

AUSTRALIA'S VACCINE ROLLOUT AND OPENING UP PLAN

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[COVID-19 Evidenced-based commentary and analysis](#)

All of Australia is anxiously awaiting news on what the future holds as we approach the vaccination targets for the next phases in the national plan to transition the COVID-19 response. The entry targets for these next critical phases are, 70 percent of adults fully vaccinated for Phase B and then 80 percent for Phase C. It is important to note that even the 80% target does not equate to “opening up” but refers to transitioning to a durable model of COVID-19 control that allows us to live with the virus. Phase D with as yet undefined entry criteria is the final step once we have found setting levels that provide a workable equilibrium, and certainty, for our health sector and our community.

There were certain assumptions built into the Doherty collaboration modelling that informed the targets for the transition Plan. A key one was restricting vaccinations to those 16 years and older as approved by the Therapeutic Goods Administration at the time. We are therefore not talking about 70 or 80 percent of the population then, but 57 percent or 65 percent once we hit 80% among adults. This is in line with Israel with 60% of the population fully vaccinated and the UK with 63%. If we do extend our coverage to those under 16 beyond the high-risk people currently eligible, then we would achieve better levels of transmission control than the models account for, and this is in fact good news.

The modelling as it stands suggests we can control outbreaks at 57% coverage if we also employ low-level public health safety measures (local outbreak control measures along with test, trace and isolate practices designed to monitor and contain spread, especially in high-risk settings, but not to find and extinguish every single small transmission cluster. This is an important point of difference between Australia and other countries that have battled very high case numbers and opening up completely once vaccination levels were high enough to contain the impact on hospital admissions.

If an outbreak takes off under the settings Australia has incorporated into its plan, we could expect to only see 3000 cases or so in 6 months across Australia. Transmission would remain suppressed, and hospitalisations and deaths would be kept low even with a portion of the population unvaccinated. The main difference from now is that vaccination coverage would do more of the heavy lifting and take pressure off the extent of public health safety measures required.

The two vaccines currently in use in Australia both afford excellent protection against serious illness, hospitalisation and death of over 95%, and this is true even with Delta infections. The same Public Health England data show that, even during the interval between doses (from two weeks after the first), or in the two weeks before the immune response from the second dose kicks in, there is an 80% reduction in the risk of being hospitalised.

More than 12 percent of COVID-19 cases in Australia in 2021 have been hospitalised, but the proportion will have been decreasing over time as more of those most at risk of serious illness are protected by vaccine. More than 60 percent of those over 70 years of age in NSW are now fully vaccinated, and more than 75 percent have had at least one dose. Currently only five percent of active cases in NSW are in hospital.

We know from the latest data out of the REACT-1 study in the UK, where nearly 100,000 people in the community were randomly sampled and screened for covid-19, that unvaccinated people were three times more likely to be infected and test positive as those who were fully vaccinated. All 527 infections reported were the Delta variant. Those who had received one dose were a third less likely to be infected compared with the unvaccinated. It is important to note, this is counting all infections, not just symptomatic disease or people who are followed up in an outbreak.

These are the some of the parameters that are incorporated into the modelling by the Doherty Institute collaboration so that simulations can be run to see how outbreaks can be managed under various vaccination rate scenarios, supported by different levels of public health interventions. The Australian plan is to move in a staged way to settings that would not allow the virus to rapidly take off, as seen in Israel and the UK for example, but to ease into a new era of infection control in the community.

The Chief Medical Officer, Professor Paul Kelly, described the aim as a “soft landing”, and indeed after 18 months of effort and sacrifice, why risk this getting out of control at the eleventh hour? Phase B of the plan, our next step, does not promise any major changes, but starts to implement some safe and, by then tested, modifications such as home quarantine for vaccinated retired travellers. This next phase also promises less reliance on major public health measures, like lockdowns.

But our world has changed since the plan was drawn up. Instead of coming off a zero, or near zero, case base, we find ourselves with entrenched community transmission in NSW, Victoria and now the ACT. Even New Zealand is battling the Delta variant with case number approaching 300. Once community transmission is established, Delta defeats our contact tracing efforts under current vaccination levels with its speed of transmission and high attack rates. Lockdown has been required in all settings to put downward pressure on transmission. But now our vaccination rates are accelerating, and this is bringing forward the dates by which we might achieve those Phase B and C vaccination targets, and the levels of coverage that will assist our outbreak control measures.

The way vaccinations are tracking, we are only a couple of weeks away from every age group over 50 exceeding the benchmark of 80% with one dose completed. Many of those people still on one dose will be about ready for their second, even with the longer interval for Vaxzevria (AstraZeneca).

Those 16 to 50 years have had limited access to vaccines unless essential workers or in one of the other vaccine roll out Phase 1a or 1b categories. Next week, those 16 to 39 years old become eligible Australia wide. Promisingly, when Victoria and NSW opened to this group last week, we saw the highest percentage uptake of first doses in a week of five to seven percent nationally. If current uptake rates continue, all those 20 years of age and older could receive at least one dose within the next 10 weeks. As they will predominantly be receiving Pfizer, their second dose will only be another three weeks away, and they will then be fully vaccinated two weeks beyond that. We could therefore reach 80% fully vaccinated adults by early December.

On another encouraging note, the Australian Government has monitored vaccine sentiment since September 2020, and the latest report this month shows the percentage who intend to be vaccinated, or already have, to be 79 percent. This is the highest since February this year where it dropped from 80 percent to a low of 66 percent after the announcements about the very rare but serious side effects and the age-specific advice on preferred vaccines. The current outbreaks have certainly increased vaccine intent, and the accelerated vaccine uptake will help bring current outbreaks under control, drive case numbers down, and hospitalisation even more quickly as those first doses start to protect more of the population from serious illness.

There are many uncertainties still; especially how quickly those 20 to 39 years of age will line up to be vaccinated after we get through the first rush. These are the core group, those most exposed and with highest infections rates, still mixing as essential workers even during lockdown, and parents to young children who are no longer spared from infection in the way they were with previous variants. This critical group's uptake will determine how long it takes to reach those Phase B and C targets, and how quickly we bring current transmission levels down. But the two processes work hand in hand and this in itself should motivate our young adults to step up sooner as they see the progress being made to control these case numbers and bring hospitalisations down.

We can look forward to managing this infectious disease, as we do others, with a level of control that brings certainty and confidence to our health sector.