Office of the Prime Minister's Chief Science Advisor
Kaitohutohu Mātanga Pūtaiao Matua ki te Pirimia

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Israel: vaccine roll-out and border restrictions

Prepared under urgency – 2 June 2021

Effectiveness of vaccine roll-out in Israel

- Pfizer–BioNTech mRNA COVID-19 vaccine BNT162b2, administered as two doses 21 days apart, was authorised for emergency use in Israel in December, 2020
- Israel administered a first dose of the Pfizer-BioNtech vaccine to over 10% of Israelis within 2 weeks of its approval.
- Approx. 60% of the population are now fully vaccinated (approx. 80% of the adult population)
- Some reasons that Israel has had an effective roll-out:
    - Small population (9.3 million)
    - Relatively young population allowing older people to be prioritised
    - Dense population meaning more straightforward logistical arrangements
    - Presence of mass vaccination plan, i.e. focus on getting structures and processes ready, rather than just acquiring stock of vaccine
    - Engaged leadership in delivering plan and interconnected parts (cold chain, population register, trained staff, recognising and responding to uptake differences)
    - Incentivisation (see 'Green Pass' below)
- The vaccine is around 95% effective at preventing SARS-CoV-2 infection following two doses (from 7 days after the second dose) (see Table 1)

Restrictions and border in Israel

Inbound air-travel – restrictions up to/including May 2021:

- Pax arriving must present a negative COVID-19 PCR test result to airline staff taken within 72 hours of scheduled departure to Israel, including those already vaccinated.
- Pax must submit an 'entry statement' with personal details, contact info, where they will isolate etc.
- Isolation required unless have a valid Israel Ministry of Health vaccination or recovery certificate. Isolation is for 14 days, or ten days if two test results taken at specific time intervals are negative.
- On arrival must have a COVID-19 PCR test undertaken.
- Facemask while travelling (over 6-7 years old), 2m distancing, hygiene etc

Border restrictions relax:

- 27 May 2021 first 'organised tourist group' enters country for first time in over a year. PCR tests are undertaken on landing. (no isolation)
- This is part of a limited pilot for vaccinated tour groups that will continue until 15 June 2021. Numbers will initially be limited (20 groups in the pilot).
- Groups will be accepted from 14 countries (the US, the UK, France, Germany, Italy, Malta, Iceland, Denmark, Ireland, Portugal, New Zealand, Australia, Singapore and Hong Kong). Must have had FDA or EU approved vaccine.
- July 2021 – possibility of individual, vaccinated tourists to arrive

- Pax who have been vaccinated or recovered offshore with appropriate evidence can have a serological test in an Israeli Ministry of Health accredited laboratory at least 10 days after they last tested positive for COVID. If the test is positive for antibodies they can apply for an exemption from isolation.
- Serological testing (and PCR testing) can be carried out at the airport.

Internal restrictions in Israel

- As of June 2021, the only remaining restrictions inside Israel is a requirement to wear masks in closed public spaces
- Green pass system:
    - A 'Green Pass' was required for entry into higher risk settings (e.g. businesses/public gatherings) and required individuals to have been vaccinated or recovered. For those under 16, the pass is valid for 72 hours from time of testing negative (PCR swab test). There were some concerns it was discriminatory.
    - The 'Green Pass' was introduced in February 2021 and ended in June 2021
- Purple badge system:
    - Workplaces and businesses that meet 'purple badge' requirements can have a greater capacity of worker than restrictions otherwise allowed (30% capacity), but requires monitoring and safety protocol
    - The purple badge was introduced March 2020 and lifted in June 2021
- The Traffic Light Model:
    - Local councils are mapped as red, orange, yellow or green according to infection rate

Testing

- PCR tests
- Rapid tests (15-30 minutes) were performed by authorised providers at the entrance to venues (this was not a requirement for venues) under the Green Pass system (now finished). A passed test allowed admittance; a failed test required individual to go into isolation until a PCR test could confirm result.
- Serological tests (blood) for antibodies are used in Israel to confirm recovery from coronavirus where PCR testing was not undertaken/confirmed in a suspected coronavirus patient
- In March 2021, a test was piloted on passengers on a flight of a rapid antigen test (nasal swab, results within 15-20 minutes) if the passenger was not yet vaccinated (mostly those under 16 years old). This does not appear to be in widespread use. Antigen tests generally have lower sensitivity (i.e. less likely to report a true positive), which may be why it is not used more broadly.

Most useful literature (attached)

- Haas *et al* (2021) *Impact and effectiveness of mRNA BNT162b2 vaccine against SARS-CoV-2 infections and COVID-19 cases, hospitalisations, and deaths following a nationwide vaccination campaign in Israel: an observational study using national surveillance data.*
    - This paper estimates the real-world effectiveness of the vaccination (Pfizer–BioNTech mRNA COVID-19 vaccine BNT162b2) in Israel. The paper compares new cases of infection and prevalence of vaccination by age group, annotated with associated restrictions and reopenings implemented in Israel.
- Katz *et al* (2021) *Lessons Learned from Israel's Reopening During a Nationwide COVID-19 Vaccination Campaign. Science Briefs of the Ontario COVID-19 Science Advisory Table.*
    - This paper outlines key elements of Israel's reopening, including an overview of the phased approach and vaccination programme, and how learnings could be applied in Ontario.

Table 1 Estimated effectiveness of two doses of BNT162b2 (≥7 days and ≥14 days after the second dose) against laboratory-confirmed SARS-CoV-2 outcomes (Jan 24 to April 3, 2021) (Haas et al. 2021)

	Vaccine effectiveness after 2 doses (adjusted)	
	More than 7 days after second vaccination	More than 14 days after second vaccination
SARS-CoV-2 infection	95·3%	96·5%
Asymptomatic SARS-CoV-2 infection	91·5%	93·8%
Symptomatic COVID-19	97·0%	97·7%
COVID-19-related hospitalisation	97·2%	98·0%
Severe or critical COVID-19-related hospitalisation	97·5%	98·4%
COVID-19-related death	96·7%	98·1%

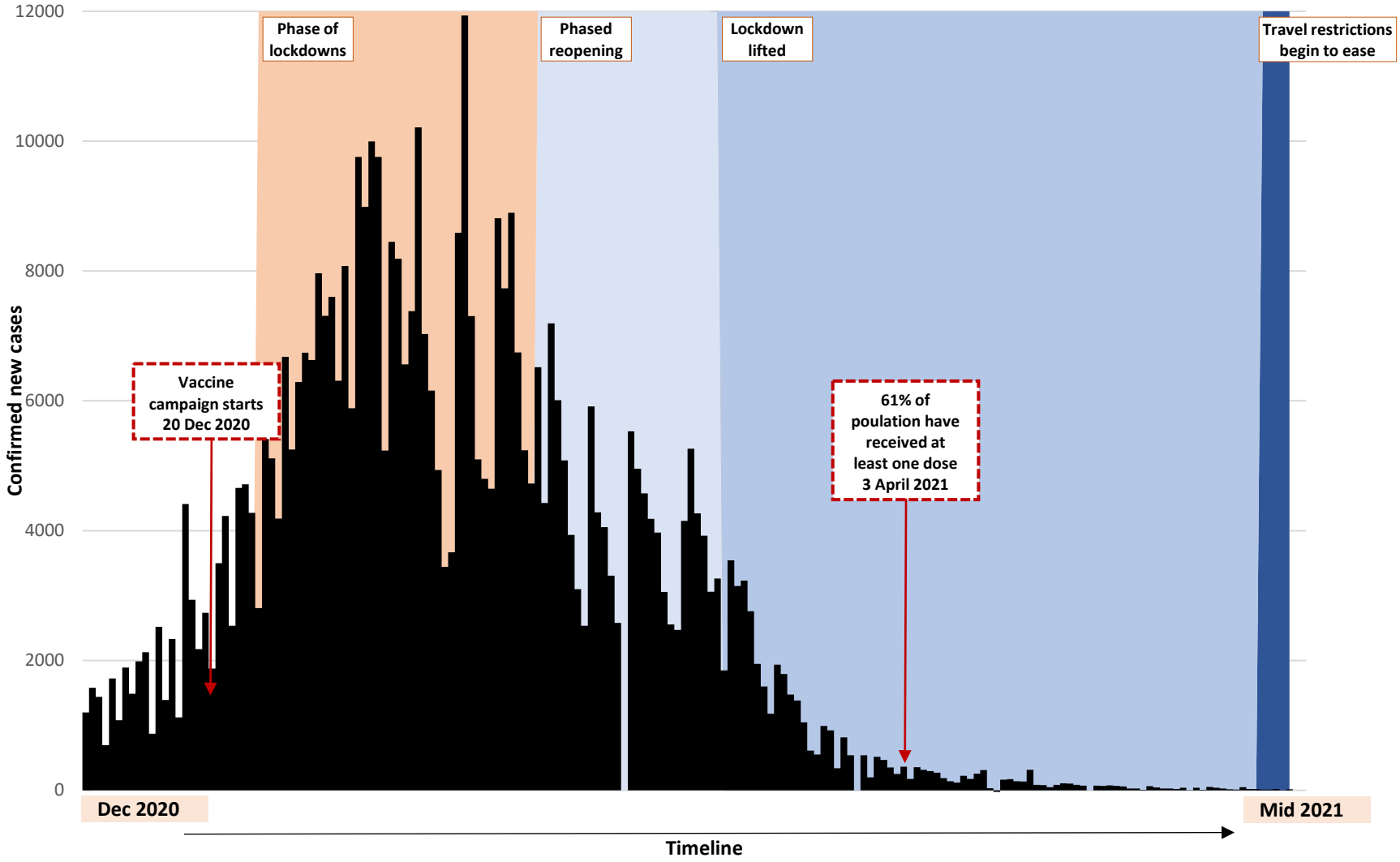

Figure 1 New confirmed COVID-19 cases per day in Israel (Data from JHU)

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