

# COVID-19 update – Alumni, staff and students

9 April 2020

**Jonathan Craig, Vice President / Executive Dean  
College of Medicine and Public Health**



**Flinders**  
UNIVERSITY



*Na Marni (welcome)*

*We acknowledge the traditional owners of the lands Flinders University teaches across (Arrernte, Boandik, Erawirung, Jawoyn, Kurna, Larrakia, Ngarrindjeri, Ngadjuri, Peramangk, Ramindjeri, Warumungu and Yolngu) and honour their Elders past and present.*



# COVID19 Epidemiology

- Caveats
  - Does not replace individual medical advice or advice from Australian Chief Medical Officer/SA and NT Chief Public Health Officer/Local jurisdiction advice
  - Rapidly evolving
- Sources
  - Covid19data.com.au
  - Australian Department of Health
    - <https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert>
  - SA Health
    - <http://emergencydepartments.sa.gov.au/wps/wcm/connect/Public+Content/SA+Health+Internet/Health+topics/Health+topics+A+--+Z/COVID+2019/>
  - WHO
    - <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/>
  - CMPH Centre for Epi/Biostats (Richard Woodman, Shahid Ullah, Barbara Toson, Mary Barnes, Feruza Kholmurodova)

# Some simple maths – numerator and denominators matter!

$n$  the number of people who get COVID-19

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$N$  the number of people who could get COVID-19

## Scenario 1 – 100% testing/perfect test

$$\frac{10}{100} = 10\%$$

*“Ascertainment bias” (only some cases are looked for) and  
“measurement bias” (only some cases who are tested are positive)*

## Scenario 2 – 50% testing/insensitive test

$$\frac{5}{100} = 5\%$$



# Incidence (new) vs Total (cumulative, all times) + Prevalent (total number at one time)

- Assume we have 100 people and five people get COVID-19 in Day 1 + Five in Day 2 + Five in Day 3
- The incidence (new cases) is 5/100 per day or 5% - *response to interventions*
- The cumulative number of cases (total) = 15/100 or 15% - *public health control*
- The prevalence (total number of cases at one point in time) is 12/100 = 12% (assuming three have recovered) – *healthcare impact*

# COVID-19 - summary

- Coronavirus – receptor in respiratory tract
- Caused by the SARS-CoV-2 virus (like EBV and “Mono”)
- Median incubation period 5-6 days (range 0-14 days)
- Presents with cough, fever, breathlessness, “flu-like” symptoms
- The effects of any public health measures are likely to be evident in 1-2 weeks with new cases, and then in 4-5 weeks with total cases (COVID-19 takes 3 weeks to resolve)
- Spread through droplets, aerosols, fomites



# Situation status internationally



Search by Country, Territory, or Area



[Overview](#)

[Explorer](#)

## Coronavirus (COVID-19)

Last updated: 2020/4/8, 12:00pm CEST

**Globally**, as of **2:00am CEST, 8 Apr 2020**, there have been **1,317,130 confirmed cases** of COVID-19, including **74,304 deaths**, reported to WHO.

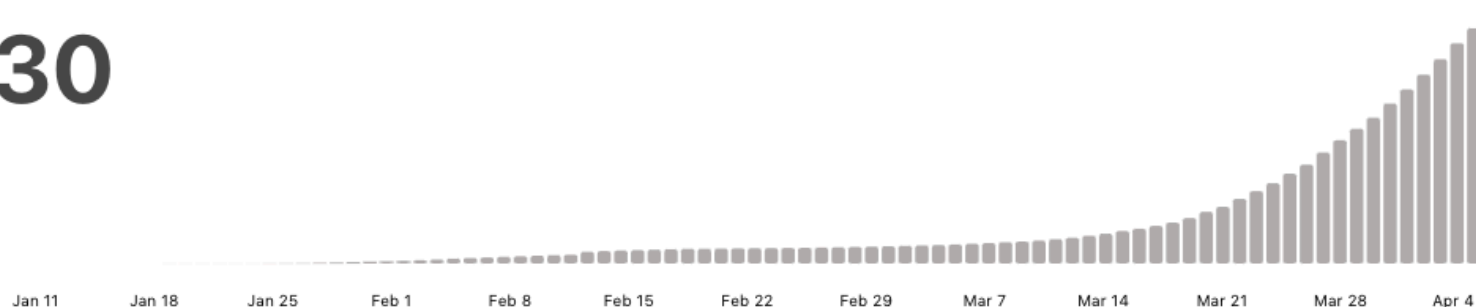
### Confirmed Cases Over Time

Cumulative

# 1,317,130

confirmed cases

Source: World Health Organization



### Deaths Over Time

Daily

# 74,304

deaths

Source: World Health Organization

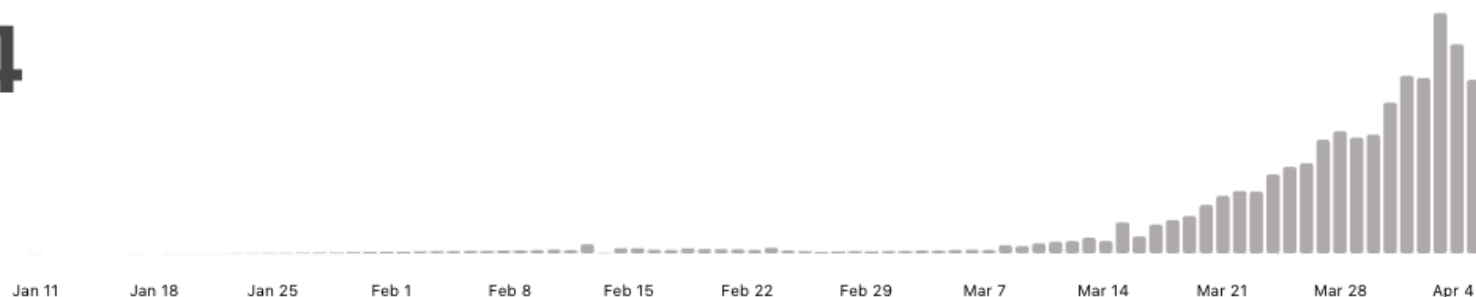
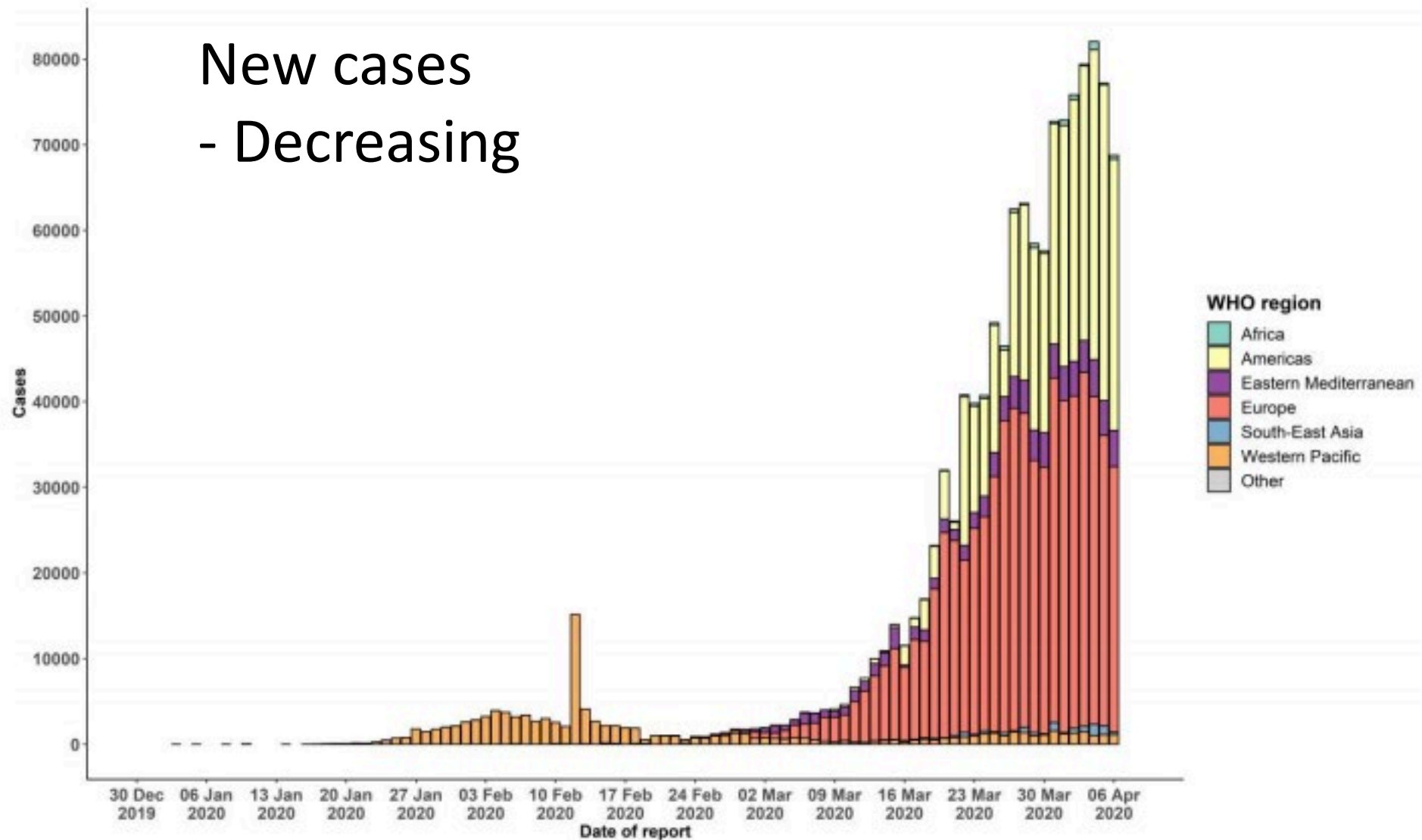




Figure 1. Epidemic curve of confirmed COVID-19, by date of report and WHO region through 7 April 2020



# **Situation status in Australia**

total cases, new cases, deaths, testing

“Cases” are people with stories and families

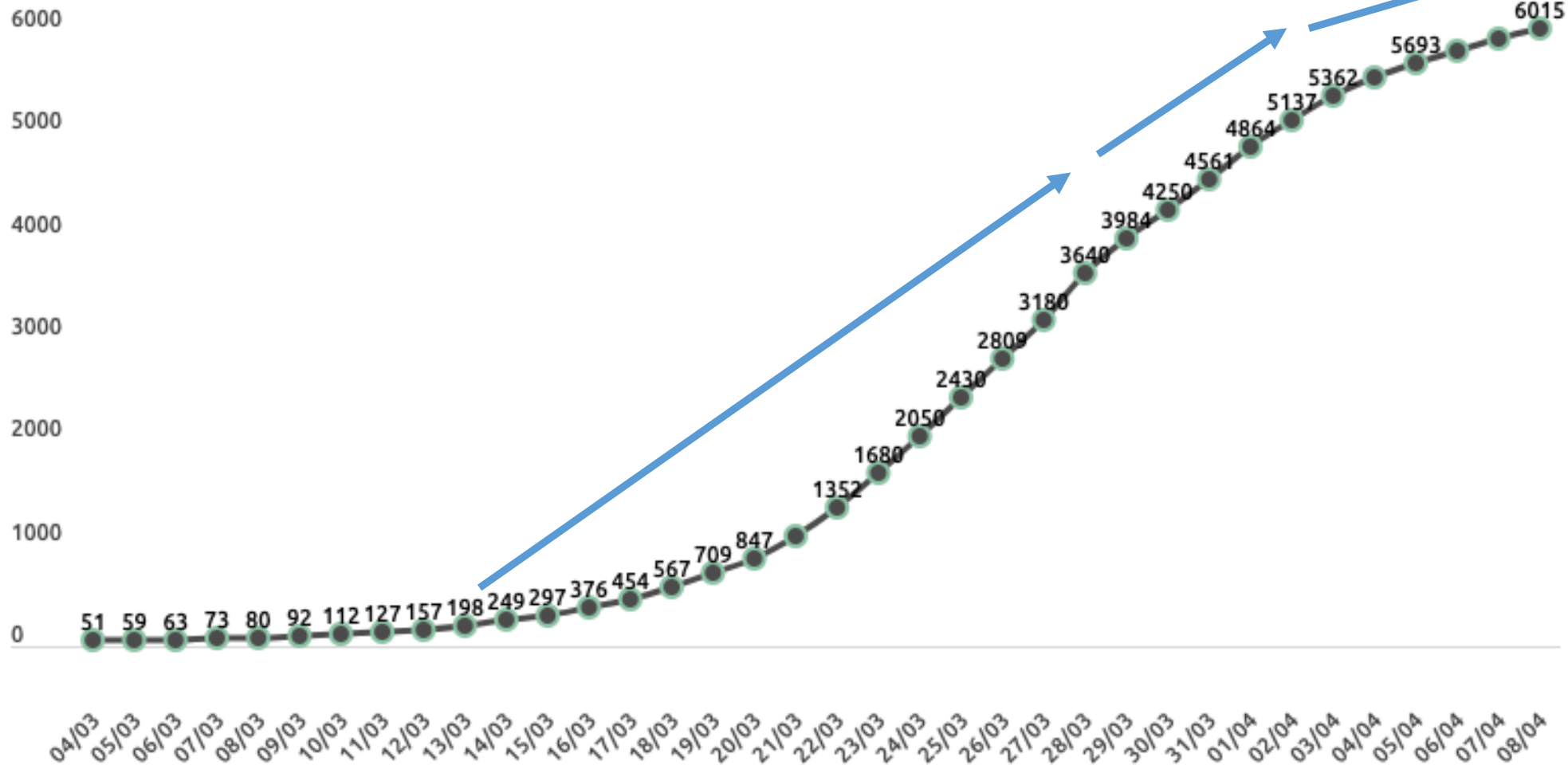


# Total cases (prevalent) April 8

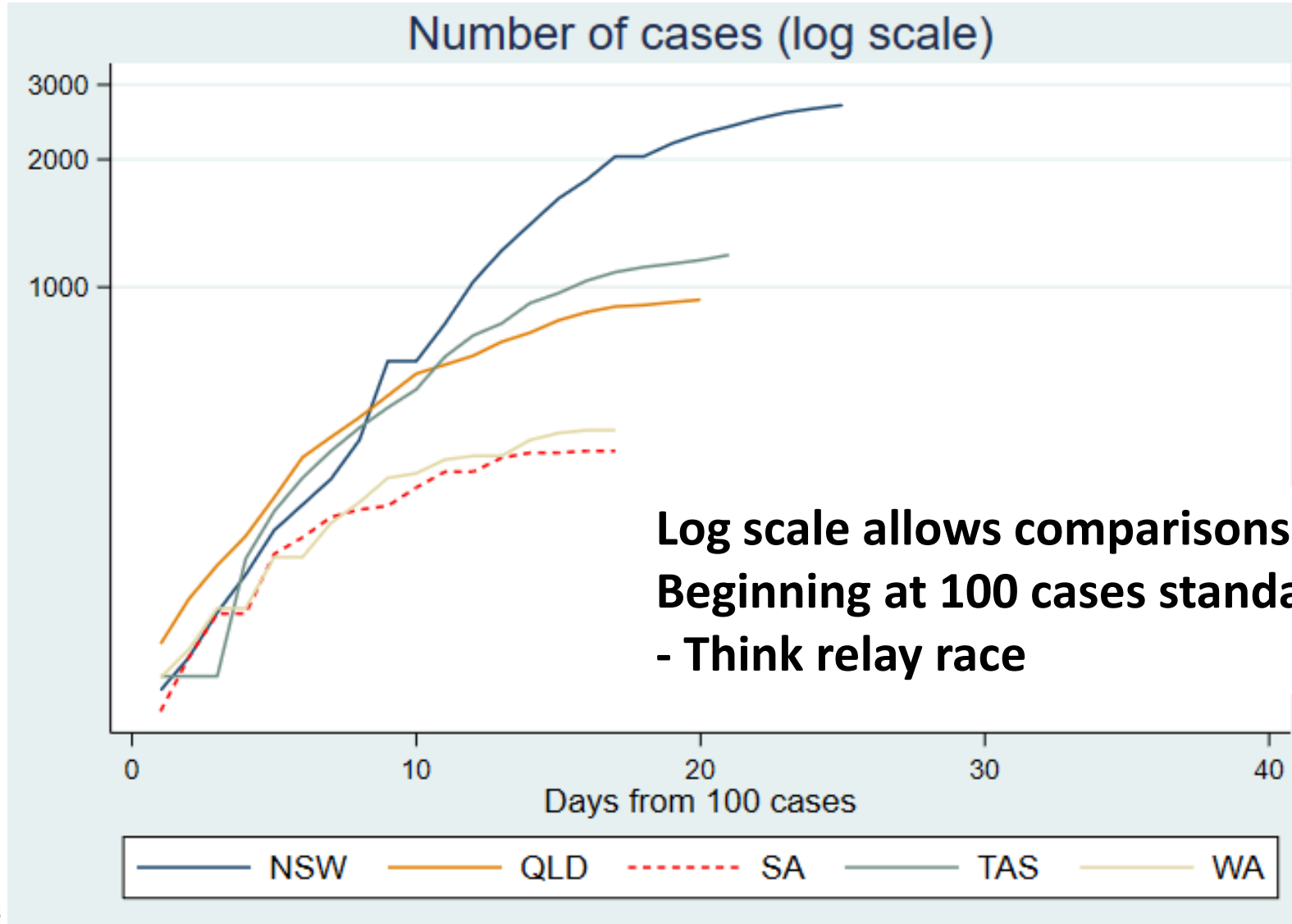
State	COVID-19 cases	% of all cases in Australia	% of Australia's population	Deaths
NSW	2,734	45.5%	31.9%	20
VIC	1,212	20.1%	25.9%	12
QLD	943	15.7%	20.0%	5
SA	420	7.0%	6.9%	2
WA	481	8.0%	10.3%	6
TAS	98	1.6%	2.1%	3
NT	28	0.5%	1.0%	0
ACT	99	1.6%	1.7%	2
Totals	6,015			50

# Cumulative view of confirmed cases of COVID-19 in Australia

From logarithmic → linear increasing → flattening

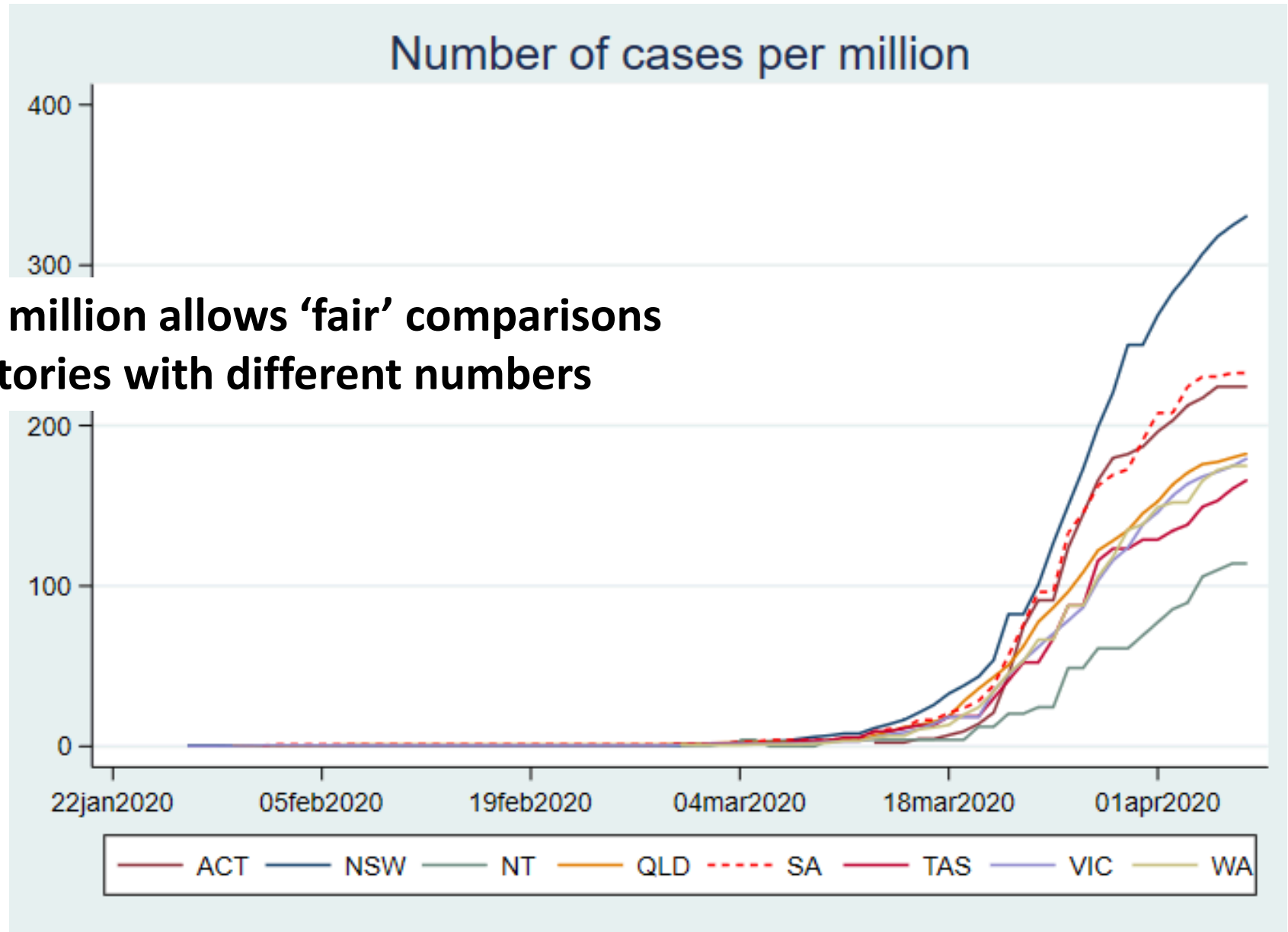


# Number of cases by state (log scale)



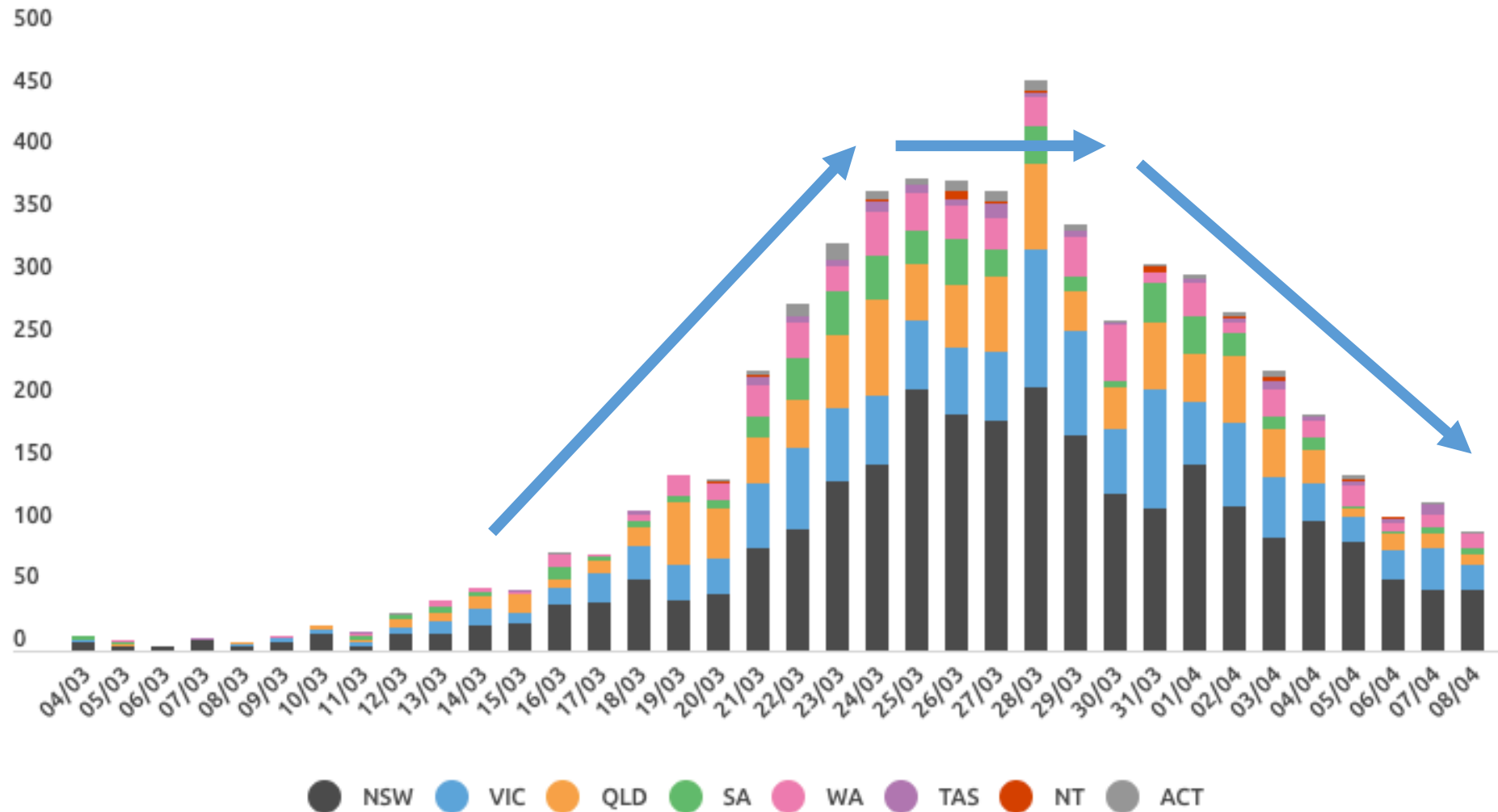
# Number of cases per million

Standardising/per million allows 'fair' comparisons across states/territories with different numbers



# New cases – trends matter, first to respond

there will be bad days and better days due to “noise” and real events



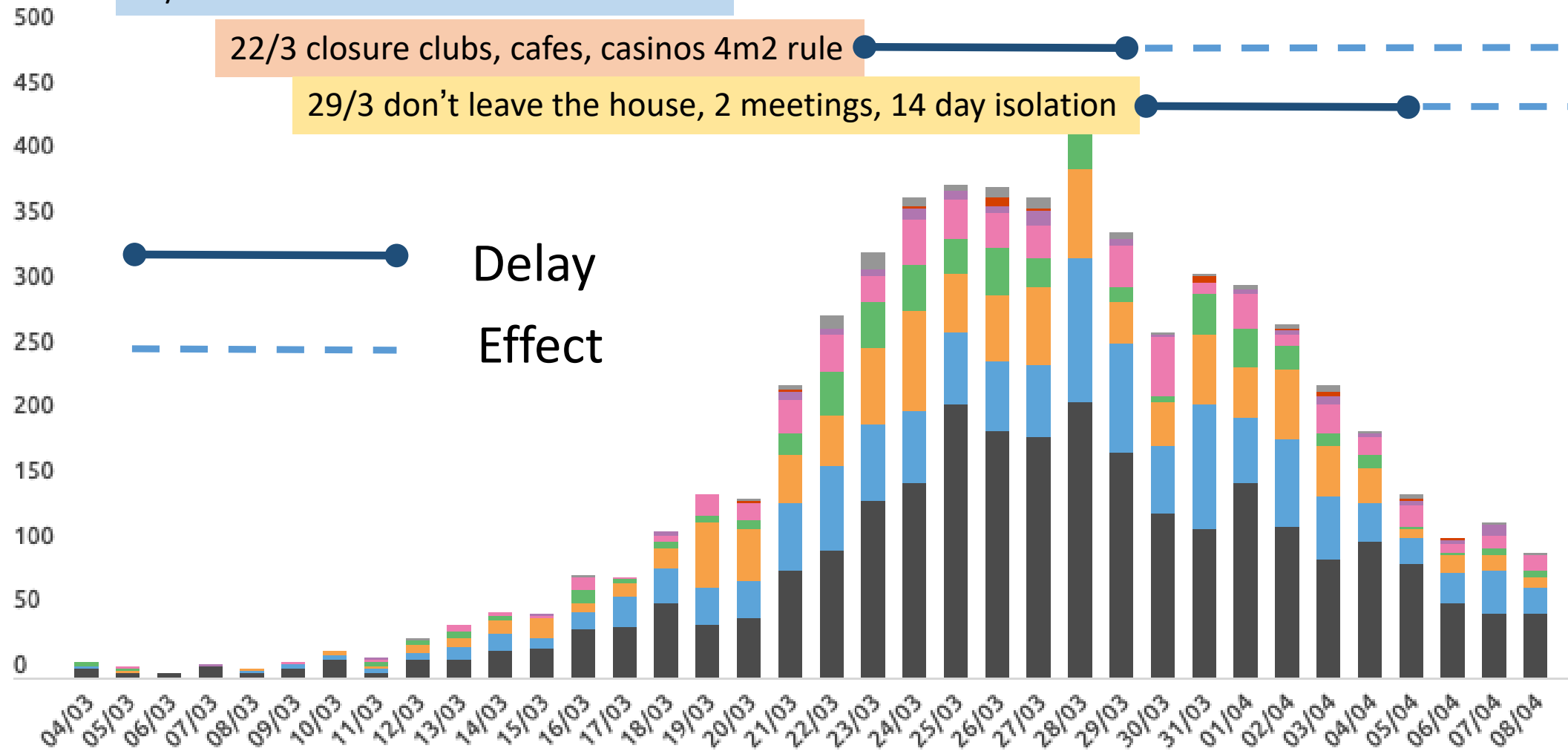


15/3 gatherings of > 500 cancelled  
Travellers arriving must self isolate 14 days

20/3 border closes to all non-residents

22/3 closure clubs, cafes, casinos 4m2 rule

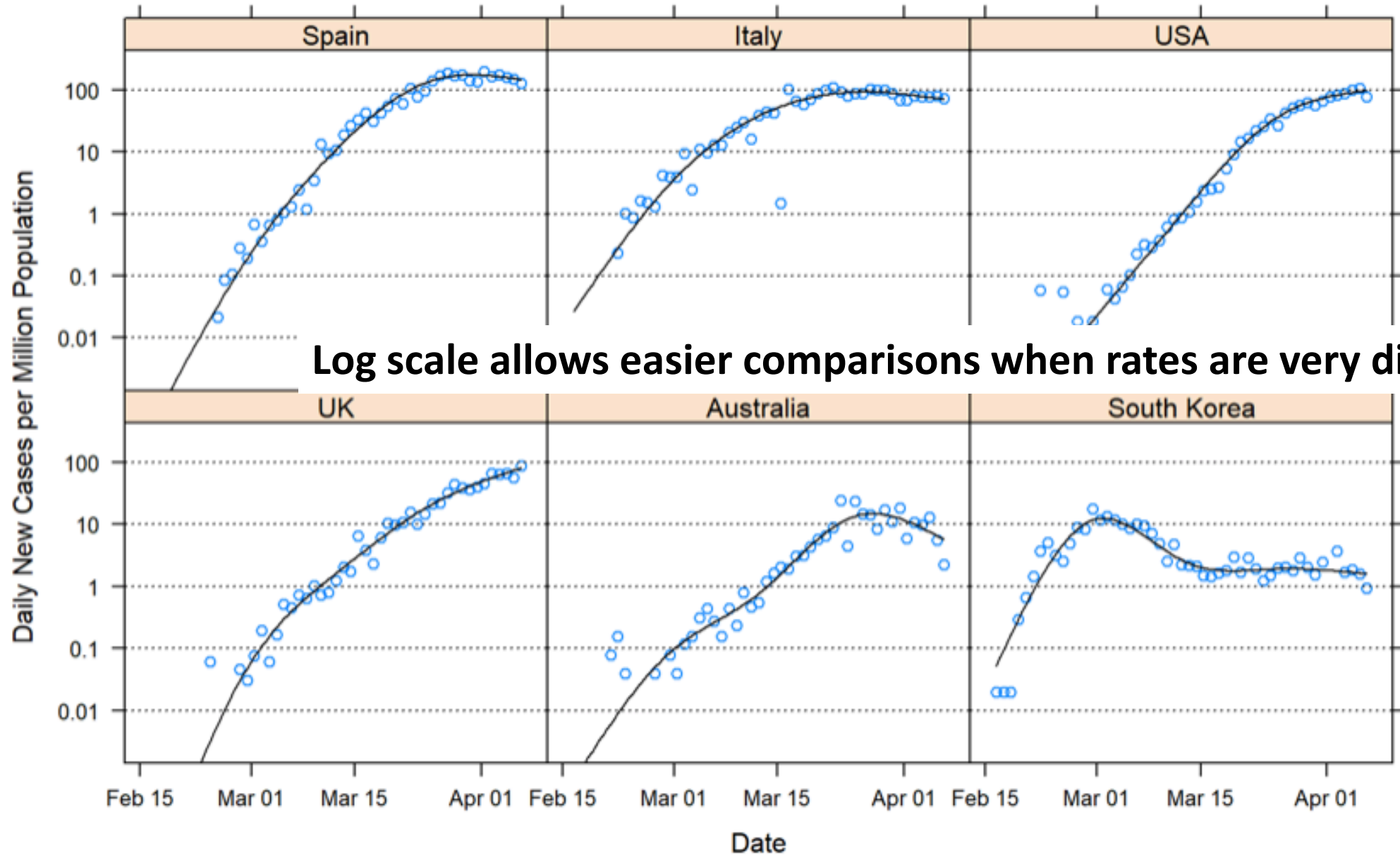
29/3 don't leave the house, 2 meetings, 14 day isolation



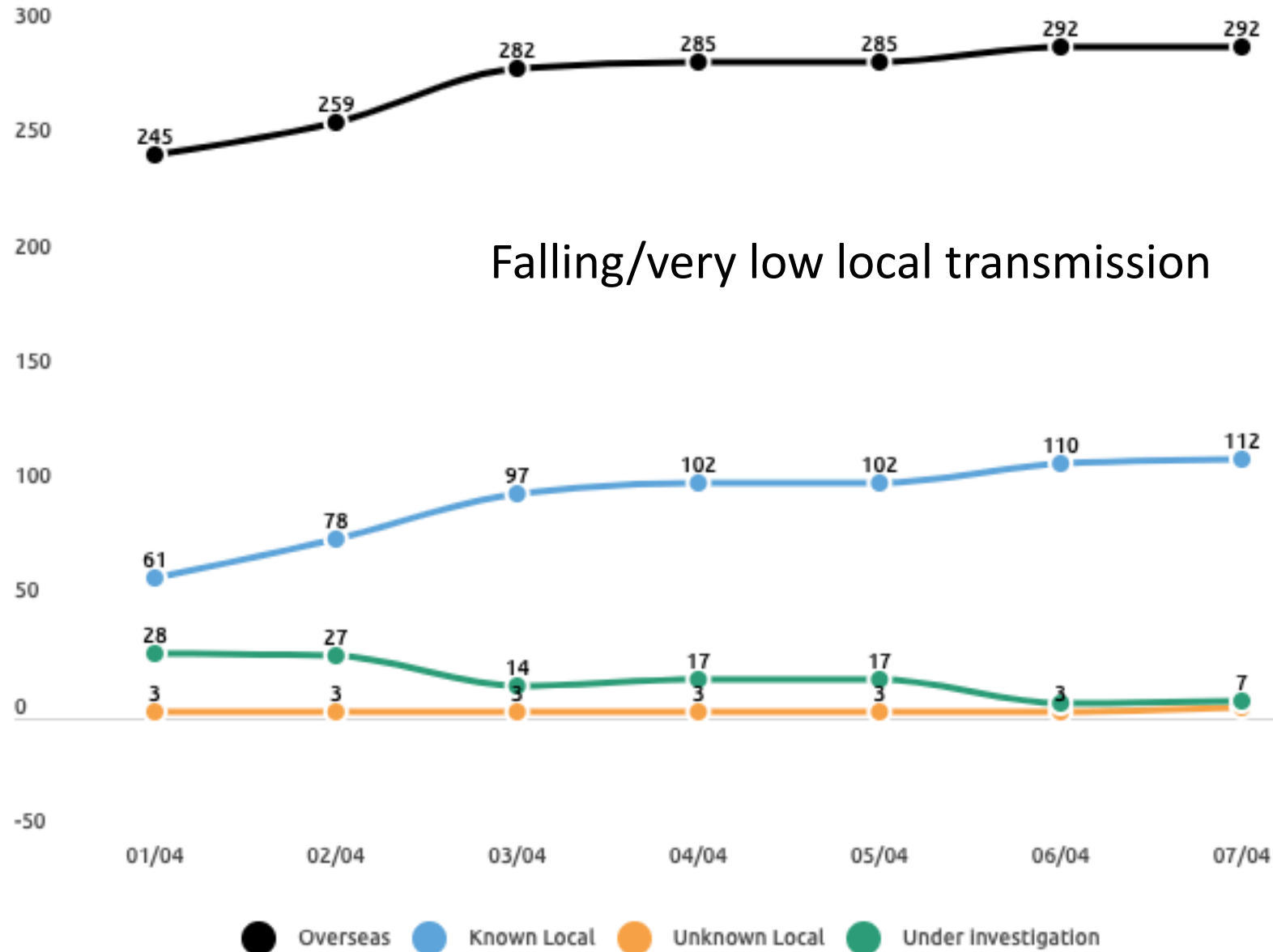
NSW VIC QLD SA WA TAS NT ACT

Thanks to Paul Glasziou

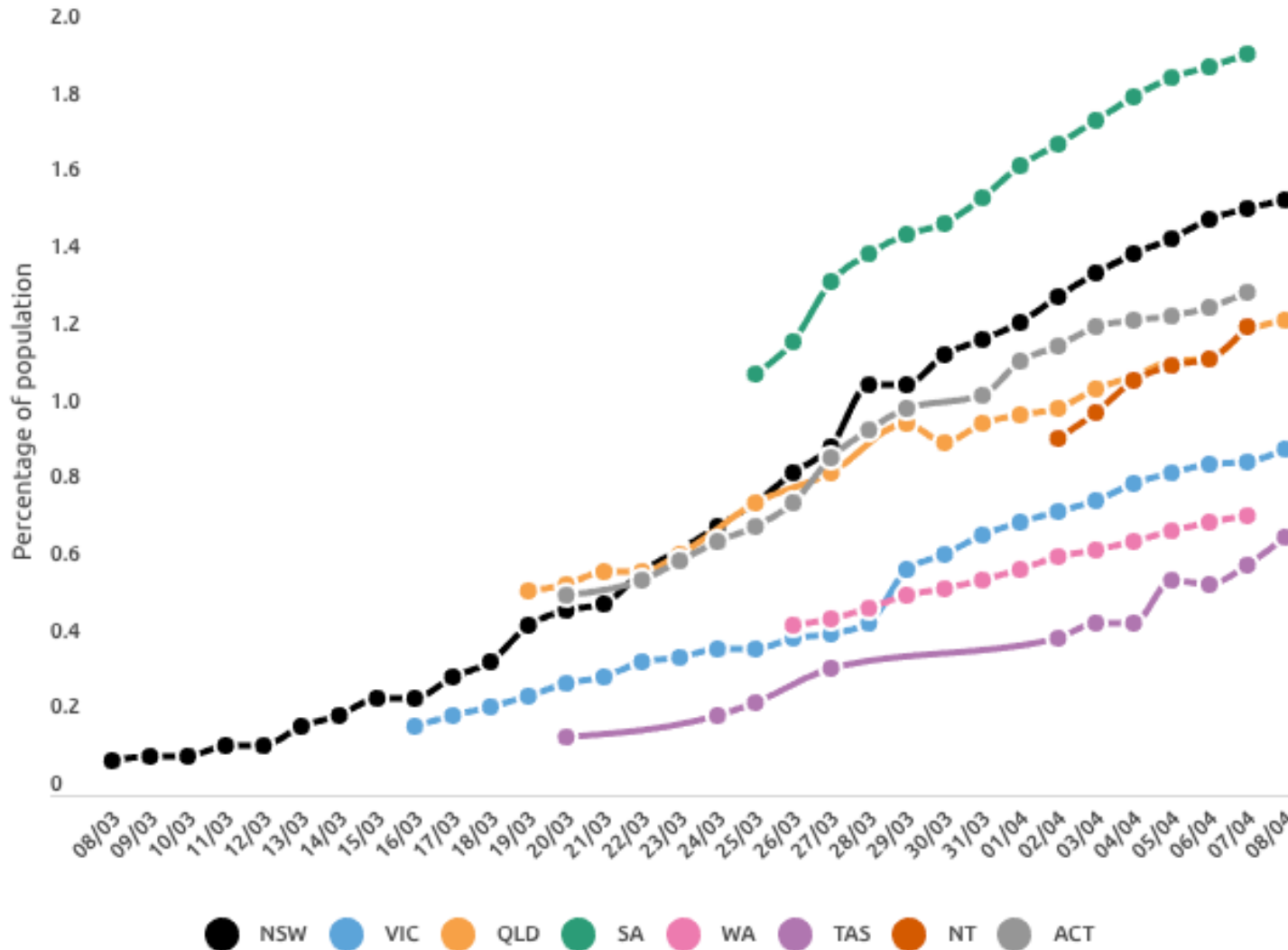
# New cases – international comparisons



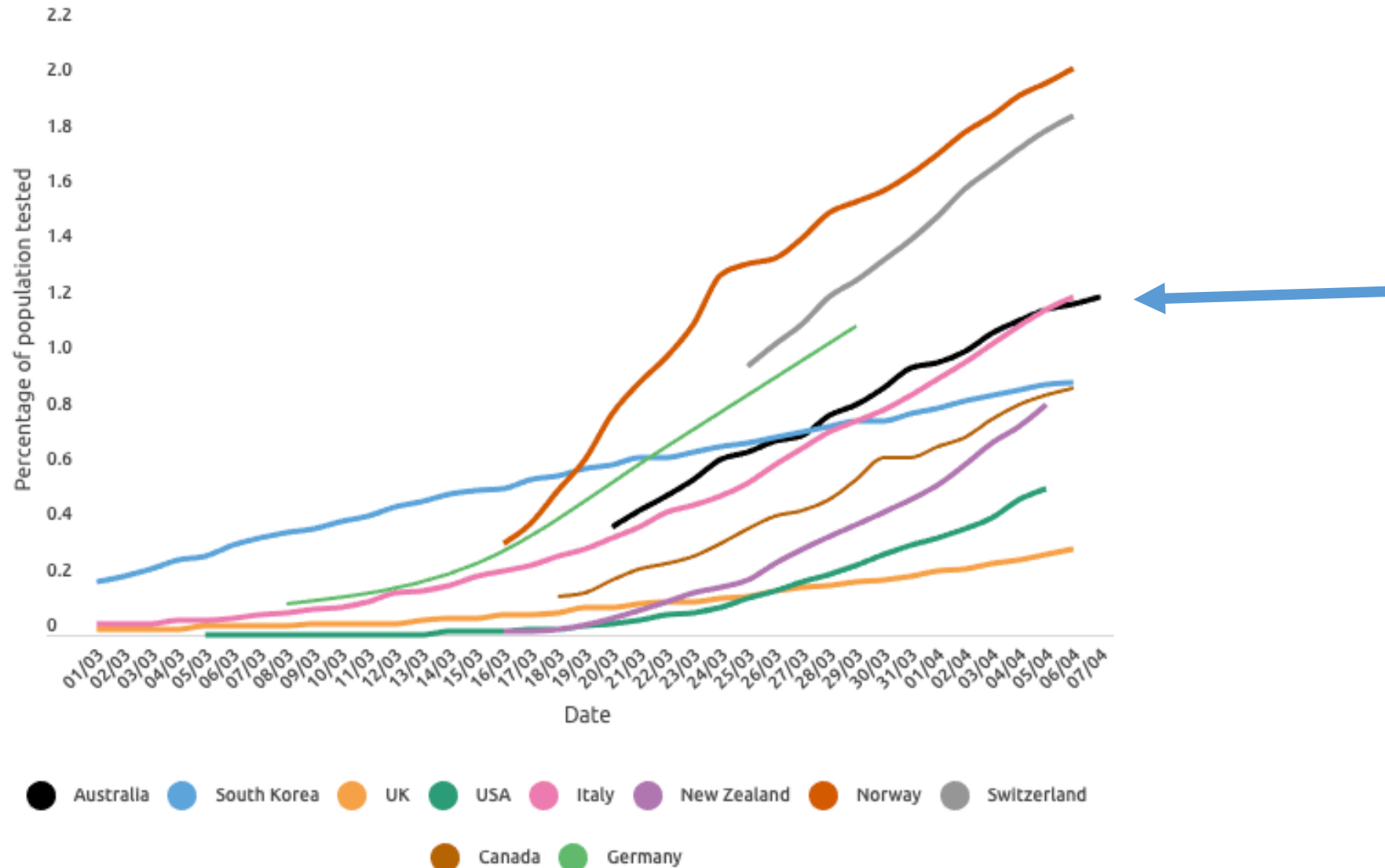
# SA: Cumulative view of transmission sources over time



# COVID-19 testing rates (standardised per population)



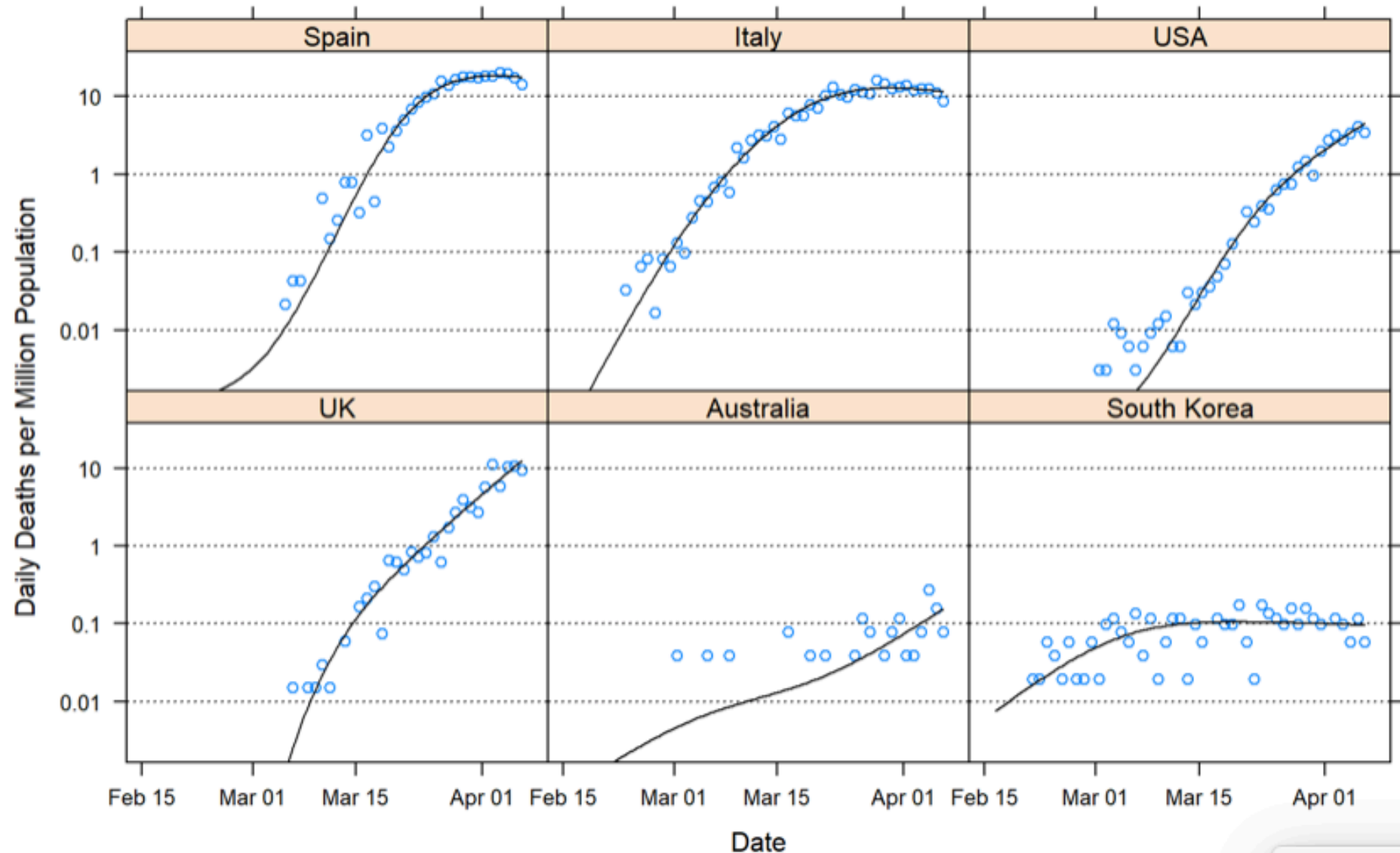
# International comparisons of testing rates





# New deaths – international comparison

(log scale, and compared with total population to allow fair comparisons)



# Summary – its promising but early days!

- The numbers of new cases are falling internationally and in Australia
  - Now < 100 in Australia (similar to 3 weeks ago)
  - The total numbers of cases will eventually fall (when recoveries that take 3 weeks > new cases that take 5 days to incubate)
  - Community transmission rates are low and also falling
- The number of deaths due to COVID-19 in Australia are very low by international standards (but will continue to rise, 2 week 'delay')
  - 0.1 per million per day
  - 0.8% of total cases (overall case fatality rate)
- Testing rates in Australia are high by international standards (and low positivity at 2%, SA 1.2%, NT 0.8%)

# New Research

366 trials registered  
(last week 239)

27 (was 18) vaccine trials

COVID-19 is an emerging, rapidly evolving situation.  
Get the latest public health information from CDC: <https://www.coronavirus.gov>.  
Get the latest research information from NIH: <https://www.nih.gov/coronavirus>.

NIH U.S. National Library of Medicine  
**ClinicalTrials.gov**

Find Studies ▾ About Studies ▾ Submit Studies ▾ Resources ▾ About Site ▾

Home > Search Results

Modify Search Start Over

366 Studies found for: **COVID-19**

Also searched for **SARS-CoV-2** and **2019-nCoV**. [See Search Details](#)

List By Topic On Map Search Details

Hide Filters Download Subscribe to RSS

Showing: 1-10 of 366 studies 10 studies per page Show/Hide Columns

Filters

Apply Clear

**Status**

Recruitment :

☐ Not yet recruiting

☐ Recruiting

☐ Enrolling by invitation

☐ Active, not recruiting

☐ Suspended

☐ Terminated

☐ Completed

☐ Withdrawn

☐ Unknown status†

Expanded Access :

**Eligibility Criteria**

Age :

years OR

Age Group :

☐ Child (birth–17)

☐ Adult (18–64)

☐ Older Adult (65+)

Sex :

☒ All

☐ Female

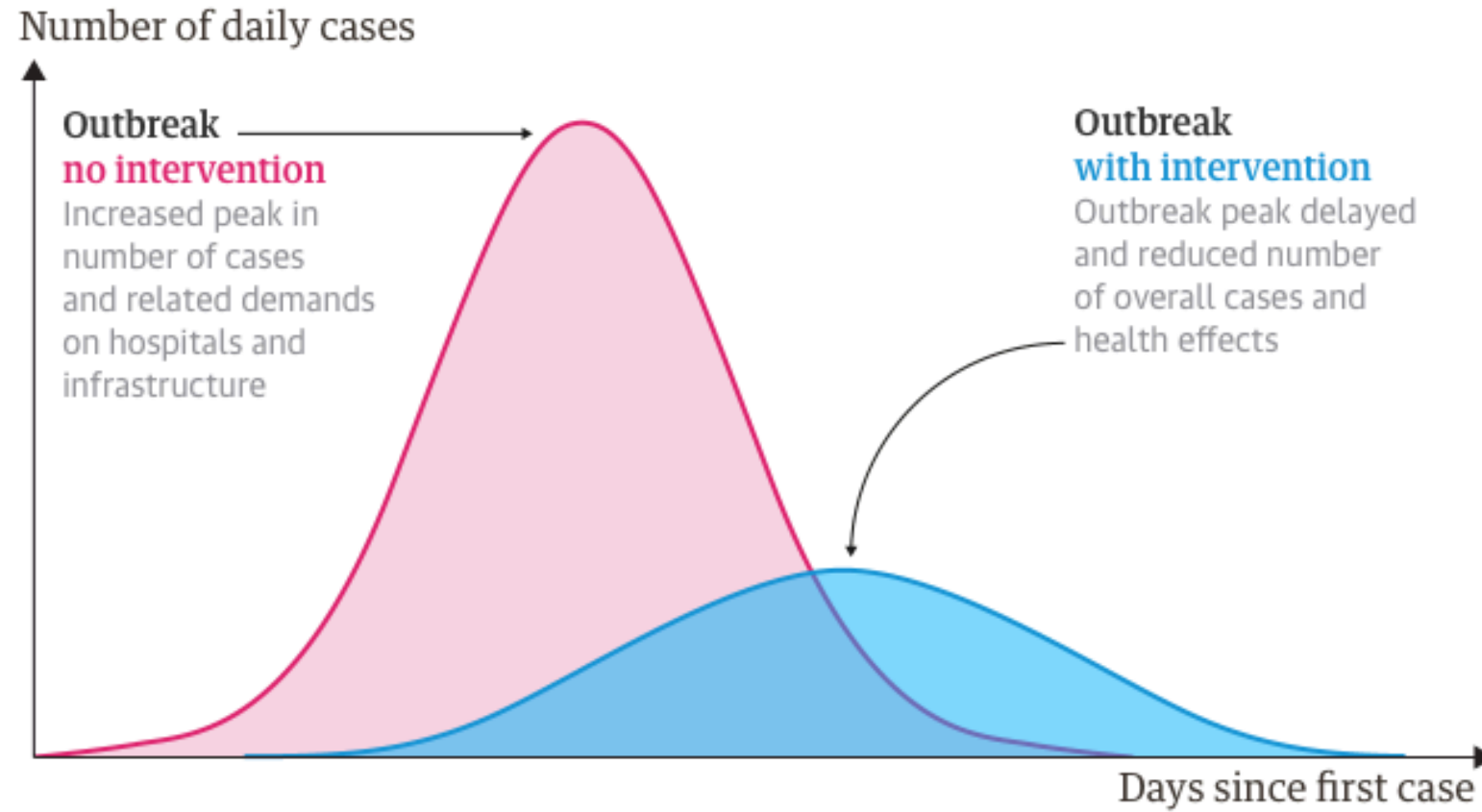
☐ Male

☐ Accepts Healthy Volunteers

Row	Saved	Status	Study Title	Conditions	Interventions	Locations
1	<input type="checkbox"/>	Recruiting NEW	<a href="#">Application of Desferal to Treat COVID-19</a>	• COVID-19	• Drug: Deferoxamine	• Regenerative Medicine Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran Kermanshah, Iran, Islamic Republic of
2	<input type="checkbox"/>	Active, not recruiting NEW	<a href="#">Clinical Study To Evaluate The Performance And Safety Of Favipiravir in COVID-19</a>	• COVID-19	• Drug: Favipiravir • Other: Placebo	• Asst Fatebenefratelli Sacco Milano, Italy
3	<input type="checkbox"/>	Recruiting NEW	<a href="#">COVID-19 Symptom Tracker</a>	• COVID-19	• Other: No Intervention	• Massachusetts General Hospital Boston, Massachusetts, United States • King's College London London, United Kingdom
4	<input type="checkbox"/>	Not yet recruiting NEW	<a href="#">Preventing Cardiac Complication of COVID-19 Disease With Early Acute Coronary Syndrome Therapy: A Randomised Controlled Trial.</a>	• COVID-19	• Drug: Aspirin 75mg • Drug: Clopidogrel 75mg • Drug: Rivaroxaban 2.5 MG • (and 2 more...)	
5	<input type="checkbox"/>	Not yet recruiting	<a href="#">The Efficacy and Safety of Huaier in the Adjuvant Treatment of COVID-19</a>	• COVID-19	• Drug: Huaier Granule	
6	<input type="checkbox"/>	Recruiting NEW	<a href="#">Hydrogen-Oxygen Generator With Nebulizer in the Improvement of Symptoms in Patients Infected With COVID-19</a>	• COVID-19	• Device: oxyhydrogen • Device: Oxygen	• First Affiliated Hospital of Guangzhou Medical University Guangzhou, Guangdong, China
7	<input type="checkbox"/>	Recruiting NEW	<a href="#">DAS181 for Severe COVID-19: Compassionate Use</a>	• COVID-19	• Drug: DAS181	• Renmin Hospital of Wuhan University Wuhan, Hubei, China
8	<input type="checkbox"/>	Not yet recruiting NEW	<a href="#">Anti-inflammatory/Antioxidant Oral Nutrition Supplementation in COVID-19</a>	• COVID-19	• Dietary Supplement: oral nutrition supplement (ONS) enriched in eicosapentaenoic acid, gamma-linolenic acid and antioxidants • Dietary Supplement: isocaloric/isonutritious ONS	
9	<input type="checkbox"/>	Recruiting NEW	<a href="#">Study of Open Label Losartan in COVID-19</a>	• COVID-19	• Drug: Losartan	• University of Kansas Medical Center Kansas City, Kansas, United States

# Reducing the R0 (R naught)

**Delaying the development of outbreaks and lowering infection rates ensures healthcare systems do not exceed capacity**



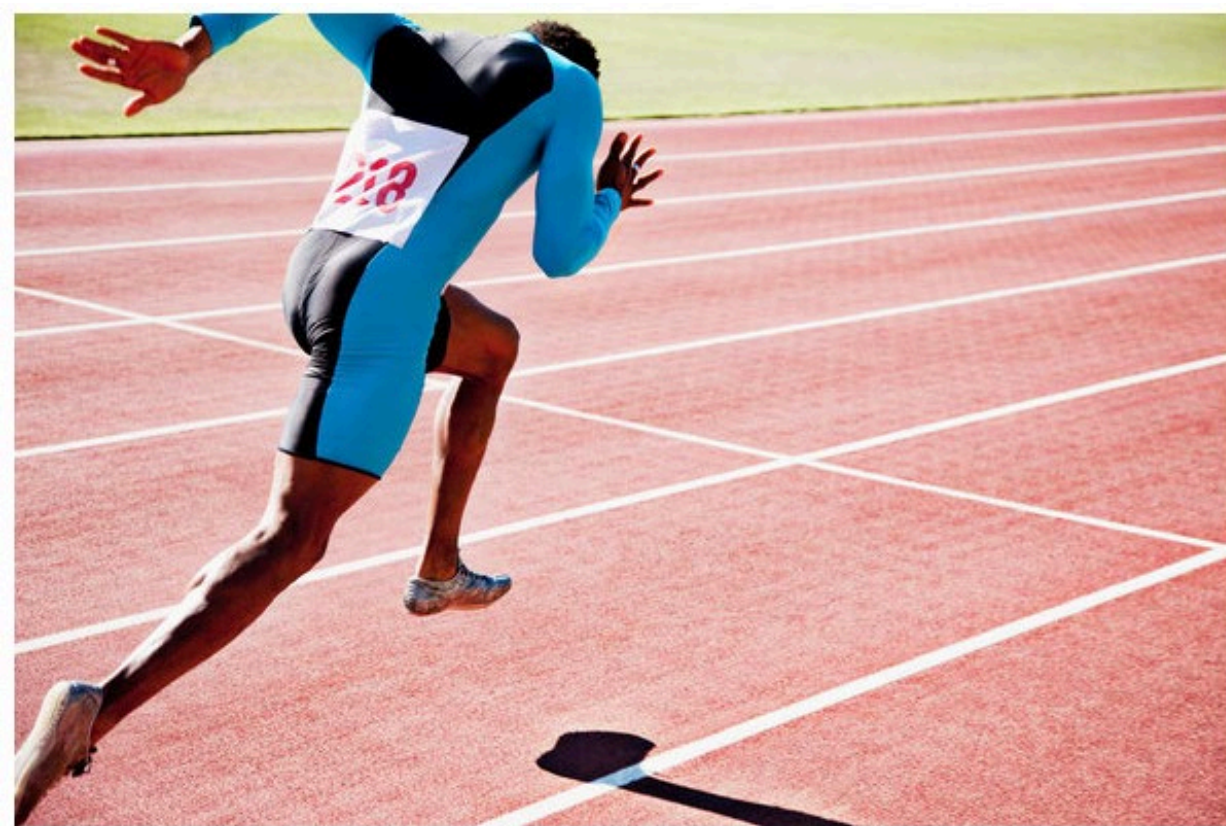


**Physical distancing  
(aerosols and droplets)**

**Hygiene - hand washing, and  
avoiding the face (fomites)**

*“Do the twirl”*

# Sprint vs Marathon – this is a marathon!



Tom Merton/Getty Images



Earl Wilson/The New York Times



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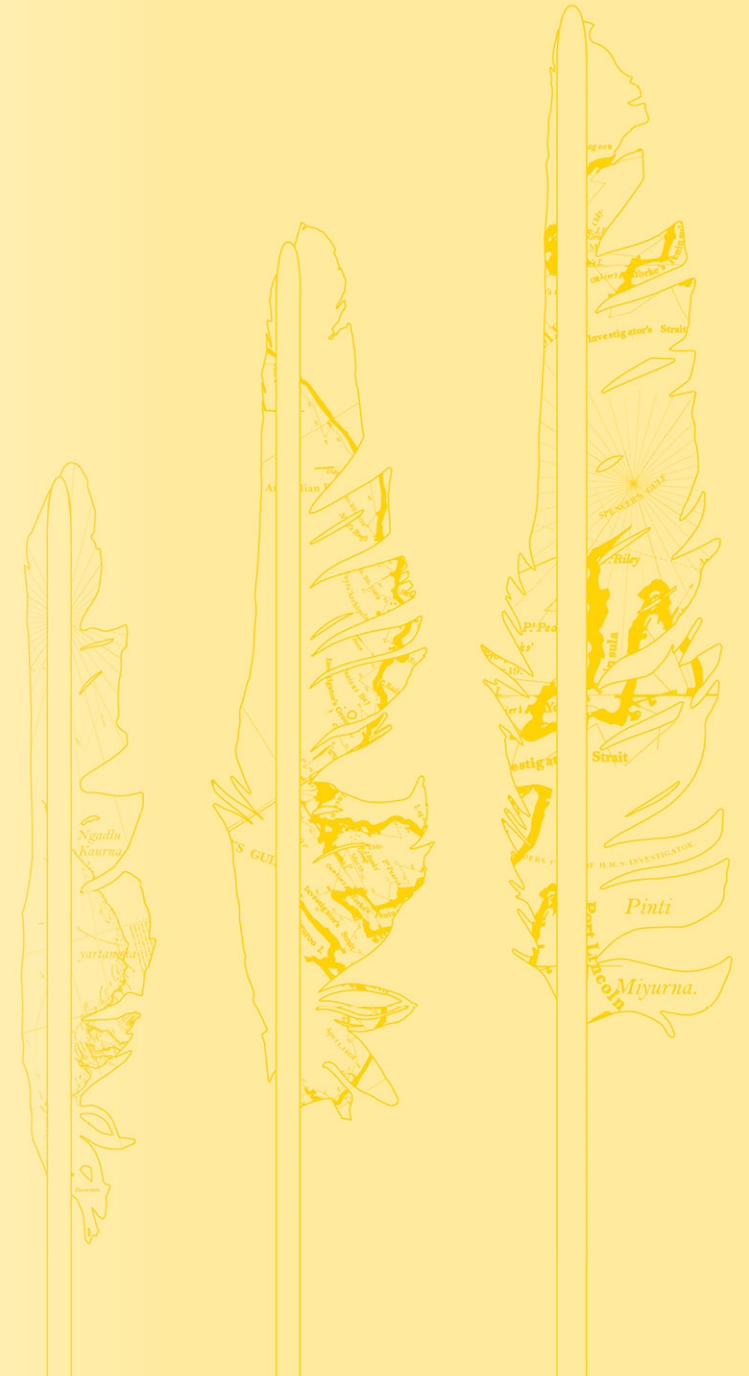
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9 April 2020

**Alison Kitson, Vice President and Executive Dean of  
the College of Nursing and Health Sciences**




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**“MY ACTIONS  
SHALL SPEAK TO  
THE WORLD.”**

Matthew Flinders, 1804



**Florence Nightingale**  
was a British social  
reformer and  
statistician, and the  
founder of modern  
nursing.

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*“So never lose an opportunity of urging  
a practical beginning, however small,  
for it is wonderful how often in such  
matters the mustard-seed germinates  
and roots itself.”*







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*Celebrating our*

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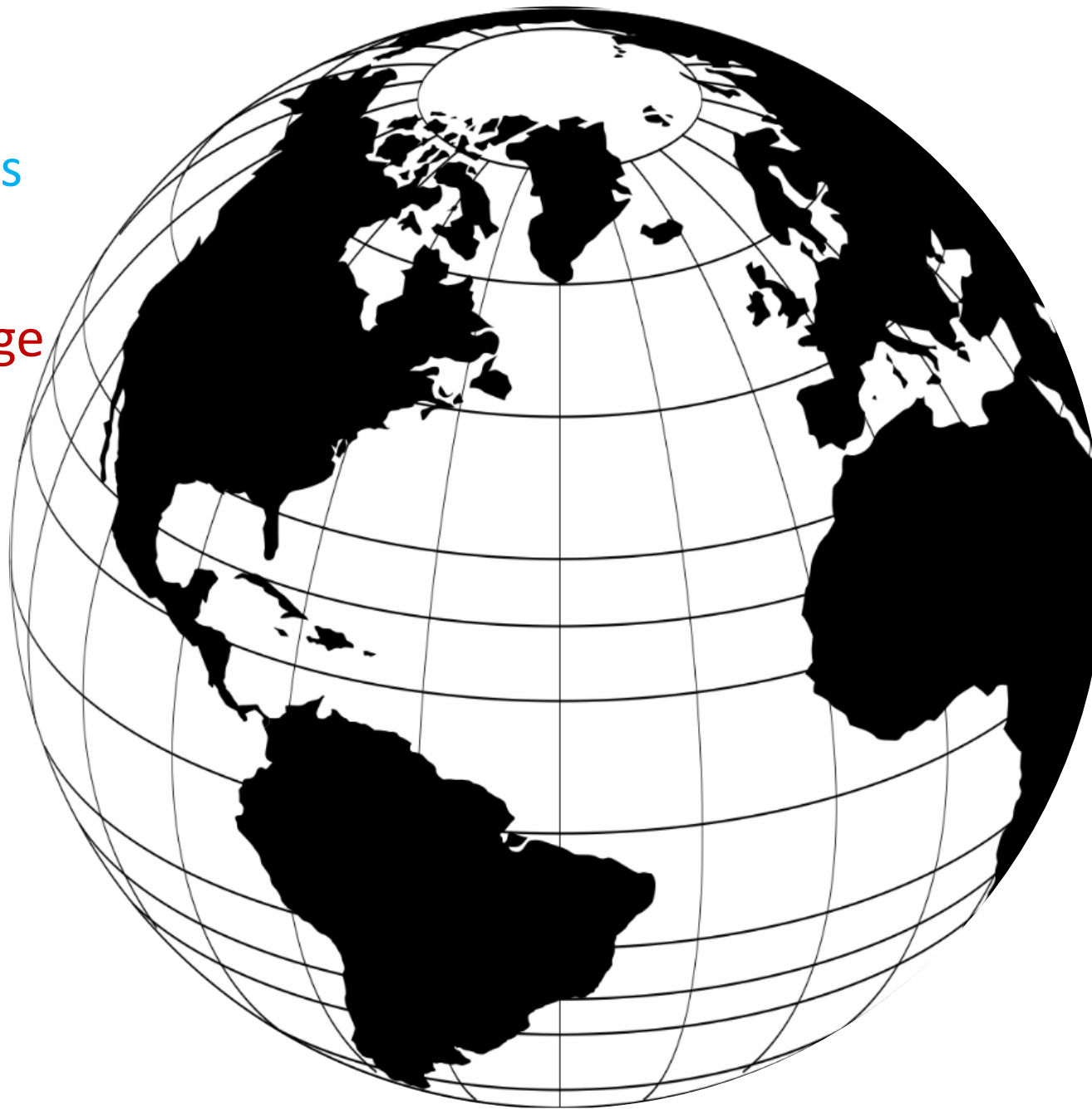
**BRAVE, BOLD AND BRILLIANT  
NURSES AND MIDWIVES**

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*2020 Year of the Nurse and Midwife*

28 million nurses  
globally

6 million shortage



6 million + allied  
health globally

2 million shortage

# Nursing and Allied Health Workforce

Over 360,000 nurses

195,000 AHPs

Allied Health attribute to 30% of health work

Nursing attributes to 50% of health work



There are more than 40,000 Flinders alumni with health degrees. These include medicine, paramedicine, public health, medical sciences and biotechnology, nursing and midwifery, allied health, disability, palliative care and health sciences as well as health and hospital administration.

This comprises:

- Approximately 9,000 from the College of Medicine and Public Health
- **And 25,000 from the College of Nursing and Health Sciences**
- With the rest coming from social work, psychology and health and hospital administration.









*Health workers wear protective masks as they observe a minute's silence at the entrance of the Hospital Doctor Peset in remembrance of nursing staff who have died due to coronavirus (COVID-19) on April 06, 2020 in Valencia, Spain. Rober Solsona | Europa Press News | Getty Images*

# The global challenges:

- Rebalancing healthcare tasks
- Developing and testing new models of care
- Producing a sustainable and gender balanced workforce
- Making care matter
- Generating the evidence base around self-care and caring interventions





# Caring Futures Institute

Creating better lives through research

The Caring Futures Institute is Australia's first fully dedicated research centre for the study of self-care and caring solutions. Our research is supporting better lives, better communities, better care and better systems. Our research works across disciplines and is focused on our four research themes.

[flinders.edu.au/caringfuturesinstitute](https://flinders.edu.au/caringfuturesinstitute)





# CHNS COVID-19 Research Initiatives

- Disadvantaged and marginalised groups
- Health and wellbeing
- Consumer literacy
- Health and care practice during and post COVID-19







# Darryl Sellwood

**Vice-Chancellor's Award for Doctoral  
Thesis Excellence**

# Flinders Health2GO

**Telehealth services launched -  
(tele)Health2GO:**

Optometry, Speech Pathologist,  
Audiologist, Physiotherapy and  
Exercise Physiologist services



[health2go.com.au](http://health2go.com.au)



# We cannot do this alone.

Disrupting traditional models and challenging old ways of thinking about care and self-caring needs a combined and concerted effort.

We need partners across industry, government and the general public to co-design and develop new approaches to ensure that quality care is accessible and delivered to all.

Join us and work towards creating better lives, better communities, better care and better systems.



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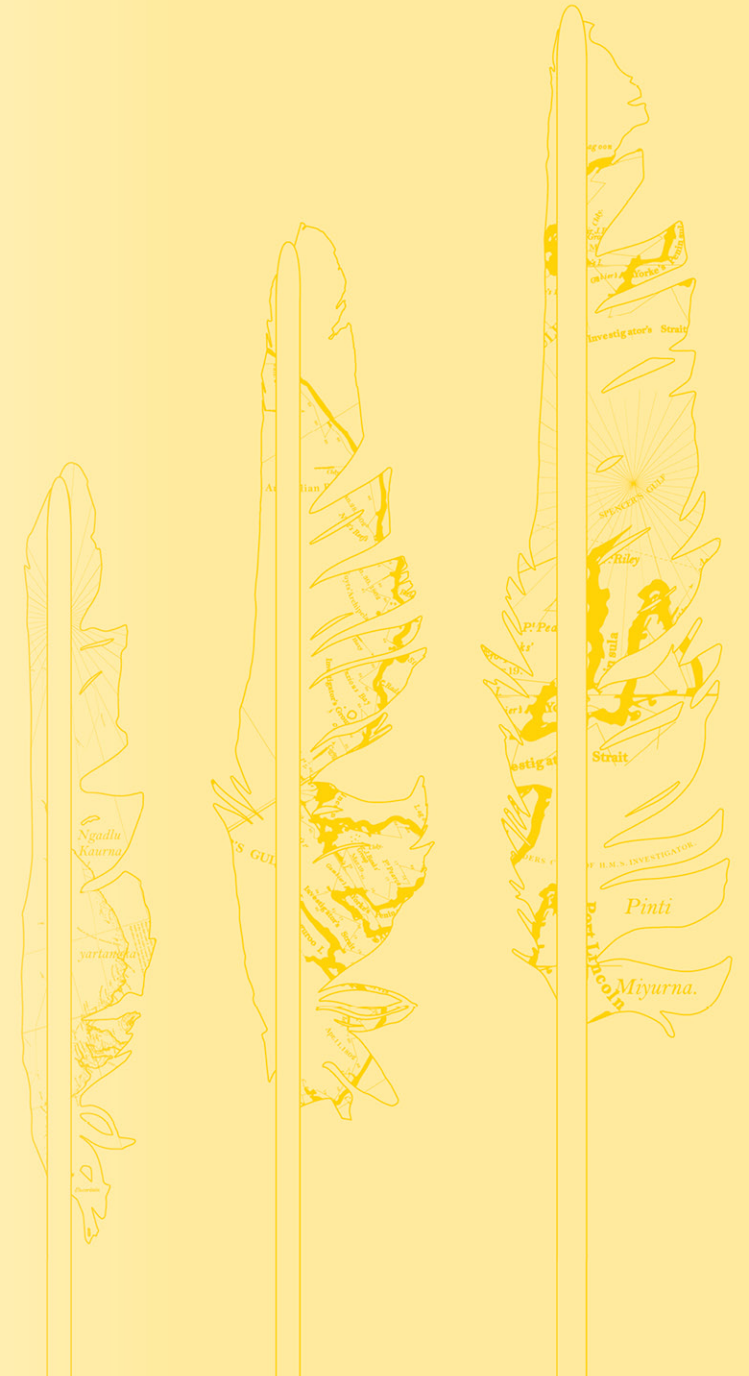
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