



“MandEval:” Evaluating COVID-19 Vaccine Mandates

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Acknowledgement of country

I'm privileged to be on the land of the Whadjuk people of the Noongar nation today. Whadjuk people remain the spiritual and cultural custodians of their land, and continue to practise their values, languages, beliefs and knowledge.



Artist: Dr Richard Barry Walley OAM

Background



- COVID-19 vaccine mandates used in Australia, Italy, France, California, (UK)
 - Design, reach and implementation varied substantially
- Key questions (that will influence future use of vaccine mandates) remain
 - Did they work?
 - Were they "good", "effective", "just", or "proportional"?
 - What about unintended consequences and challenges?

How do we evaluate these policies effectively?

Mandatory vaccination:

Vaccine mandates are defined as “interventions that impose consequences for non-vaccination and/or restore rights and provide benefits/privileges to vaccinated individuals.”

(Duong and Attwell, manuscript submitted, 2025)

Cross-cutting questions

1. What was the impact of the COVID mandate implementation and removal
2. What is the public's willingness to entertain future broad-scale mandates, and in what situations?
3. How does timing of **implementation** and **removal** generate consequences (both intended and unintended?)
4. What to do and what to avoid in design, implementation, communication, and promotion?
5. What is the ideal mechanism for accountability that preserves trust in government?

MandEval: 5 Studies at a glance



Study one: Big data; all jurisdictions

Study two: Quantitative surveys of groups affected by mandates; all jurisdictions.

Study three: Qualitative methods; key groups at “pointy end” of mandates.

Study four: Key informant analysis of elected officials / technical experts in Australian states, Italy and France, UK.

Study five: Legal analysis and construction of an online observatory of superior court cases.

Policy Repository



A new requirement: After the first all team meeting in February 2024 the team realised a "**shopping list**" was needed that included all relevant details about vaccine mandates in each jurisdiction. This is essential for constructing our policy variables and so we built the 'policy repository' to cover all Australian states/territories, Italy, France, and California.

How we built it: Desk research, information from key informant interviews (Study 4). We categorised directions / policies into some of the following categories: *announcement date, published date, enforcement date, type, policy target (e.g. health worker), mandate requirement, exemption, communication, vaccine eligibility/availability, ATAGI recommendation*. Information was entered into a spreadsheet, coded and added to EndNote.

Publication plans: Once finalised the team will potentially add it to the MandEval website and/or publish in a journal.

Study 1: Big data analysis

Aim:

- Evaluate the impact of COVID-19 vaccine mandates and removals on vaccine uptake in Australia and comparators in Italy, France and California (USA).

Data

- **Australia** – Australian Immunisation Register (AIR) linked with 2021 Census and additional administrative data via the Person Level Integrated Data Asset (PLIDA).
- **Italy and France** – Our World in Data – Country-level daily data on COVID-19 cases, deaths, and vaccinations
- **California** – Oxford COVID-19 Government Response Tracker data – State-level daily data

Analysis

- **Aggregate Analysis (Country and State Level):** This involves looking at overall trends in data over time to see the effect of vaccine mandate announcements on vaccine uptake, comparing what actually happened to what might have happened without the mandates.
- **Individual-level analysis (Australia only):** This uses a method called Difference-in-Differences, which compares groups of people over time to see if changes in policy (vaccine mandates) had different impacts on different groups.

Sub-study 1: Aggregate Jurisdiction-level Analysis from Italy, France, and California



Aim:

- Governments introduced mandates to boost uptake with varied design, timing, and scope across jurisdictions.
- Aim to examine the effect of mandate announcements and removals on uptake in Italy, France, and California 2021-2

Methods

- **Interrupted Time Series (ITS)** using *Our World in Data* and *Oxford COVID-19 Government Response Tracker* datasets.

Key Findings

- Announcements were linked to immediate increases in first-dose vaccine uptake
- Removals generally coincided with declines in booster uptake
- Mandates effectively increased vaccination during critical phases.

Sub-study 1: Vaccinating Now or Later

- **Research question/s:**
 - What was the effect of WA's 2021 *Leavers* mandate on first COVID-19 vaccine take-up among the target population?
 - How much of the effect is due to people *pulling-forward* their eventual vaccination versus vaccination that would not have happened absent the mandate (*induced vaccinations*)?
- **Population/participants:** Students graduating Year-12 in 2021 in WA
- **Description of the data:** We link: vaccination records (AIR) + census information about schooling + place of residence data + demographic data – Year 11s as control.
- **Findings:** we find that the mandate raised vaccination rates by 9.3 percentage points at the mandate deadline. *The effect was all from pulling-forward*, with the mandate students getting their jab up to 80 days earlier than absent the mandate

Study 2A: Discrete Choice Experiment



- Quantify preferences and trade-offs for “future” vaccine mandate designs (policies) across Australia, France, and Italy.
- Online survey responses from adults (≥ 18 years) in Australia, France, and Italy.
- Choose between one of two mandate designs and under two framing scenarios, mild/severe outbreak—a discrete choice experiment
- This allows us to understand their preferences for certain features of mandates indirectly (bias)

Research question	Population / participants	N
How do mandate design features, individual characteristics, outbreak-severity framing, and resulting population segments collectively shape public acceptance of (and trade-offs among) alternative COVID-19 vaccine mandate policies?	Adults living in Australia, France, and Italy who completed the DCE survey	Australia: 3416 France: 3353 Italy: 3380

Study 2A: Discrete Choice Experiment Findings



- **Lives saved drive support:** Across all countries, effectiveness (lives saved per 100,000) remains the most powerful predictor of mandate acceptance ($p < 0.01$).
- **Crisis shifts preferences:** Under severe outbreak conditions, resistance to broad mandates diminishes markedly. In Australia and Italy, the public becomes willing to accept mandates even when the marginal health benefit is lower.
- **Exemption policies and credibility:** Allowing religious or personal exemptions consistently reduces public support. Resistance to exemptions strongest in Italy.
- **Coverage targets as credibility signals:** Higher vaccination coverage targets (70% and 90%) substantially enhance support, even when fewer lives are saved: perceived as indicators of governmental commitment and competence.
- **Population heterogeneity:**
 - Approximately 3/4 of respondents belong to a *pro-mandate* segment.
 - Around 1/5 form an *anti-mandate* segment; preferences are anchored in autonomy, opposition to compulsion.
- Trust in institutions and positive vaccination attitudes predict membership in the pro-mandate segment, whereas political conservatism, marital status, and vaccine hesitancy are associated with anti-mandate alignment.

Study 2B: Population Attitudes Survey



2B continued in next presentation...

Study 3: Qualitative Analysis of Unrecognised Stakeholders



1. THE ACCIDENTAL ENFORCERS

Hospitality
workers

Public
servants/
Ministers
assessing
special
exemptions

Clinicians
assessing
special
medical
exemptions

Businesses /
business
owners

2. THE PHYSICALLY OR EMOTIONALLY HARMED

People
seeking
special
medical
exemptions

Vaccine
refusers who
lost jobs

Vaccine
refusers /
resistors
(Legitimacy)

Study 4: Key informant interviews with Policymakers



Aims: To understand reasons and timing of / introduction / removal of mandates in Australia, Italy, France, California, and the UK, plus lessons learned by policymakers including communicating decisions and experiencing legal contestation.

Methods: Semi-structured interviews with policymakers / technical experts. Professionally transcribed, coded in NVivo 20, and analysed using reflective thematic methods.

Interviewed 73 health department technical experts, legal experts, and relevant local political and policy actors across Australian states / territories.

6 similar actors in Italy; 12 in France; 3 in the UK

16 Californian political actors and technical experts.

Study 4: Key informant interviews with Policymakers



Early Findings...

- Goals/Aims: not only intended to increase vaccination coverage or protect public health; also a means to sustain or reopen normal activities and to support economic recovery.
- Rationale less about complete confidence in vaccines as tools to stop transmission or prevent death, and more about the government's responsibility to act in the absence of better measures.
- Policymakers recognized that people needed rules and incentives to encourage vaccination.
- CHOs employed both authoritative power and collaborative approaches to navigate epidemiological, political, and public complexities.
- Mandates applied across various employment sectors and public spaces; often specific exemptions.
- Communication strategies were timely, targeted, and delivered through multiple channels.
- Enforcement varied in both agents and methods, involving police, "authorised officers" (e.g. regulators, inspectors), employers, venue operators.
- Lifted either explicitly—press releases or formal revocations—or implicitly, without formal declarations, depending on political mood and epidemiological setting.

Study 5 – [Legal Case repository](#) (available)



- Case repository of 'superior court' (state and territory Supreme Court and above, as well as the Federal Court) challenges to vaccine mandates.
- Currently at 41 cases.
- Regularly updated – still proceedings in the Queensland Supreme Court funded by Clive Palmer off the back of successful case challenging mandates.
- Only two successful cases so far – *Johnston* in Queensland Supreme Court (above) and *Shearer* in Victorian Supreme Court.
- Primarily procedural (process-based) legal errors identified by courts rather than it being unlawful to mandate vaccination (substantive law).
- Powers given to public decision-makers in public health legislation are broad enough to support mandatory vaccination policies.
- Mandatory vaccination policies generally seen by courts as a reasonable and proportionate response in the context of a public health emergency and an ever-changing scientific landscape.

Next steps for MandEval (halfway point)

- **Papers:** traditional academic outputs collated on our website
- Summarise papers for **newsletter** – please sign up!
- Potential **future translation workshops:**
 - CHOs / senior imm staff
 - Public sector heads in each state / territory re next pandemic.
- **Community forum** (ideally broadcast) at project's end.
- Some team members pursuing research on No Fault Compensation for vax injury.
- Regaining / rebuilding community trust in immunisation / immunisation policy (shared project)



Website:

[https://www.uwa.edu.au/
projects/mandeval](https://www.uwa.edu.au/projects/mandeval)

Investigator team



The MandEval team is made up of early and mid-career researchers from Australia, the US, France and Italy. It includes

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Research partners: State / Territory Health Departments; Immunisation Foundation of Australia; PureProfile



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