

A State and National perspective

The 2021 AMA Council of Doctors in Training CAS Forum

19 November 2021

Dr Sonya Bennett

MBBS FRACGP MPHTM FAFPHM GAICD

Deputy Chief Medical Officer

Australian Government Department of Health
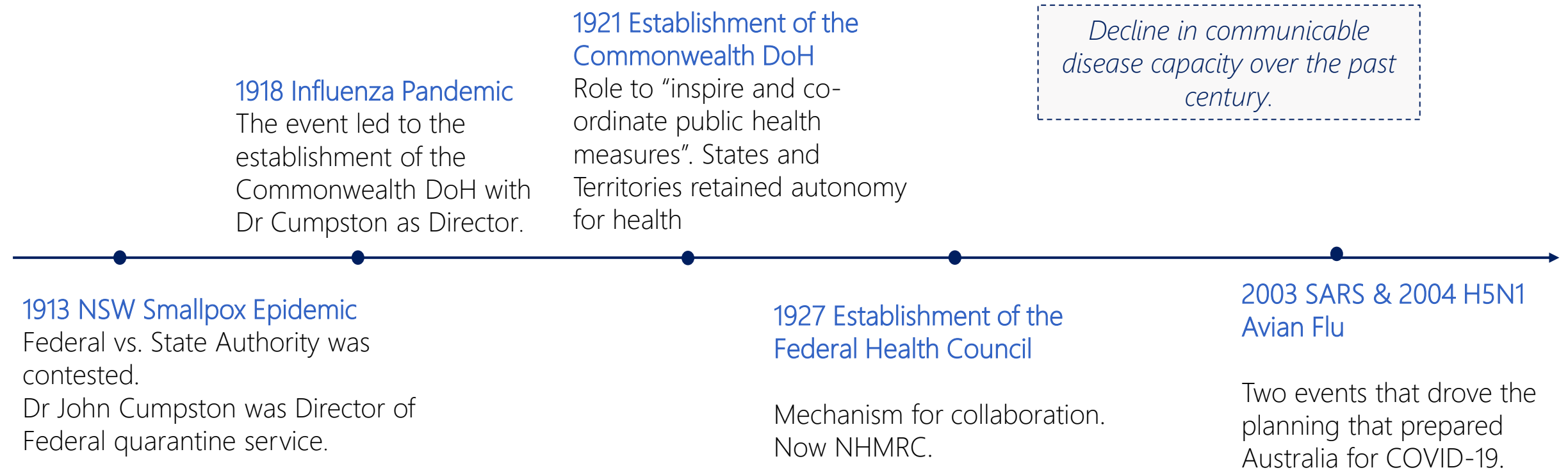
Presentation Structure

1   Governance and CDC in Australia

2   Planning and Preparedness

3   Response – early decision making

4   Reopening Australia

5   Living with COVID-19 and the future

"Emperors, explorers and presidents made decisions without fully understanding either the situation they faced or the effects of their actions. And so must we."

Radical Uncertainty:
Decision-making for an Unknowable Future
John Kay and Mervyn King, 2020

History of Communicable Disease Control Governance

Advocacy for National Leadership led to Establishing Commonwealth Dept of Health

1921 Establishment of the Commonwealth DoH
Role to "inspire and co-ordinate public health measures". States and Territories retained autonomy for health

1918 Influenza Pandemic
The event led to the establishment of the Commonwealth DoH with Dr Cumpston as Director.

Decline in communicable disease capacity over the past century.

1913 NSW Smallpox Epidemic
Federal vs. State Authority was contested.
Dr John Cumpston was Director of Federal quarantine service.

1927 Establishment of the Federal Health Council

Mechanism for collaboration.
Now NHMRC.

2003 SARS & 2004 H5N1 Avian Flu

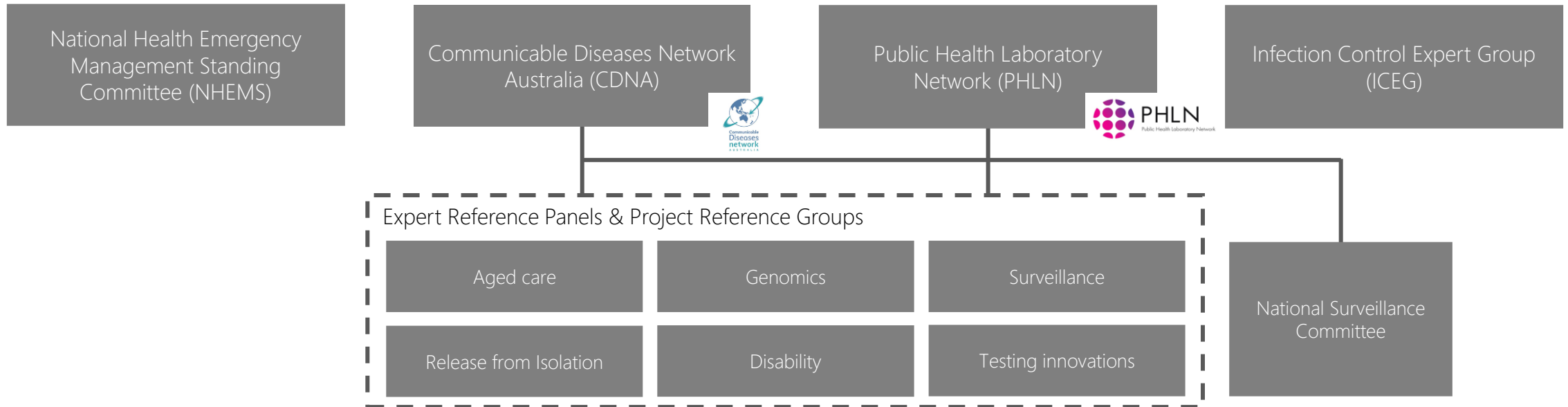Two events that drove the planning that prepared Australia for COVID-19.

Australian Government Crisis Management Framework 2020

The National Cabinet was convened in response to the pandemic. The Framework has supported a successful COVID response
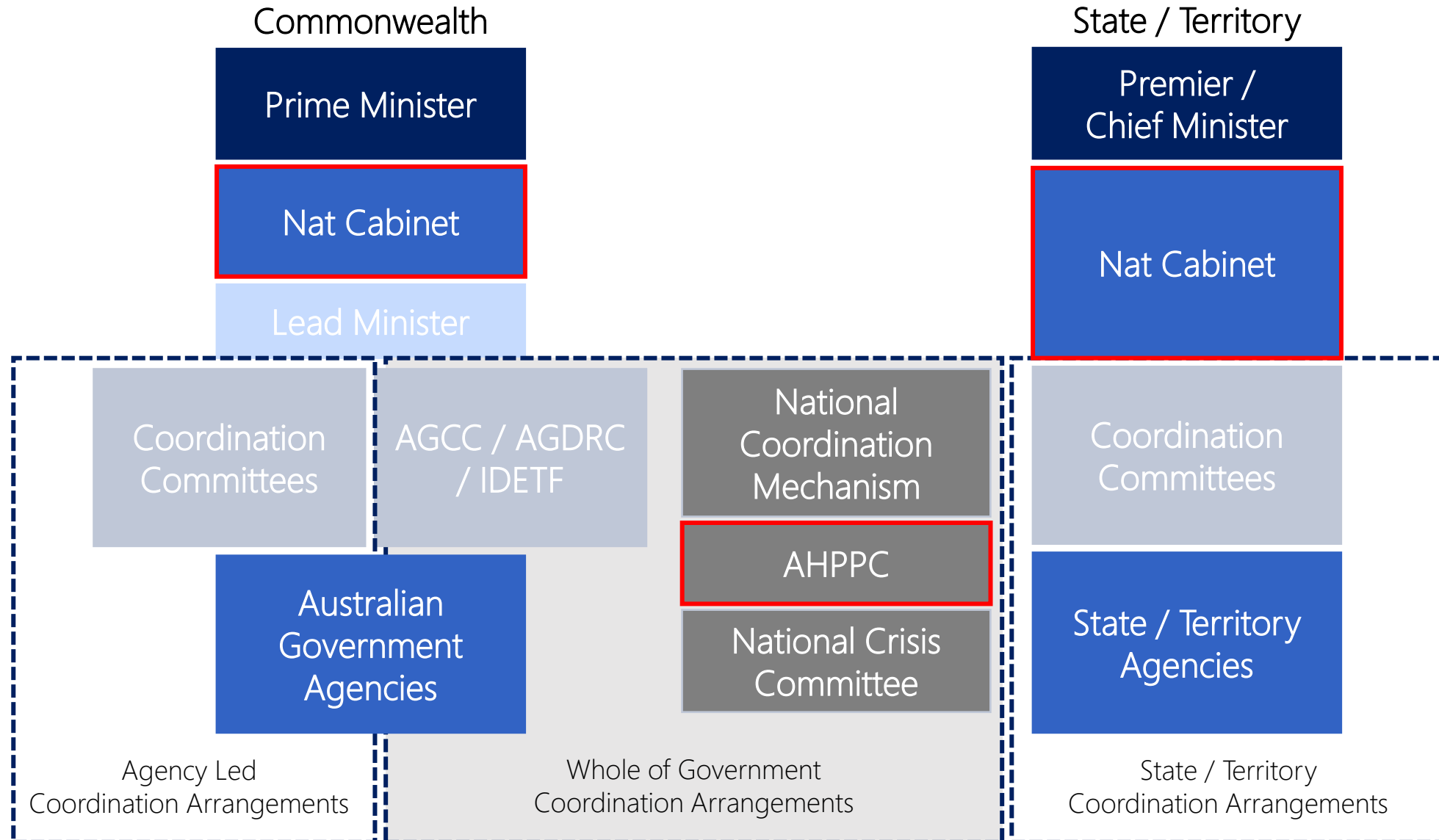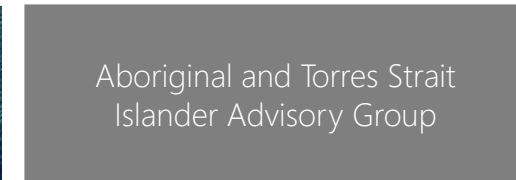
National Governance Health Response COVID-19

Australian Health Protection Principal Committee (AHPPC)

National Health Emergency Management Standing Committee (NHEMS)

Communicable Diseases Network Australia (CDNA)

Public Health Laboratory Network (PHLN)

Infection Control Expert Group (ICEG)

Expert Reference Panels & Project Reference Groups

Aged care	Genomics	Surveillance
Release from Isolation	Disability	Testing innovations

National Surveillance Committee

National Committees

Australian Academy of Science

National COVID-19 Health and Research Advisory Committee

Aboriginal and Torres Strait Islander Advisory Group

NATIONAL COVID-19 CLINICAL EVIDENCE TASKFORCE

NACCHO

Doherty Institute

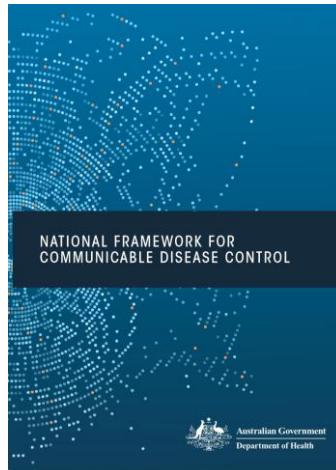Australian Academy of Health and Medical Sciences

COVID-19 Planning and Response – Art vs. Science

"In preparing for battle I have always found that plans are useless, but planning is indispensable."
Dwight D. Eisenhower

National Communicable Disease Control 2004-2019	COVID-19
• AHMPPI 2009, 2014 and 2019 • National Framework for Communicable Disease Control 2014 • Emergency Response Plan for Communicable Disease Incidents of National Significance (CDINS) 2016 • CDNA SARS and MERS CoV Public Health Guideline • National Action Plan for Health security 2018	• H1N1 Pandemic Review 2011 *"must be flexible to accommodate the biological variations in the clinical picture and the potential uniqueness of each pandemic scenario, to enable resources to be effectively directed to achieve optimal outcomes"* • CDNA COVID-19 Public Health Guideline (SoNG) 23 January 2020 • The Australian Health Sector Response Plan for Novel Coronavirus (COVID-19 Plan) 18 February 2020

NATIONAL FRAMEWORK FOR COMMUNICABLE DISEASE CONTROL

Australian Government
Department of Health

Communicable Diseases network
AUSTRALIA

Snapshot of COVID-19 in Australia

Figures as at 9 November 2021 | Source: Australian Government, Department of Health

Key components of response:
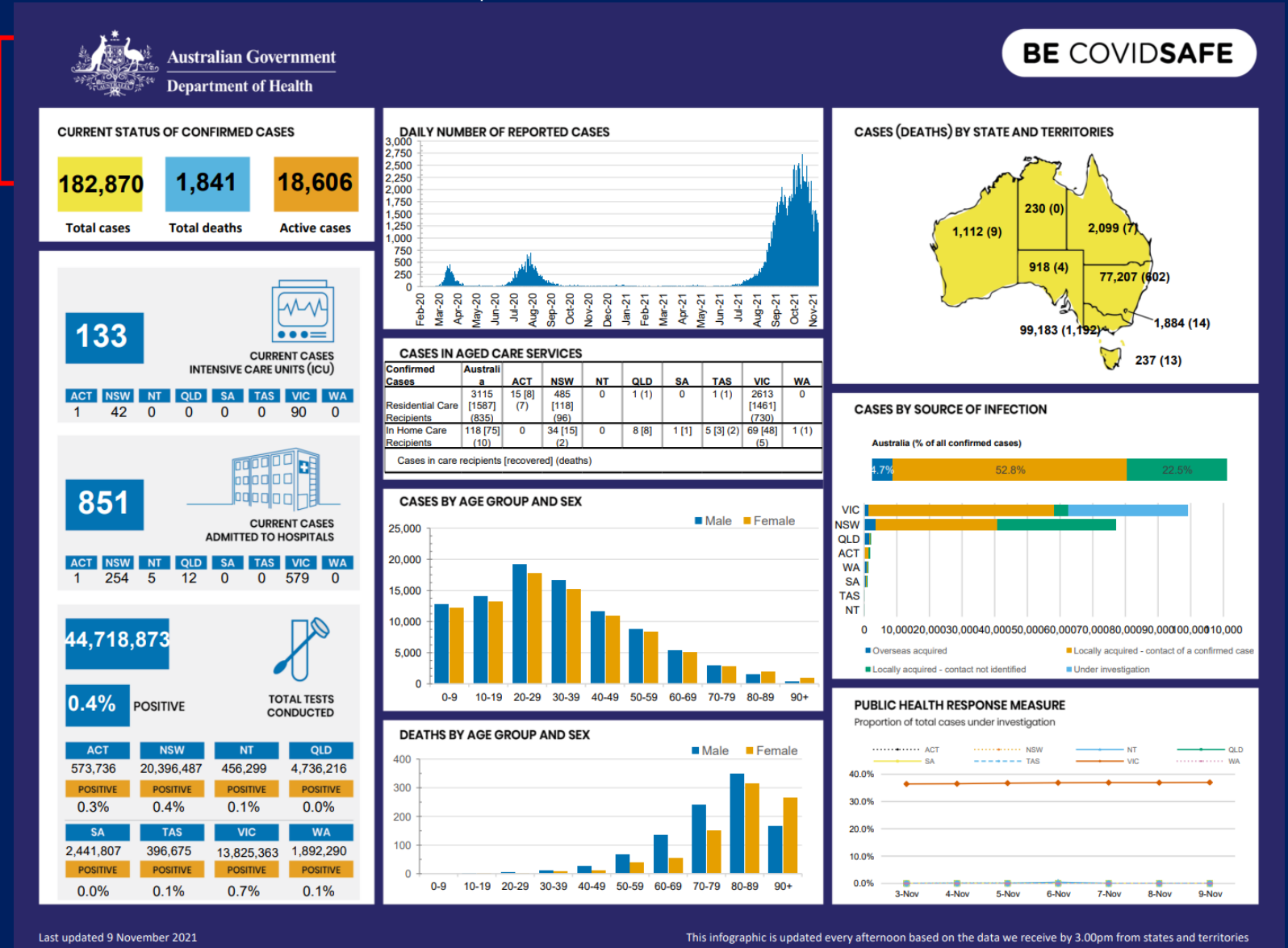
Broad testing strategy

Precautionary decisions on case and contact Mx

Border Management

Designated quarantine

First Nations partnership

Community support for measures

Australian Government — Department of Health

CURRENT STATUS OF CONFIRMED CASES

182,870	1,841	18,606
Total cases	Total deaths	Active cases

DAILY NUMBER OF REPORTED CASES

CASES (DEATHS) BY STATE AND TERRITORIES

230 (0)
1,112 (9)
2,099 (7)
918 (4)
77,207 (602)
99,183 (1,192)
1,884 (14)
237 (13)

133 — CURRENT CASES INTENSIVE CARE UNITS (ICU)

ACT	NSW	NT	QLD	SA	TAS	VIC	WA
1	42	0	0	0	0	90	0

CASES IN AGED CARE SERVICES

Confirmed Cases	Australia	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Residential Care Recipients	3115 [1587] (835)	15 [8] (7)	485 [118] (96)	0	1 (1)	0	1 (1)	2613 [1461] (730)	0
In Home Care Recipients	118 [75] (10)	0	34 [15] (2)	0	8 [8]	1 [1]	5 [3] (2)	69 [48] (5)	1 (1)

Cases in care recipients [recovered] (deaths)

851 — CURRENT CASES ADMITTED TO HOSPITALS

ACT	NSW	NT	QLD	SA	TAS	VIC	WA
1	254	5	12	0	0	579	0

CASES BY AGE GROUP AND SEX — Male / Female

44,718,873 — **0.4% POSITIVE** — TOTAL TESTS CONDUCTED

ACT	NSW	NT	QLD
573,736	20,396,487	456,299	4,736,216
POSITIVE 0.3%	POSITIVE 0.4%	POSITIVE 0.1%	POSITIVE 0.0%

SA	TAS	VIC	WA
2,441,807	396,675	13,825,363	1,892,290
POSITIVE 0.0%	POSITIVE 0.1%	POSITIVE 0.7%	POSITIVE 0.1%

DEATHS BY AGE GROUP AND SEX — Male / Female

CASES BY SOURCE OF INFECTION

Australia (% of all confirmed cases)

4.7% | 52.8% | 22.5%

Overseas acquired / Locally acquired - contact of a confirmed case / Locally acquired - contact not identified / Under investigation

PUBLIC HEALTH RESPONSE MEASURE

Proportion of total cases under investigation

ACT | NSW | NT | QLD | SA | TAS | VIC | WA

3-Nov 4-Nov 5-Nov 6-Nov 7-Nov 8-Nov 9-Nov

COVID-19 Timeline of Early Events in Australia

Stakeholders: ☐ QLD ☐ Commonwealth ☐ International

8 – 14 Jan 2020

- First fatal case reported
- Named as 2019-nCoV; whole genome sequence shared with WHO
- First case in Thailand reported
- First case in Japan reported

10 Jan: First meeting of CDNA; 319 meetings to date

22 – 31 Jan 2020

22 Jan: QH PHESS

23 Jan: Wuhan borders closed

23 Jan: Interim SoNG [56 versions] published, daily TCs commenced

24 Jan: CHO Stakeholder meeting

25 Jan: SHECC Stood Up

March 2020

20 Mar: Closure of international borders

26 Mar: Biosecurity Determination to restrict access to remote communities

27 March: Compulsory hotel quarantine commenced

1 – 7 Jan 2020

- Huanan Seafood Wholesale market closed
- Novel corona virus isolated

15 – 21 Jan 2020

- First case in Korea reported
- Two cases in Beijing and one case in Guangdong province reported
- Infection in health-care workers caring for 2019-nCoV patients
- 835 cases reported in China

20 Jan: CDNA met and recommended national coordination (CDINS)

21 Jan: Listed Human Disease

21 Jan: PCR developed VIC, NSW, QLD

25 Jan: First Australian Case

25 – 26 Jan: Presymptomatic transmission risk in SoNG

27 Jan: Case definition expanded to Hubei

28 Jan: First QLD Case

29 Jan: QLD Public Health Emergency declared

30 Jan: QLD controlled notifiable disease

30 Jan: WHO PHEIC

Feb 2020

01 Feb: Mainland China added to case definition

01 Feb: Travel restrictions imposed by Australian government

18 Feb: Australian COVID-19 Response Plan published

The Role of Evidence in Early Decision Making

Novel virus | Rapidly changing landscape | Infodemic | Poor quality data

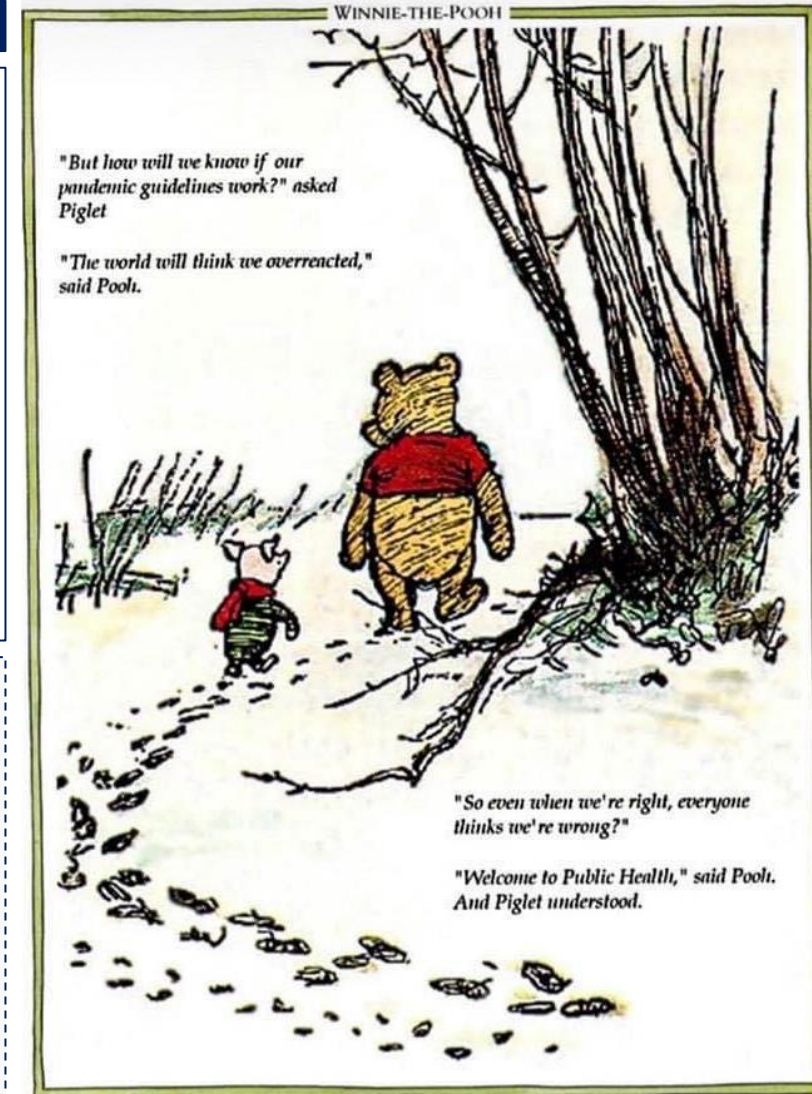| Optimal Decisions	World Health Organisation

• **Memorable decisions**
  • Presymptomatic transmission
  • Testing consumable shortage and broad case defns
  • School closures
  • Release from isolation criteria
• **Agile decisions**
  • Contact defns
  • Release from isolation criteria
  • Masks...!
  • VOC amendments more recently
	• WHO Director General Feb 2020
	
	"...we reiterate our call to all countries not to impose restrictions inconsistent with the International Health Regulations. Such restrictions can have the effect of increasing fear and stigma, with little public health benefit."
	
	• WHO Independent Panel
	
	"...too many countries took a 'wait and see' approach rather than enacting an aggressive containment strategy that could have forestalled the global pandemic."

Regarding the infectious period issue, I think most agree that the evidence for similar viruses shows infectivity prior to onset of symptoms is ==probably negligible== *and highest when symptoms are at their peak. The reason why we might manage some cases differently now is primarily that:*

- *It is still a nCoV so we can't necessarily be certain it will behave exactly the same?*
- *Globally we are still aiming for containment. (recognising some agree we are already past this)*
- *These are the first few cases into Australia*
- *We have capacity atm to do a little more than we might otherwise*
- *To have transmission on a plane when we knew of a confirmed case would be disastrous for public and political confidence*

WINNIE-THE-POOH

"But how will we know if our pandemic guidelines work?" asked Piglet

"The world will think we overreacted," said Pooh.

"So even when we're right, everyone thinks we're wrong?"

"Welcome to Public Health," said Pooh. And Piglet understood.

Innovation

COVID-19 Innovation in Health Sector

A — Surveillance – Whole Genomic Sequencing

B — Surveillance - Wastewater

C — Medical research – vaccines, treatments, tests

D — Viruses and aerosilisation

E — Supply Chain independence

F — How and where patient care is provided: telehealth; e-scripts

G academic, operational policy partnerships and collaboration

Dr Devi Shetty 2017 - Indian cardiac surgeon and entrepreneur.

"The entire health care industry will turn upside-down in the next ten years. This will happen primarily due to technology. The hundreds of patients who are waiting outside my office will disappear. Patients will be in touch with doctors through mobile phones from their homes...personal health records will be maintained on their own phones...a doctor might be sitting in their farm house, and doing a major surgery in Africa... kids who are really good at playing video games will become the best surgeons."

The new norm

Living with COVID

1 Maintain physical distancing (1.5m)

2 Wear a mask when distancing is not possible (particularly in enclosed spaces)

3 Maintain good hand hygiene

4 Stay at home when sick

5 Collection of contact details to allow for effective contact tracing

6 Rapidly responding to outbreaks

7 Travel restrictions from hot spots

8 COVID Safe Plan or Checklist in place

COVID-19 Reviews

Each jurisdiction runs its pandemic health response its own way, but they are all willing to share and to learn

Finkel Review	Halton Review

Finkel Review

- Constant Preparation
- End to end contact tracing
- Outbreak investigation and management
- Data exchange
- Technology
- A conversation with communities
- Earning community confidence

National Contact Tracing Review

A report for Australia's National Cabinet
November 2020

Halton Review

- Embed end-to-end assurance mechanisms and continuous improvement
- Information on the quarantine system should be easy to access by travellers
- People in quarantine should have access to timely decision making, review processes and complaints mechanisms
- Options for new models of quarantine should be developed, including a risk assessment
- Consider exempting low risk cohorts, such as travellers from New Zealand
- Consider the establishment a national facility for quarantine for urgent scalability

National Review of Hotel Quarantine

Factors to consider in Re-opening

Guiding the reopening of Australia and leading a shift from a pandemic response to an endemic state.

Factors

- Supported by modelling and Evaluation
- Underpinned by a Vaccination Program
- These tactics will not be linear or binary
- Arrivals Management
  - Models of quarantine
- Diagnostics and Surveillance
  - Rapid Ag tests
- Case and contact management
  - Public health workforce
- Outbreak management
  - Health System capacity
  - Social restrictions
- Community Engagement
  - Risk comms
  - Mask wearing

Knowns, Unknowns & Modifiers

- Impact of VOCs
- Vaccine coverage
- Longevity of immune protection
- Geographic and demographic differences
- Treatments
- PEP

Radical Uncertainty: Decision-making for an Unknowable Future
John Kay and Mervyn King, 2020

"This is a world of uncertain futures and unpredictable consequences, about which there is necessary speculation and inevitable disagreement – disagreement which often will never be resolved."."

National Plan to Transition Australia's National COVID-19 Response

Guiding the reopening of Australia and leading a shift from a pandemic response to an endemic state.
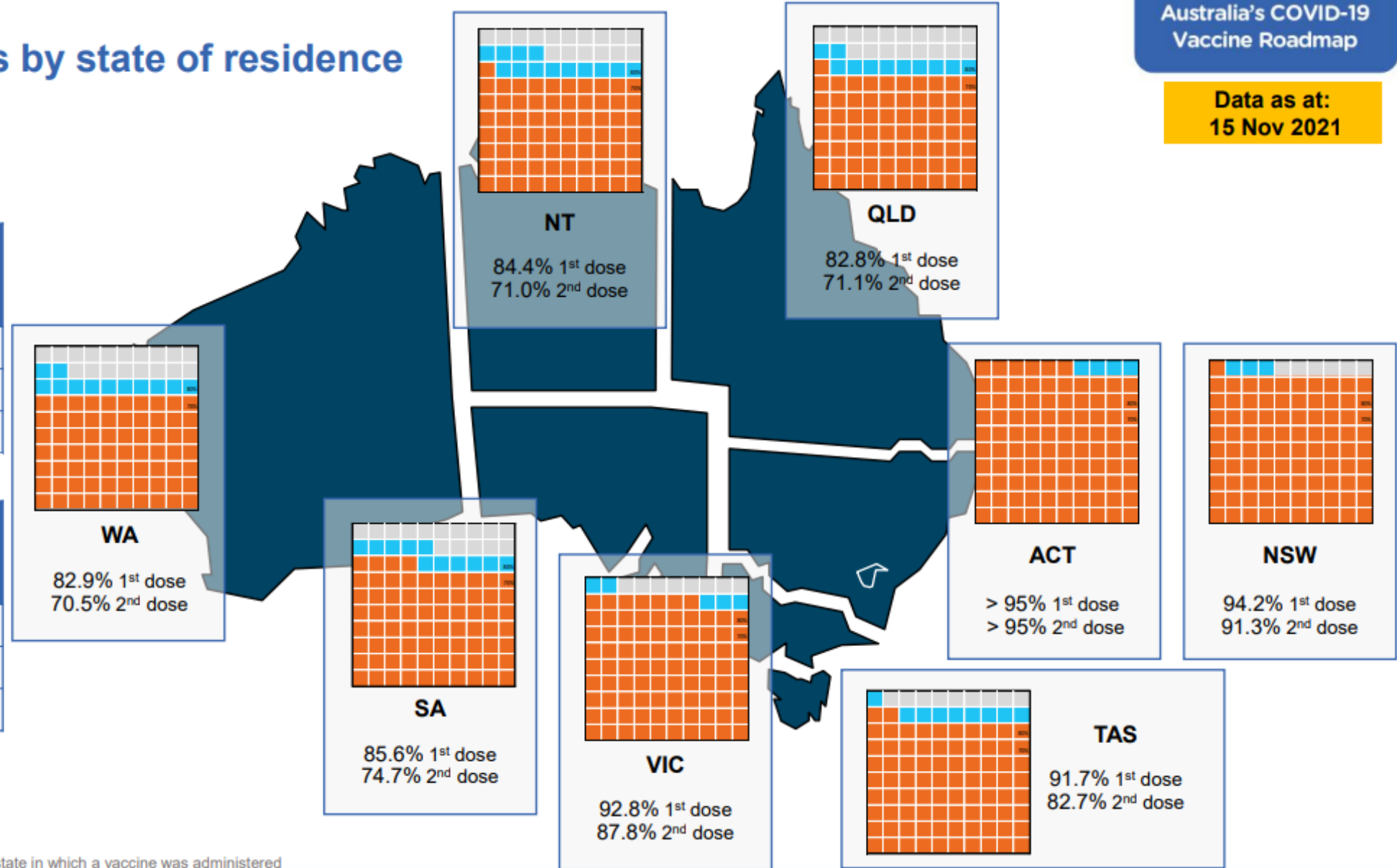
Phases triggered in a jurisdiction when the average vaccination rates across the nation have reached the threshold and that rate is achieved in a jurisdiction expressed as a percentage of the eligible population (16+), based on the scientific modelling conducted for the COVID-19 Risk Analysis and Response Task Force

~70% vaccination
(2 doses)

≥80% vaccination
(2 doses)

A. Current Phase: Vaccinate, Prepare and Pilot*	B. Vaccination Transition Phase	C. Vaccination Consolidation Phase	D. Final Post-Vaccination Phase
Continue to strongly suppress the virus for the purpose of minimising community transmission	*Seek to minimise serious illness, hospitalisation and fatality as a result of COVID-19 with low level restrictions*	*Seek to minimise serious illness, hospitalisations and fatalities as a result of COVID-19 with baseline restrictions*	*Manage COVID-19 consistent with public health management of other infectious diseases*

A. Current Phase: Vaccinate, Prepare and Pilot*

Measures may include:

- Accelerate vaccination rates
- Close international borders to keep COVID-19 out
- Early, stringent and short lockdowns if outbreaks occur
- Minimise cases in the community through effective test, trace and isolate capabilities
- Implement the national vaccination plan to offer every Australian an opportunity to be vaccinated with the necessary doses of the relevant vaccine as soon as possible;
- Inbound passenger caps temporarily reduced
- Domestic travel restrictions directly proportionate to lockdown requirements
- Commonwealth to facilitate increased commercial flights to increase international repatriations to Darwin for quarantine at the Centre for National Resilience in Howard Springs;
- International Freight Assistance Mechanism extended
- Trial and pilot the introduction of alternative quarantine options, including home quarantine for returning vaccinated travellers;
- Expand commercial trials for limited entry of student and economic visa holders
- Recognise and adopt the existing digital Medicare Vaccination Certificate (automatically generated for every vaccination registered on AIR);
- Establish digital vaccination authentication at international borders;
- Prepare vaccine booster programme; and
- Undertake a further review of the national hotel quarantine network.

B. Vaccination Transition Phase

Measures may include:

- Maintain high vaccination rates, encouraging uptake through incentives and other measures
- Minimise cases in the community through ongoing low-level restrictions and effective track and trace
- Lockdowns less likely but possible
- International border caps and low-level international arrivals, with safe and proportionate quarantine to minimise the risk of COVID entering
- Ease restrictions on vaccinated residents (TBD)
- Restore inbound passenger caps at previous levels for unvaccinated returning travellers and larger caps for vaccinated returning travellers;
- Allow capped entry of student and economic visa holders subject to quarantine arrangements and availability;
- Introduce new reduced quarantine arrangements for vaccinated residents; and
- Prepare/implement vaccine booster programme (depending on timing).

C. Vaccination Consolidation Phase

Measures may include:

- Maximise vaccination coverage
- Minimum ongoing baseline restrictions, adjusted to minimise cases without lockdowns
- Highly targeted lockdowns only
- Continue vaccine booster programme;
- Exempt vaccinated residents from all domestic restrictions;
- Abolish caps on returning vaccinated Australians;
- Allow increased capped entry of student, economic, and humanitarian visa holders;
- Lift all restrictions on outbound travel for vaccinated Australians; and
- Extend travel bubble for unrestricted travel to new candidate countries (Singapore, Pacific)
- Gradual reopening of inward and outward international travel with safe countries and proportionate quarantine and reduced requirements for fully vaccinated inbound travellers.

D. Final Post-Vaccination Phase

Measures may include:

- Open international borders
- Quarantine for high-risk inbound travel
- Minimise cases in the community without ongoing restrictions or lockdowns
- Live with COVID-19: management consistent with influenza or other infectious diseases
- Boosters as necessary
- Allow uncapped inbound arrivals for all vaccinated persons, without quarantine; and
- Allow uncapped arrivals of non-vaccinated travellers subject to pre-flight and on arrival testing.

*No jurisdiction required to increase restrictions beyond current settings
The Plan is based on the current situation and is subject to change if required
The COVID-19 Risk Analysis and Response Taskforce's report will be available once finalised at: pmc.gov.au.

Vaccinations by state of residence

Australia's COVID-19 Vaccine Roadmap

Data as at: 15 Nov 2021

First doses

Age	Today	4 weeks ago	8 weeks ago
16+	90.7%	85.6%	73.8%
50+	>95%	93.7%	87.5%
70+	>95%	>95%	94.2%

Fully vaccinated

Age	Today	4 weeks ago	8 weeks ago
16+	83.5%	69.9%	48.6%
50+	90.9%	81.2%	67.7%
70+	94.7%	86.7%	76.4%

NT
84.4% 1st dose
71.0% 2nd dose

QLD
82.8% 1st dose
71.1% 2nd dose

WA
82.9% 1st dose
70.5% 2nd dose

SA
85.6% 1st dose
74.7% 2nd dose

VIC
92.8% 1st dose
87.8% 2nd dose

ACT
> 95% 1st dose
> 95% 2nd dose

NSW
94.2% 1st dose
91.3% 2nd dose

TAS
91.7% 1st dose
82.7% 2nd dose

*Residential state may differ from the state in which a vaccine was administered

3

Preparing our health care system for 'living with COVID-19'

Guiding the reopening of Australia and leading a shift from a pandemic response to an endemic state.

Preparing hospitals

- Enhancing ICU capacity
- Updating guidelines
- Surge planning
- Recruiting surge workforce
- Monitoring real-time data at a local, state and national level

Preparing community health care

- $180 million package to support primary care
- Updating guidelines
- Managing cases in their homes
- Triaging cases based on need
- Supporting vaccination and booster rollout

Preparing doctors

- Understanding latest guidance (e.g. furlough requirements)
- Upskilling health staff to support surge response
- Mental health support

Preparing patients

- Adjusting to a new COVID-19 normal
- Mental health and wellbeing
- Catching up on overdue care

Where to from here?

Communicable Disease Control

- Building on advances to date
  - supply chain
  - Research
  - partnerships
- Improve capacity and capability in health system
  - Public health workforce
  - Infection Control
  - Epidemiology
  - Integrate laboratory capability and expertise
- Data, data, data – interoperable systems, open data, access red tape

COVID-19

- Long COVID
- NON COVID Health Impacts
  - Mental health
  - Delays to treatment
- First Nations
- The widening inequality gap
- Regional/Global support
- Ongoing investments Research
- Post pandemic review and learnings
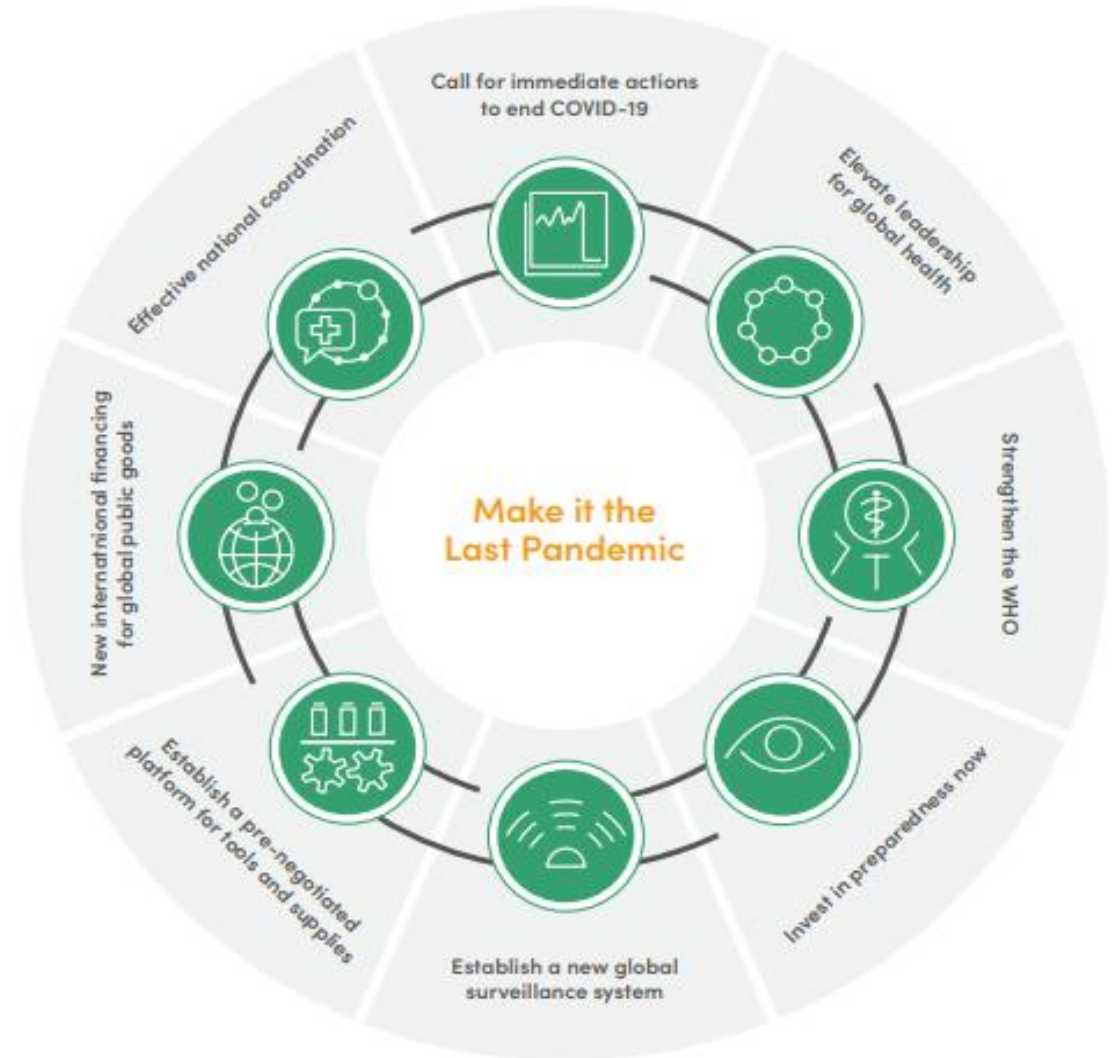
What does this mean for Doctors in Training?

- Learning through crisis

- Strengthening our health system capacity and capability

- Building resilience

- New opportunities for professional development

- Preparing for Australia's future

"In the eye of a storm like COVID, scientific and public health tools are essential, but so are humility and kindness. With solidarity, humility and assuming the best of each other, we can – and will – overcome this together."

Dr Tedros Adhanom Ghebreysus, Director-General World Health Organisation

The woods are lovely, dark and deep,
But I have promises to keep,
And miles to go before I sleep,
And miles to go before I sleep.

Stopping by Woods on a Snowy Evening
Robert Frost, pub 1923

This presentation is the view of the presenter and does not represent the views of the Commonwealth DoH or Qld Health

No conflicts of interest to disclose

Dr Sonya Bennett
MBBS FRACGP MPHTM FAFPHM GAICD
Deputy Chief Health Officer Queensland Health
Chair Communicable Disease Network of Australia