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Author/s:

Trauer, JM;Marais, BJ;Ragonnet, R;Savulescu, J;McBryde, ES

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Time for a clear national COVID-19 strategy

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Authors:

	Title	First name	Mid inits	Last name	Postnom (eg, PhD) [3 only for publication]	Position1	Address1	Position2	Address2	Tel	Email
1	Assoc. Prof.	James	M	Trauer	FRACP, FAFPHM, PhD	Head, Epidemiological Modelling Unit	1	Respiratory physician	2	+61 3 9903 0798	james.trauer@monash.edu
2	Prof.	Ben	J	Marais	MD, PhD	Deputy Director	3	Senior Clinical Academic	4	+61 2 9845 3433	ben.marais@health.nsw.gov.au
3	Dr.	Romain		Ragonnet	BSc, MSc, PhD	Research Fellow	1			+61 3 990304 44	romain.ragonnet@monash.edu
4	Prof.	Julian		Savulescu	MBBS, BMedSc, PhD	Director	5	Distinguished Visiting Professor in Law	6	+44 1865 286888	julian.savulescu@philosophy.ox.ac.uk
5	Prof.	Emma	S	McBryde	FRACP, MBios, PhD	Professor of Infectious Diseases Modelling and Epidemiology	7			+61 7 478165 47	emma.mcbryde@jcu.edu.au
6											

Number of corresponding author:	1
Number of alternative corresponding author:	

Addresses:

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	Institution	City	State	Post Code	Nation
1	Monash University	Melbourne	VIC	3004	
2	Alfred Hospital	Melbourne	VIC	3004	
3	Marie Bashir Institute for Infectious Diseases and Biosecurity, University of Sydney	Sydney	NSW	2145	
4	Children's Hospital at Westmead	Sydney	NSW	2145	
5	University of Oxford	Oxford		Ox1	United Kingdom
6	University of Melbourne	Melbourne	VIC	3053	
7	Australian Institute of Tropical Health and Medicine, James Cook University	Townsville	QLD	4811	
8					

Postal address of first corresponding author (if different from the institutional address given above)	
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Time for a clear national COVID-19 strategy

TO THE EDITOR: Pandemic responses across the world have been highly reactive. However, there remain only three strategic options to managing coronavirus disease 2019 (COVID-19): mitigation, suppression and elimination (Box).² With the promise of efficacious new vaccines, mitigation is appropriately not considered as part of Australia's national strategy. However, our stated goal of achieving "no community transmission" remains poorly defined and risks missing important distinctions between elimination and suppression.³

Effective elimination is dependent both on getting to zero local cases and then staying there, with any new transmission chains immediately halted. All jurisdictions of Australia have now achieved elimination over significant periods, even without articulating this as their strategy. By comparison to suppression, greater relaxation of restrictions may well be allowable under an elimination approach if vigilance is maintained, as New Zealand has demonstrated.⁴ Although the challenges of ensuring quarantine of returning travellers are well recognised, this is an essential aspect of maintaining elimination and increases in importance as distancing restrictions are eased.

Australia's current strategy appears to imply suppression, with some virus circulating but with case numbers at manageable levels. Whether suppression has been achieved can be monitored by maintaining an effective reproduction number of no greater than one, or equivalently by ensuring the epidemic curve of new community cases is not upsloping. Importantly, the reproduction number and the rate of new cases at any point in time are unrelated — we could have effective suppression and a reproduction number of one with daily case rates of five, ten or 50. Our definition of no community transmission appears to imply complete identification of transmission chains with no "mystery cases", regardless of the number of new cases. These considerations are important in determining whether we have full visibility of the epidemic and effective contact tracing but do not determine the reproduction number.

The rapid spread of the virus necessitates a public health strategy that is clear, robust and agile. Improved control combined with the increasingly clear seasonality of the virus⁵ suggest that control can be maintained throughout the summer. However, if vaccination has not been widely distributed before winter 2021 and we do not make clear choices, further major outbreaks remain likely.

Competing interests: The Epidemiological Modelling Unit at Monash University (under James Trauer) provides the COVID-19 forecasts for the Victorian Department of Health and Human Services.

Author details

James M Trauer^{1,2}

Ben J Marais^{3,4}

Romain Ragonnet¹

Julian Savulescu^{5,6}

Emma S McBryde⁷

1 Monash University, Melbourne, VIC.

2 Alfred Hospital, Melbourne, VIC.

3 Marie Bashir Institute for Infectious Diseases and Biosecurity, University of Sydney, Sydney, NSW.

4 Children's Hospital at Westmead, Sydney, NSW.

5 University of Oxford, Oxford, United Kingdom.

6 University of Melbourne, Melbourne, VIC.

7 Australian Institute of Tropical Health and Medicine, James Cook University, Townsville, QLD.

james.trauer@monash.edu

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References

- 1 Gidding H, Machalek D, Hendry A, et al. Seroprevalence of SARS-CoV-2-specific antibodies in Sydney, Australia following the first epidemic wave in 2020. *Med J Aust* 2020. <https://www.mja.com.au/journal/2020/seroprevalence-sars-cov-2-specific-antibodies-sydney-australia-following-first> [Preprint, 2 November 2020]
- 2 Meehan MT, Rojas DP, Adekunle AI, et al. Modelling insights into the COVID-19 pandemic. *Paediatr Respir Rev* 2020; 35: 64-69.
- 3 National Cabinet recommitts to coronavirus suppression strategy amid outbreaks in Victoria, NSW. *ABC News* 2020; 24 July. <https://www.abc.net.au/news/2020-07-24/national-cabinet-recommits-coronavirus-suppression-strategy/12489044> (viewed Oct 2020).
- 4 Cousins S. New Zealand eliminates COVID-19. *Lancet* 2020; 395: 1474.
- 5 Ma Y, Pei S, Shaman J, et al. Role of air temperature and humidity in the transmission of SARS-CoV-2 in the United States [preprint]. *medRxiv* 2020.11.13.20231472. 16 Nov 2020. <https://doi.org/10.1101/2020.11.13.20231472> (viewed Nov 2020).

[Box]

Characteristics of coronavirus disease 2019 (COVID-19) epidemic response strategies

	Elimination	Suppression	Mitigation
Our definition	No cases or transmission, except in quarantined arrivals	Very low community case rates; limited transmission	Higher case rates, but within health service capacity
Key metric of success	No locally acquired cases	Effective reproduction number not exceeding one,* or a horizontal sloping epidemic curve of locally acquired cases	Hospital and ICU occupancy within (expanded) capacity
Accrual of significant population-level immunity	No	No ¹	Yes, likely to take many months, with considerable morbidity and mortality
Need for mobility restrictions and hygiene measures	Mobility may return to near normal while cases and transmission remain at zero; vigilance essential; likely need for episodic restrictions if quarantine escape occurs	Continuous need for high levels of restrictions; strong possibility of disruptive lockdowns given that community transmission persists	Unpredictable
Need for restrictions on international arrivals	Extremely high, and increases as distancing restrictions are eased	Moderate	Less important
Current appropriateness to Australian jurisdictions [†]	Reasonable	Reasonable	Not under consideration

ICU = intensive care unit. * The effective reproduction number becomes more difficult to quantify precisely as numbers fall. † Given an effective vaccine appears likely.