

The Optimise Study is a highly innovative study that will provide the Victorian and Australian Governments with timely and high quality data to assist them in making informed, precise and impactful policy during the COVID-19 response.

## COLLECT STRATEGIC INFORMATION



**Understand compliance and adherence** with isolation, quarantine and physical distancing.



**Determine key factors affecting cooperation** with physical distancing measures, including health, social, structural and economic.



**Assess unintended consequences** of isolation, quarantine and distancing measures on key vulnerable groups and the general population.



**Identify vulnerable populations** for whom sustaining isolation and quarantine is more difficult or who are disproportionately affected.



**Characterise people's social networks** and assess if key groups or individuals are at higher risk of COVID-19 infection.

## INFORM STATE AND NATIONAL POLICY AND PRACTICE



**Inform Government strategy to relax the current physical distancing control measures** in a precise and evidence-based way that mitigates the risk of new infections.



**Improve messaging** to enhance comprehension, acceptability and cooperation with Government guidance and interventions.



**Test the feasibility and acceptability of emerging strategies for COVID-19 diagnosis** such as point-of-care tests, home-based testing and antibody testing.

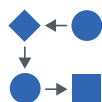


**Develop strategies to support highly vulnerable populations** to reduce their risk of infection and limit unintended consequences of isolation, quarantine and distancing measures.



**Report to the State and Federal Governments** through regular reports on compliance, key factors affecting compliance, and mechanisms to improve compliance.

## UNDERSTAND AND PREDICT THROUGH MATHEMATICAL MODELS



**Develop responsive, precise agent-based mathematical models**, utilising empirical data from the Optimise Study to inform and test strategies, such as the timing of the Government's release from physical distancing measures and the impact of various diagnostic testing strategies.

## WHY?

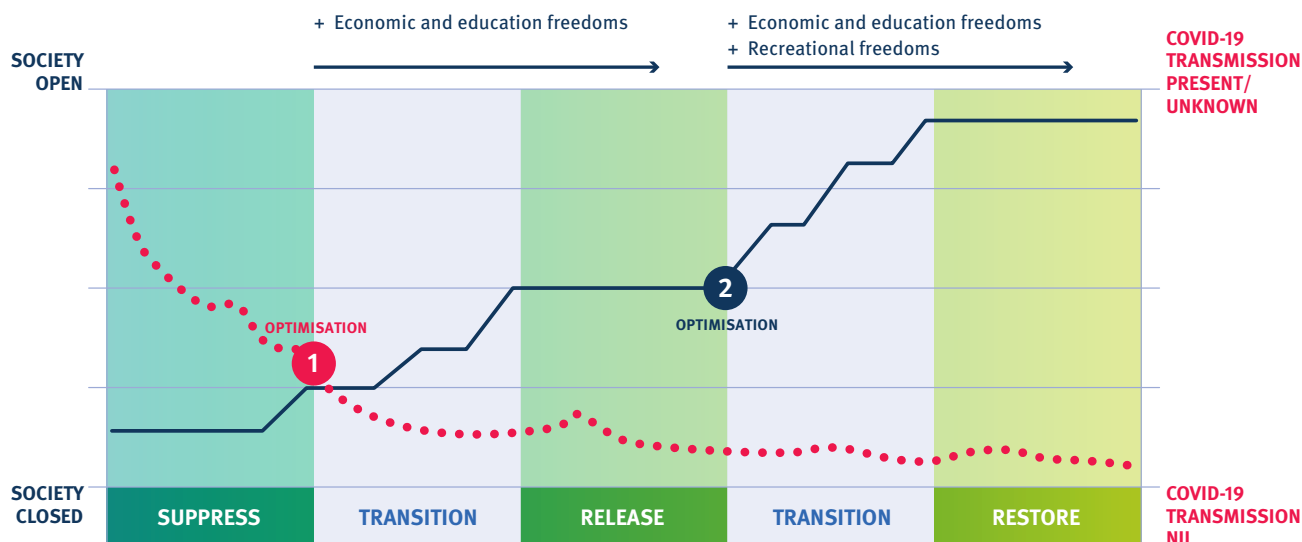
Countries are rapidly responding to the novel coronavirus (COVID-19) disease pandemic to reduce transmission and related illness and deaths, but there are limited data available to inform critical decision making.

Over the next 12 months, it is highly likely there will be **no effective vaccine and no effective drug treatments** to control the COVID-19 pandemic. The global response will need to rely on a combination of public health interventions, combined with thoughtful use of diagnostic testing and key support strategies.

# THE AUSTRALIAN CONTEXT

In Australia, Government actions have introduced two key public health measures 1) isolation of individuals with COVID-19 ('cases'), and quarantine of their close contacts and returned travellers, 2) physical distancing within the general community. Whilst the number of locally acquired new cases has declined, data are vital to inform a strategic approach which optimises reductions in new infections while releasing the economic and social pressures of physical distancing (Figure 1).

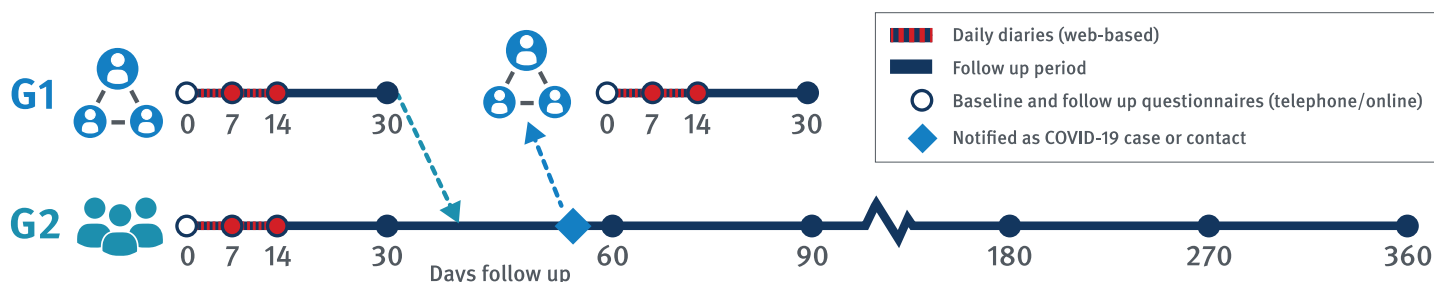
Figure 1: Strategic framework to ease restrictions in a phased approach



## HOW?

- Establish two cohorts that will be followed for 12 months:
  - Group 1**  
N = 200 - 300 | People newly diagnosed with COVID-19 and in isolation ('cases') AND Contacts of people infected with COVID-19 and in quarantine ('contacts')
  - Group 2**  
N = 500 - 700 | People from the general community and their immediate contacts undertaking physical distancing ('general community'), with over representation from key at-risk and vulnerable populations
- Administer repeated questionnaires via telephone or web surveys at regular intervals for 12 months on participants' health, social and economic wellbeing (Figure 2).
- Collect daily web diaries of participants physical and social contacts, and their wellbeing.

Figure 2: Data collection in Group 1 and Group 2



## WHO?

Recruitment will oversample populations who are a) most at-risk of COVID-19 or b) vulnerable due to barriers to observing distancing measures or potential impact from the response.

Targeted community-based organisations and services will be engaged to recruit individuals from these priority groups. This will supplement recruitment through health services, network referral, social media adverts, and sampling of population registers, mobile or landlines.

The Optimise Study is a partnership between Burnet Institute and Doherty Institute in collaboration with University of Melbourne, Swinburne University of Technology, Monash University, La Trobe University, the Victorian Government, Macquarie Group Foundation, the Centre for Ethnicity and Health, and the Health Issues Centre.