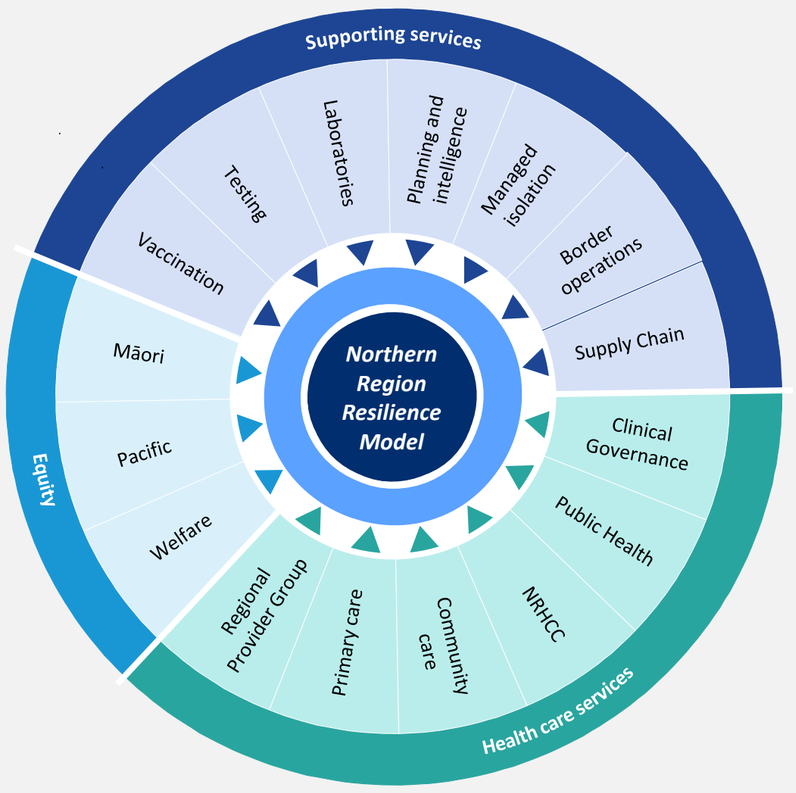
Northern Regional Resilience Plan: update for Health Systems Readiness Steering Group

20th October 2021

Northern Regional Resilience Plan - Overview



The purpose of this plan is to provide advice to DHBs, Ministry of Health and Minister of Health and Associates on what will be required to build the resilience of the Northern Region healthcare system in anticipation of changes in pandemic management strategy and Government policy settings.

A function is considered resilient if it has the capacity and capability to support sustainable responses to recurring community resurgences of COVID-19, without limiting the ability to provide effective non-COVID related health care services.

Key assumptions

The "unmitigated scenario" modelling has been used to inform resilience planning.

- 90% adult (16+) vaccination rate.
- No vaccination of <12 year olds.
- Loose public health controls.
- Loose border restrictions.

Predicted regional numbers per week (in 2022)

5,300
New cases

270
Hospital admissions

5,030
In community

25
Deaths

Priorities to build resilience

Priority area	Recommendations by December-21	Estimated additional funding required
Increasing Māori and Pacific NGO Providers' capacity and capability to offer end-to-end COVID support services to their communities sustainably	i. Offer **flexible and sustained funding models** for Providers, to fund end-to-end COVID service "packages" instead of individual activities including testing, vaccination and welfare support for isolating households. ii. Fund culturally competent **Training Providers** to recruit, upskill and grow the available workforce pool. iii. Provide **officially recognised micro-credential courses** and **official accreditation** that allows **increased devolution** of activities to Providers with specialised reach into vulnerable communities. iv. Providing funding security to allow **workforce growth** within Providers.	**$2m** For recruiting and training workforce **$24m** Additional annual workforce cost
Offering a standardised Welfare package to enable families to safely self isolate due to COVID.	i. Operationalise a scalable and sustainable process that provides an **immediate 48 hour Manaaki package** to all families requiring to self isolate, including procurement, storage and logistics arrangements. ii. Clarify **role of MSD** to support families with all Welfare requirements, including post-isolation funding support. iii. Ensure access to **priority supermarket delivery slots** for those self-isolating due to COVID *(note – this should not be actioned by the Northern Region healthcare system)*. iv. Acquire thermometers and oximeters to **allow self-monitoring of symptoms**.	**$65m** (Note this may be from MSD budget)
Develop and operationalise a community model for managing COVID cases and their bubbles isolating at home.	i. Offer official accreditation to NGO and Primary Care Providers to provide Q@Home monitoring for **priority communities** by the end of October. ii. Delegate **default management of all COVID cases** isolating in the community to **accredited NGO and Primary Care providers** by 08 November. iii. Establish a central coordination model, including a **'Q@Home Hub',** to triage positive cases isolating in the community and signpost to appropriate organisations (e.g. Healthline, Primary Care, Mental Health Services, NGO Providers, MSD).	**For (i) & (ii)** **$47m** Per year **For (iii)** **$1.5m** Per year
Sustainable outbreak suppression model within Auckland, including defining the long-term ARPHS operating model.	i. Development of **automated data entry,** case triage, case and contact management tools to manage those who can remain at home. *(Note – MoH support needed)* ii. Stand up a **triage function** to assess and direct all cases to either MIQ or Q@home pathway. iii. **Delegate certain cases** to most appropriate pathways, including **other PHUs, NITC** and **telehealth services** based on initial triage. *(Note – additional MoH funding for these services likely to be needed)* iv. Development of tools to allow many settings to **self-manage exposure events** without ARPHS involvement.	– Limited additional regional funding required above other requests in this paper.
Upgrading the facilities and infrastructure within DHBs to expand the available space to treat patients with COVID.	i. **$40m** funding needed to enable facility and infrastructure changes required across the four DHBs (to enable up to **200 negative pressure beds** and **137 isolation rooms**). ii. Conduct **rapid review of space** available for screening, testing and pre-triage of patients **at all hospital entrance points** – including standing up dedicated temporary space for this if needed.	**$40m** One off
Rapidly expand regional laboratory capacity to process COVID tests.	i. **Automate current manual processing** of COVID swabs by procuring four COPAN Universe pre-analytical automation systems to improve efficiency and provide regional resilience. ii. Provide **Policy clarification** on the intended use of RAgT to relieve current labs pressure. *(Note – MoH support needed)* iii. Conduct rapid review **of options to increase laboratory capacity** to 35,000 tests per day by December-21.	**For (i)** **$3m** One off
Set up systems & infrastructure to enable COVID Booster jabs and catch up campaigns for non-COVID diseases.	i. Build **event management capability and capacity** within NRHCC for future vaccination events, including recruiting permanent staff to replace DHB secondees. ii. Increase **regional outreach** capacity and capability. iii. Revise **Commissioning Framework** to align incentives for Pharmacy, GPs & Providers. *(Note – MoH support needed)* iv. Enable new COVID vaccination infrastructure to provide **additional hauora services**, such as alternative immunisations and cardiovascular screening services.	**For (i) and (ii)** **$7.2m** Per year **$60m** Per year for COVID booster jabs
Build Mental Health to support capacity and accessibility	i. **Build the capacity of Specialist Mental Health Services** to safely manage mental health inpatients with COVID-19 patients in appropriate acute settings (ED and inpatients). ii. Expand and **support public access to the Access and Choice Wellbeing Support** programme to provide mental health support to community COVID-19 cases. *(Note – MoH support needed)* iii. Implement recommendations from the Psycho-social Recovery Plan (further details to be provided).	**For (i)** **$2.5m** To establish Tamaki Oranga as dedicated inpatient facility
Rapid clinical review of decision making and treatment of COVID patients.	i. Provide guidance on **ethical considerations** for treatment (e.g. ventilation limits). ii. Review the available **treatments and medication**, oral antivirals for community cases, including the results of overseas trials for rapid deployment into clinical settings.	–

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Scenario modelling overview

The below assumptions have been used to model the predicted impact of COVID in the Northern Region in 2022.

Key assumptions (Full assumptions available on request)

- 90% adult vaccination rate by Dec 2021.
- Children ages 12-15 are vaccinated.
- 0-11 year olds not vaccinated.
- Borders are opened 1 Jan 2022.
- Restrictions remain on travel to some countries, but otherwise quarantine-free travel is occurring.
- Assume Delta variant is main issue, medium R0 = 4.5 per REF.
- Assume variation in coverage by community around the average vaccination coverages.
- Vaccine efficacy (Pfizer) against Delta = 88%, against severe disease 94%.
- Assume severity proportions as per REF.
- Vaccine reduction in transmission - 85%.
- No further community lockdowns, but case isolation and contact tracing e.g. as measles is managed now, drops R0 44% [REF p11].
- Health care workers at 93% coverage - assume other groups slightly lower.
- M + P have 2.5 and 3x the rate of hospitalisation as European/Other.

	Over 2022 year							Average per week in 2022		
DHB	**Cases**	**Hospitali-sations**	**Deaths**	**% cases M**	**% cases P**	**% deaths M**	**% deaths P**	**Cases**	**Hospitali-sations**	**Deaths**
Northland	27,900	1,900	200	43%	2%	52%	0	540	36	4
Waitemata	89,200	4,000	380	11%	9%	14%	14%	1,700	80	7
Auckland	68,700	3,300	300	10%	14%	17%	34%	1,300	60	6
Counties M	88,700	4,800	430	17%	27%	24%	36%	1,700	90	8
Total Regional	**273,100**	**13,000**	**1,300**	**20%**	**13%**	**27%**	**21%**	**5,240**	**260**	**25**

(Note, rounding may cause some variation in numbers reported)

Notes and assumptions

Priority area	Notes and assumptions	Estimated additional funding required
Increasing Māori and Pacific NGO Providers' capacity and capability to offer end-to-end COVID support services to their communities sustainably	i. Based on modelling, approx. 33% of new cases will be Māori or Pacific ethnicities, with an estimated 1,600 cases per week in these communities. ii. To accommodate the growth in cases within these communities, at least 200 additional FTE regionally will need to be trained and contracted by Providers. iii. An estimated training cost of $10k per person has been assumed based on current courses available. iv. An average salary of $100k per year has been used, with a 20% overhead margin.	**$2m** For recruiting and training workforce **$24m** Additional annual workforce cost
Offering a standardised Welfare package to enable families to safely self isolate due to COVID.	i. Based on modelling, around 5,000 cases per week will not require hospitalisation. ii. Of these, we have assumed approx. 1 in 3 cases will require welfare support for their whānau, to enable safe self isolation. iii. The average cost to provide essential welfare support (food, clothing, telecoms, medication and children's items) has been $750 per whānau (from NRHCC Welfare team). iv. Providing this support to the higher number of cases will require an additional $1.25m per week. *Note, MSD procurement arrangements may significantly alter these assumed costs.*	**$65m** (Note this may be from MSD budget)
Develop and operationalise a community model for managing COVID cases and their bubbles isolating at home.	i. Primary Care COVID-19 Activity Funding Framework current payment levels ($120 for initial consultation, $60 for monitoring) used to estimate additional funding required to manage 5,030 community cases per week. ii. 15 additional FTE required to staff "Q@Home Hub", with average salary of $100k per year. iii. Note some Primary Care funding may be from already allocated streams.	**For (i) & (ii)** **$47m** Per year **For (iii)** **$1.5m** Per year
Sustainable outbreak suppression model within Auckland, including defining the long-term ARPHS operating model.	i. Central development of tools to allow many settings to self-manage exposure events without ARPHS involvement (e.g. schools, DHBs, Businesses) will release ARPHS capacity and allow triage function to be established.	– Limited additional regional funding required above other requests in this paper.
Upgrading the facilities and infrastructure within DHBs to expand the available space to treat patients with COVID.	i. DHB funding requirements from Facilities & Infrastructure regional planning (led by Tony Phemister and Mark Harris) to upgrade the COVID capability of existing DHB capacity. ii. Note that this will result in a net loss of 11 beds in the region. iii. Note that some of these projects are already underway, and retrospective funding approval will be required.	**$40m** **One off**
Rapidly expand regional laboratory capacity to process COVID tests.	i. Average cost to procure and install each COPAN Universe automation system is $750k. ii. These will reduce FTE required to process samples by ~50%, and improve turnaround time, quality and consistency of results. iii. There is a 3-4 month lead time for operationalising these once ordered.	**For (i)** **$3m** **One off**
Set up systems & infrastructure to enable COVID Booster jabs and catch up campaigns for non-COVID diseases.	i. Funding for at least 60 FTE required to organise and run weekly events, outreach campaigns and coordinate non-COVID services. (Currently 120 FTE in the NRHCC vaccinations team). ii. Average salary of $100k with 20% overheads assumed. iii. $40 per booster jab assumed (based on current rates) for an eligible population of 1.5m.	**For (i) and (ii)** **$7.2m** Per year **$60m** Per year for COVID booster jabs
Build Mental Health to support capacity and accessibility	i. Transferring 15 inpatients from the Tamaki Oranga regional facility will enable a 20 bed regional facility to be quickly established to care for acute mental health patients with COVID (who do not require specialist COVID treatment). ii. 24/7 1:3 supervision will be required for each of the current inpatients, equivalent to 21FTE. iii. An average salary of $100k has been assumed, with 20% overheads.	**For (i)** **$2.5m**
Rapid clinical review of decision making and treatment of COVID patients.	i. No additional funding required.	

NRHCC Northern Region Health Coordination Centre