DEPARTMENT OF THE PRIME MINISTER AND CABINET
TE TARI O TE PIRIMIA ME TE KOMITI MATUA

Proactive Release

The following item has been proactively released by the Rt Hon Jacinda Ardern, Prime Minister:

Systems architecture (Health System preparedness)

Border restrictions are providing New Zealand with time to prepare for potential outbreaks of COVID-19 in our country. We must:

- harness increased scientific understanding of COVID-19 to formulate evidence-based policies
- learn from other countries about how best to contain and slow spread
- apply innovative and flexible solutions (technological and policy)
- increase capability and capacity in the health system
- inform and prepare all New Zealanders, especially high-risk and vulnerable groups
- get government, workplaces and educational institutions ready for physical distancing and possible closures
- get all workplaces to test and sharpen up continuity plans.

The effectiveness of border restrictions is likely to diminish rapidly should widespread community outbreaks occur in New Zealand. Also, over time, border restrictions are likely to pose mounting economic costs through restrictions of movement.

Our preparedness is determined by three key things:
(i) the capability and capacity of the health system
(ii) policy and operational settings in the health system as well as coordination across the system
(iii) an informed and prepared population, especially high-risk and vulnerable groups.

An informed and prepared population can (i) flatten the curve through lowering transmission and (ii) better respond to public health measures which will increase physical distancing and restrict movement.

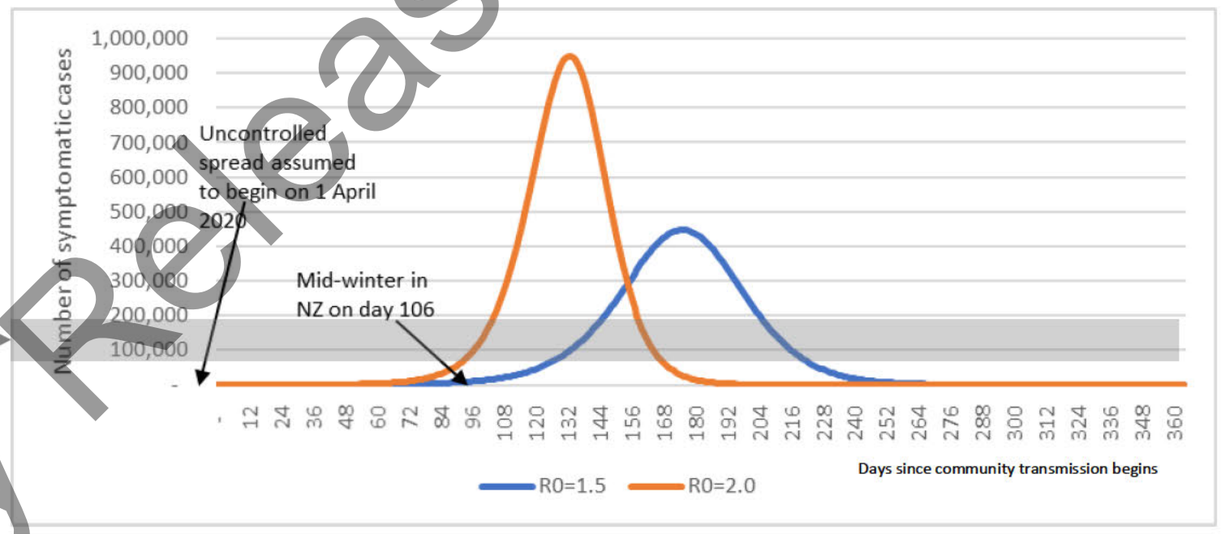
Care in the community (including in people's homes) is required, particularly when health system capacity is exceeded.

COVID-19 Epidemiology curves

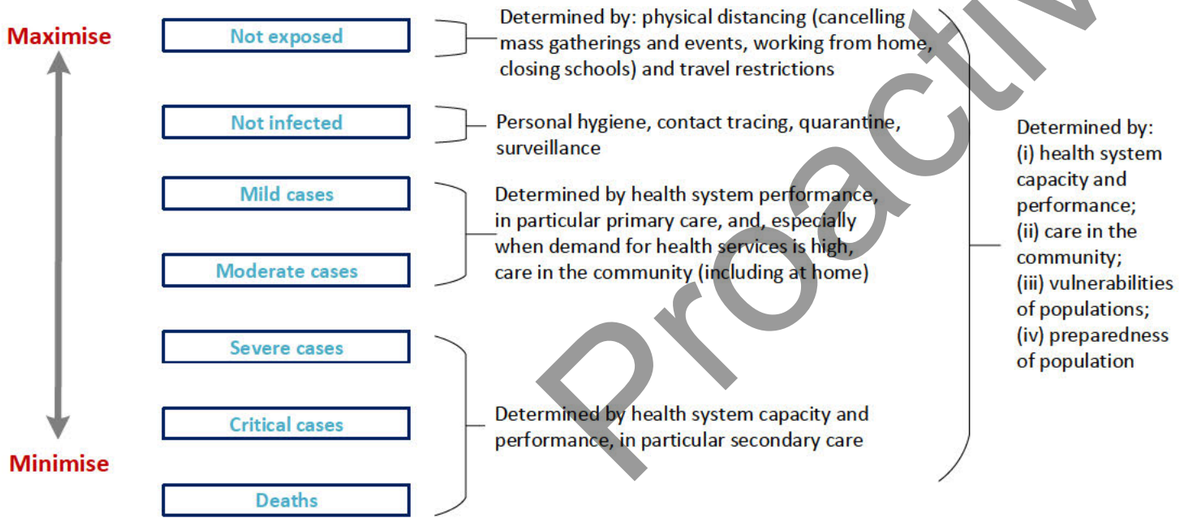
Orange curve: symptomatic cases 3.6 million, hospitalisation 124,100, ICU 19,400
Blue curve: symptomatic cases 2.7 million, hospitalisation 92,600, ICU 14,400

We can lower the curve (ie lower transmission) through public health measures and by informing and preparing the population

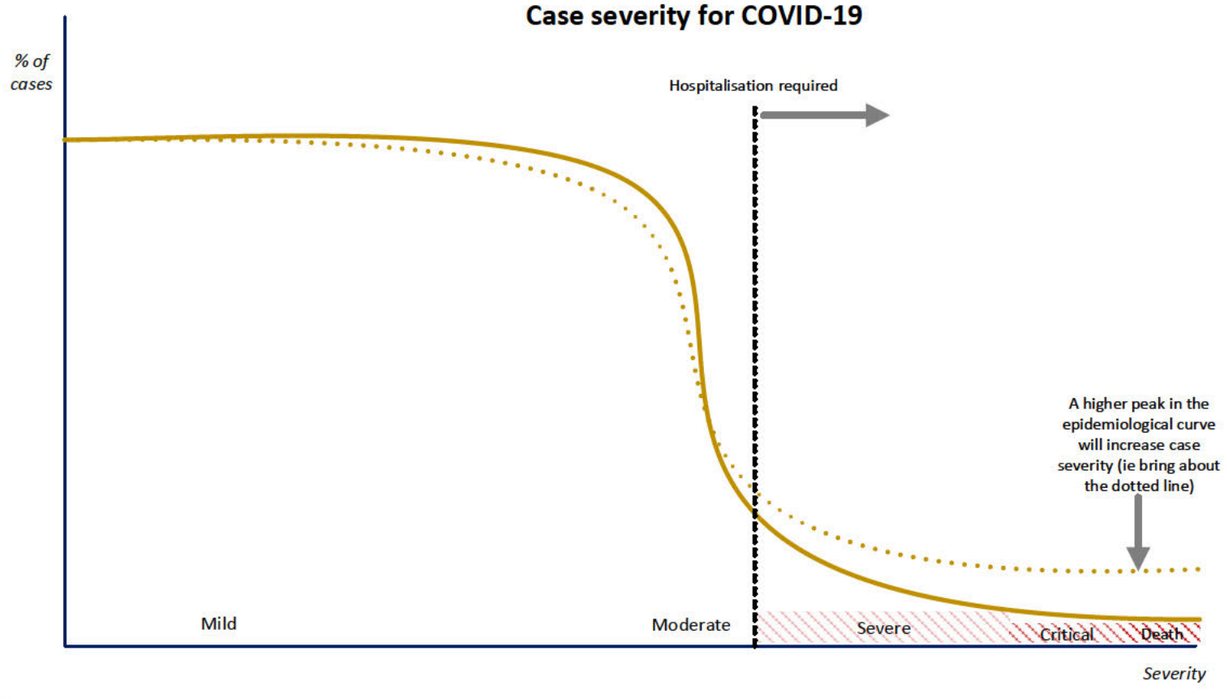
Modelling results from University of Otago Wellington, University of Tübingen (Germany), Epimos GmbH (Germany), Landesgesundheitsamt Baden-Württemberg (Germany) and ExploSYS GmbH (Germany).
Caution: The results of models vary widely. They are built on data from locations that have had major outbreaks (esp China and Italy).
Key assumptions: 3% of symptomatic cases require hospitalisation; 15% of hospitalised cases require ICU care.



Increased readiness helps us flatten the curve by lowering the infection rate, and minimising severe cases and deaths



Case severity for COVID-19



Go hard, Go early, Stay the course – scaling up preparedness Page 2

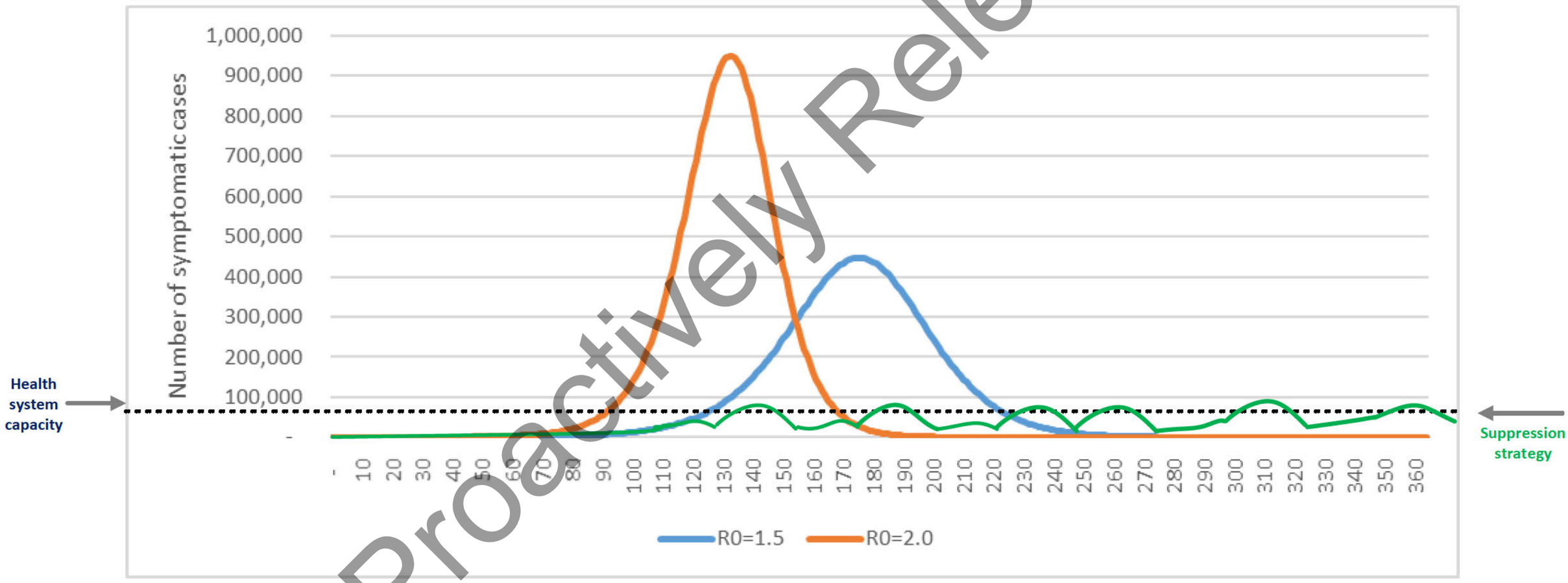
This page forms the basis of our work programme for the next six weeks.

We will update this document for the next CVD Cabinet meeting. The document will include more commentary on scalability and resource implications.

	Current assessment of readiness and focus for action	Readiness within next month
Workforce	❑ The regulated health workforce stands at 109,934 ❑ Have set up Ministry, DHB and union function to make workforce decisions across the sector ❑ Options identified for increasing front line health staff ❑ Expediting MECA bargaining for 2020 (senior doctors and nurses) ❑ Rehiring retired doctors, nurses and allied health – expedited registration processes ❑ Call made on 16 March across public service for staff with health sector qualifications	❑ Unified all-of-sector approach to leave, travel and workforce utilisation developed (eg moving staff between DHBs) ❑ Options identified for surging healthcare workforce, including appropriate training ❑ Previously retired healthcare professionals re-registered ❑ Health professionals from across the public sector identified and ready to act ❑ Clear guidelines for health care professionals developed
Facilities	❑ 249 ICU beds, including high dependency units, across DHBs ❑ 330 negative pressure rooms across DHBs ❑ DHBs have set up designated testing/swabbing facilities across their regions, eg designated GP practices, mobile units, other community facilities ❑ By 20 March, DHBs will have plans to stand-up and activate community-based assessment centres (CBACs) within 24 hours	❑ Stocktake completed of private sector capacity (including ICU beds and general beds) ❑ Outbreak investigation and management plans in place in residential care facilities, schools, prisons and other residential institutions ❑ Alternative care settings in place to support hospitals that reach capacity ❑ Different pathways of care in place, eg community-based assessment centres and teleconsultations
Equipment and medicines	❑ Survey sent to all ICU units in DHBs to determine number of useable ventilators ❑ Wholesale medicine suppliers are required to hold 2 months' worth of normal usage in the supply chain (there is usually an additional 3-6 weeks' worth in the distribution chain at any one time). ❑ PHARMAC in contact with suppliers on weekly/fortnightly basis; asked suppliers to increase their stock and said they will underwrite; checking whether reduced flight schedules will affect incoming supplies. ❑ MedSafe has policy on potential out-of-stock medicine stockages, including what suppliers should do	❑ Increase in availability of ventilators ❑ Stocktake completed of ventilators in the private sector ❑ Virtual care technology is in place for staff to support patients that can be managed outside of an acute setting
Testing, surveillance and monitoring	❑ As of 17 March, current testing capacity across New Zealand is 700 tests per day ❑ Disease surveillance plan confirmed and some elements (eg FluTracking and ICU testing) underway ❑ Contact tracing capacity across New Zealand estimated at 10 active cases ❑ From 17 March, spot checking and enforcement taking place ❑ From 18 March, operating model changed to relieve pressure from PHUs (case tracing done by MoH)	❑ Testing capacity increased to 1500 tests by March 22. More capacity can be added, depending on demand ❑ Full surveillance programme underway, including sentinel practices ❑ Further scale up New Zealand's contact tracing capacity to 50 cases per day ❑ Compliance model for education, support and enforcement of self-isolation scaled up to manage large-scale isolation ❑ Routine telephone monitoring in place for those in self-isolation
Infection control	❑ Centrally-held supplies: 9 million P2/n95 masks, 9 million surgical masks (estimated to last for 82 days when hospitals at full capacity, assuming medics provided with 2 masks per day with R0 2.2) ❑ Volumes of DHB PPE reserve holdings (masks, gowns, gloves, googles, hand sanitisers) not fully confirmed ❑ Infection prevention and control protocols in place	❑ Production at mask facility in Whanganui ramped up ❑ DHB reserve holdings of PPE confirmed to Ministry of Health ❑ Updates to infection prevention and control protocols based on new scientific/clinical knowledge and PPE holdings ❑ Environmental services room decontamination and waste stream plans in place ❑ Prepared for extensive disinfectant in all public places and transport vehicles
Care in the community	❑ Primary and community-based healthcare providers are reinforcing and implementing public health messaging and practices to prevent COVID-19	❑ Self-management tools implemented to enable patients and their families to care for themselves at home (where appropriate) ❑ Alternative community care arrangements in place to care for patients outside of the hospital setting if required ❑ Triage protocols in the community care setting in place ❑ Alternative delivery mechanisms established for dispensing and delivering medication and diagnosis
Health system policy and operational settings **Health system coordination**	❑ DHBs developing plans to coordinate services across DHBs/regions ❑ DHBs activated local pandemic plans on 14 March ❑ Epidemiological modelling (to be used for planning purposes) being refined and distributed	❑ DHB plans prepared for a range of scenarios, including a reasonable worst case ❑ DHBs coordinated nationally to meet surge capacity and workforce requirements ❑ Public Health Units nationally coordinated for containment activities, including active case finding, contact tracing and quarantine of contacts ❑ Flow models of care by region are developed including intensive care units, general beds, community
Informed and prepared population, especially high-risk and vulnerable	❑ Mass public health campaign just beginning ❑ On 16 March, HealthLine staff dealt with 32,000 calls; 3,000 calls diverted to government helpline ❑ Engaging with high-risk and vulnerable networks, including iwi, hapu and whānau ❑ Few government agencies, workplaces and schools have tested/refined business continuity plans ❑ MoE working on options (eg online learning and access to devices) should schools close	❑ More preparation in the community, including amongst high-risk vulnerable populations (including iwi, hapu and whānau) ❑ HealthLine: Larger workforce and more telephone lines ❑ New Zealanders more used to physical distancing ❑ Government agencies, workplaces and schools have tested and improved business continuity plans ❑ Schools have systems and processes in place to manage remote learning

COVID-19 Mitigation versus suppression

- Our strategy is focusing on keeping COVID-19 out, stamping it out and slowing it down.
- Our aim is to prevent widespread outbreaks. Allowing widespread outbreaks (ie trajectories along the **orange** and **blue** curves ('flattening the curve')) will significantly overwhelm the health system.
- The strategy centres on border restrictions, intense testing, aggressive contact tracing, and stringent self-isolation and quarantine.
- Physical distancing will also be required to varying degrees as we continue along this path.
- We can call this a **suppression** strategy.
- Should outbreaks occur, a suppression strategy aims to reverse epidemic growth through tougher public health measures – eg by more intense physical distancing and travel restrictions.
- The aim is to ensure that health system capacity is not exceeded through strengthening public health measures.
- When cases fall, public health measures can be eased slightly.
- This cycle repeats itself (refer **squiggly green line**).
- However, we must still prepare for times when capacity of the health system is exceeded by having 'surge' options.
- A suppression strategy does incur significant economic and social disruption. Longer periods of physical distancing, including school closures, will be required.
- However, many lives will be saved and more people remain well so are able to operate the economy and the health care system.
- We would need to maintain this approach until a vaccine is developed, which is *at least* January 2021, and/or the global pandemic has passed.
- This approach is distinct from a **mitigation** strategy, which focuses on reducing the size of the peak (ie moving from the orange curve to the blue curve).



Unmitigated spread

Mitigated spread – requires public health measures

Suppression – requires longer and tougher public health measures – hold-out until vaccine