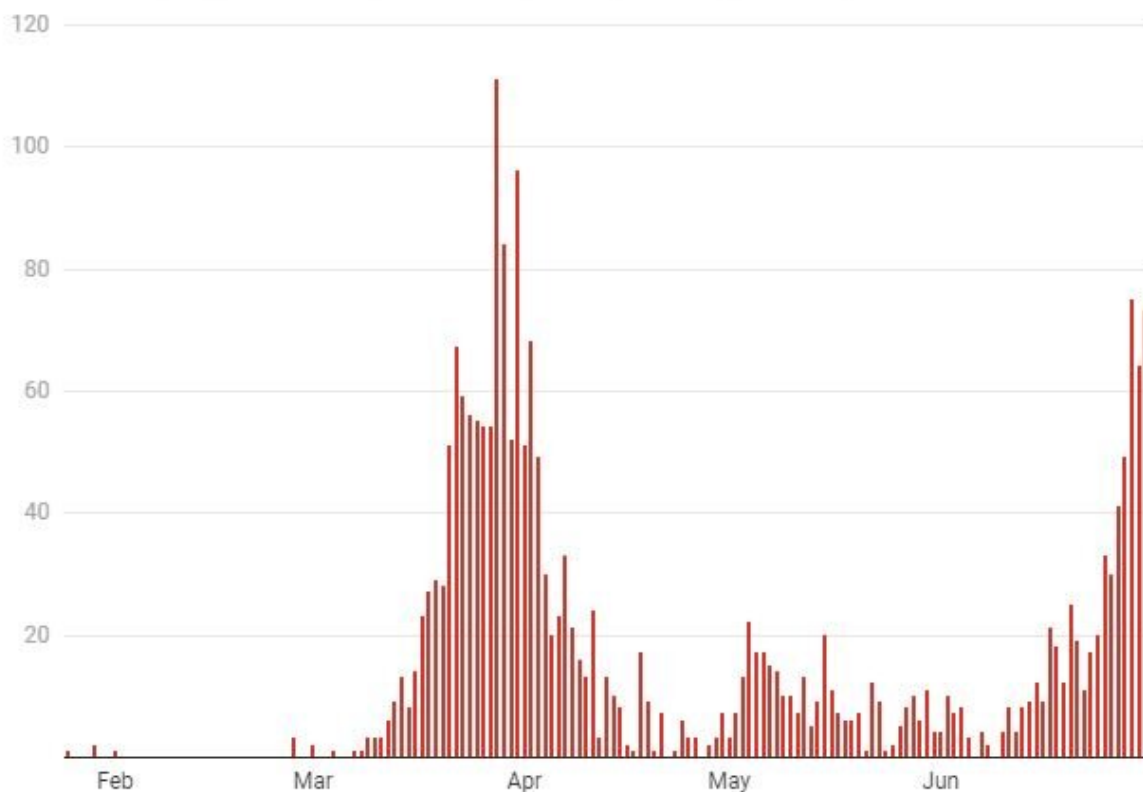


Victoria is on the precipice of an uncontrolled coronavirus outbreak, and new control measures set

July 2 2020, by Adrian Esterman

Victoria's COVID-19 case curve

New cases by day, since first reported case (January 25 2020), Victoria, Australia.



Credit: Department of Health and Human Services, Victoria

I recently wrote about Victoria's surge in COVID-19 cases. On that day, Victoria recorded 11 new infections, after a few days of new cases in the high teens and low twenties.

I wondered then whether the situation could be brought quickly under control. Unfortunately, it has since got much [worse](#).

On Wednesday, the state recorded 73 new cases, after 64 new cases on Tuesday and 75 the day before that. These numbers are approaching levels seen at the peak of Victoria's initial outbreak in late March.

In response, the [state government](#) has reintroduced lockdown measures in hotspot postcodes.

Victoria is right on the precipice. Either the government's measures will wrest back control, or unbridled community transmission could mean infection rates get totally out of hand.

The main issue here is public compliance. We can't forget this is a [public health emergency](#), the likes of which we haven't seen in Australia for a century. We simply can't have people refusing to take tests.

There's no definition of second wave

Victoria has actually had four "waves" of infection, although the subsequent waves were quite small and could probably be better described as wavelets.

There's no formal definition of what constitutes a second wave, but a reasonable one might be "the return of an outbreak where the numbers of new daily cases reach a peak as high or higher than the original one."

By that definition, Victoria has not yet had a second wave of COVID-19.

The peak of the pandemic so far was 111 new cases, recorded on March 28.

However, the current resurgence is still a major concern, and at this stage we are unsure whether the daily tallies will go up or down from here.

Sadly, it's still possible the new outbreak gets worse and the Victorian government loses control of the situation.

How could this have happened?

There have been several holes in Victoria's approach so far.

As we know, all people entering Australia from overseas must go into a 14-day quarantine. But 14 days may not be long enough. A [recent](#) (not yet peer-reviewed) study looked at COVID-19's incubation period based on 1,211 Chinese patients. It found that "based on the estimated incubation distribution in this study, about 10% of patients with COVID-19 would not develop symptoms until 14 days after infection."

In other words, the 14-day quarantine does not guarantee all people are free of COVID-19 when they leave quarantine. It's important to remember, though, that this data is preliminary and must be treated with caution.

Another possible threat involves locally acquired cases—close contacts of known cases. Although these people must [self-quarantine](#), in Victoria they are not required to be tested unless they develop symptoms.

One [study](#) which reviewed cases from several countries concluded "more than 50% of positive individuals were asymptomatic at the time of testing." It's possible people connected to a known outbreak, but without

symptoms, could pass the virus on after their self-isolation period. It would make sense to make testing mandatory for all close contacts of confirmed cases.

Of increasing concern is the proportion of Victoria's cases that are still under investigation, meaning many of these might be community-acquired. The percentage of cases under investigation was 46% on June 28, and 58% on July 1.

In cases of community transmission, the individual does not know how or where they got infected. This makes contact-tracing and quarantining much more difficult. Increasing levels of community-acquired cases mean it's possible public health authorities could completely lose control of the outbreak.

Further, the state government believes a large number of cases may have been caused by lapses in infection control measures in the hotel quarantine system.

Premier Daniel Andrews [said on June 30](#): "As a result of genomic testing, the Chief Health Officer has today advised the government that a number of our cases through late May and early June can be linked to an infection control breach in the hotel quarantine program."

Genomic testing is a way to track cases using a special technique based on the virus's genetic profile, rather than through human contact tracing.

What is being done?

The state government has ordered residents of ten Melbourne postcodes to [stay at home](#) until at least July 29. Residents are only allowed out to buy food or essential items, to work or study, to provide care or seek medical attention, or for exercise.

To fix the problem of cases in hotels potentially incubating for longer than 14 days, the Victorian government has introduced [testing](#) on day 11 of quarantine. Those who refuse to be tested have to stay in quarantine for an extra ten days after day 14. This regime means returned travelers will hopefully pose little risk of spreading infection.

The government has also organized a testing blitz with the help of the Australian Defense Force across the ten hotspot postcodes over ten days, aiming to [test](#) 10,000 residents a day. Andrews has [pleaded](#) with residents not to refuse testing.

Testing can now be done using saliva, which involves spitting into a plastic container. This test, developed by the Peter Doherty Institute for Infection and Immunity in Melbourne, is much more comfortable than the current nasal and throat swabs. But it is less sensitive, and is likely to [miss](#) 13% of positive cases, according to the Doherty Institute's own research.

The government has also [announced an investigation](#) into how the virus escaped hotel quarantine. [International flights](#) have been diverted away from Melbourne for the next fortnight to reduce the load on hotel quarantines.

What else can be done?

These measures could very well be effective in containing the surge.

But in my opinion, testing in the hotspots should be made compulsory. This is a public health emergency, and authorities have the power to insist people be tested.

As mentioned, Andrews has already [said](#) anyone arriving from overseas who refused a test would be forced to stay in quarantine in hotels for ten

extra days on top of the existing compulsory two weeks.

It's possible similar consequences could apply to any test-refuser in a hotspot, but we don't know exactly what the punishment would be if someone refused.

As acting Chief Medical Officer Paul Kelly [said](#): "Testing can be mandatory—all of the state and territory chief health officers have powers under their public health acts that can make testing and other mechanisms mandatory—but it's a last resort."

[Nearly 1,000 people refused testing](#) in Broadmeadows and Keilor Downs alone.

Finally, nasal and throat swabs should continue to be used, rather than the saliva tests that could easily produce false negatives. We can't have a situation where infected people go about their daily lives, wrongly believing they are negative. This might breed community transmission cases, the most difficult cases for authorities to track.

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