

# The Long Normal: Preparing the National Reserve Supply (NRS) for pandemic cycles

Think Piece 33: April 2020

## Appendix 1: Pandemic plan-related Ministry of Health documents

Note: All URLs in this appendix are correct as at 9 April 2020.

Table 1: New Zealand Ministry of Health Pandemic-related plans (Note: The table only includes documents published by MoH, and no other government departments or agencies.)

Plan title	Edition (if applicable)	Date produced	Link
New Zealand Influenza Pandemic Plan: A framework for action	2nd	August 2017	<a href="https://www.health.govt.nz/system/files/documents/publications/influenza-pandemic-plan-framework-action-2nd-edn-aug17.pdf">https://www.health.govt.nz/system/files/documents/publications/influenza-pandemic-plan-framework-action-2nd-edn-aug17.pdf</a>
National Health Emergency Plan: A framework for the health and disability sector	-	October 2015	<a href="https://www.health.govt.nz/system/files/documents/publications/national-health-emergency-plan-oct15-v2.pdf">https://www.health.govt.nz/system/files/documents/publications/national-health-emergency-plan-oct15-v2.pdf</a>
National Health Emergency Plan: National Reserve Supplies Management and Usage Policies, 3rd edition	3rd	5 December, 2013	<a href="https://www.health.govt.nz/system/files/documents/publications/nhep-reserve-supplies-usage-dec-2013-v2.pdf">https://www.health.govt.nz/system/files/documents/publications/nhep-reserve-supplies-usage-dec-2013-v2.pdf</a>
National Health Emergency Plan: Mass Casualty Action Plan	-	2011	<a href="https://www.health.govt.nz/system/files/documents/publications/nhep-mass-casualty-action-plan.pdf">https://www.health.govt.nz/system/files/documents/publications/nhep-mass-casualty-action-plan.pdf</a>
National Health Emergency Plan: Infectious diseases	-	2004	<a href="https://www.health.govt.nz/system/files/documents/publications/nationalhealthemergencyplan.pdf">https://www.health.govt.nz/system/files/documents/publications/nationalhealthemergencyplan.pdf</a>

Table 2: New Zealand Ministry of Health Pandemic Plan-related documents (Note: Not plans)

Document title	Edition	Date produced	Link
Guidance on Community-based Assessment Centres and Other Support Services  [Part of the National Health Emergency Plan set of documents]	-	2 December, 2008	<a href="https://www.health.govt.nz/system/files/documents/publications/nhep-community-based-assessment-dec08.pdf">https://www.health.govt.nz/system/files/documents/publications/nhep-community-based-assessment-dec08.pdf</a>
H5N1 Pre-Pandemic Vaccine Usage Policy  [Part of the National Health Emergency Plan set of documents]	'Revised 2013'	2 December, 2008	<a href="https://www.health.govt.nz/system/files/documents/publications/nhep-vaccine-policy-dec2013-v2.pdf">https://www.health.govt.nz/system/files/documents/publications/nhep-vaccine-policy-dec2013-v2.pdf</a>
Planning for Individual and Community Recovery in an Emergency Event: Principles for Psychosocial Support.  [Part of the National Health Emergency Plan set of documents]	-	2007	<a href="https://www.health.govt.nz/system/files/documents/publications/planning-individual-community-recovery-in-emergency-event.pdf">https://www.health.govt.nz/system/files/documents/publications/planning-individual-community-recovery-in-emergency-event.pdf</a>
National Laboratory Guidelines for Pandemic Influenza Collection and Handling of Human Specimens for Laboratory Diagnosis of Influenza with Pandemic Potential	-	June, 2006	<a href="https://www.health.govt.nz/system/files/documents/publications/national-laboratory-guidelines-pandemic-influenza.pdf">https://www.health.govt.nz/system/files/documents/publications/national-laboratory-guidelines-pandemic-influenza.pdf</a>

Table 3: New Zealand Epidemic Legislation

Title of legislation	Version	Link
Epidemic Preparedness Act 2006	Reprint as at 26 March 2020	<a href="http://legislation.govt.nz/act/public/2006/0085/latest/DLM404459.html">http://legislation.govt.nz/act/public/2006/0085/latest/DLM404459.html</a>

## Endnotes

Number	Reference
1	Kahn, J., & McIntosh, K. (2005, November). 'History and Recent Advances in Coronavirus Discovery'. The Pediatric Infectious Disease Journal, 24(11). Retrieved 9 April 2020 from <a href="https://journals.lww.com/pidj/Fulltext/2005/11001/History_and_Recent_Advances_in_Coronavirus.12.aspx">https://journals.lww.com/pidj/Fulltext/2005/11001/History_and_Recent_Advances_in_Coronavirus.12.aspx</a> .
2	Akpan, N. (2020, April). 'Why a coronavirus vaccine could take way longer than a year'. National Geographic. Retrieved 9 April 2020 from <a href="https://www.nationalgeographic.com/science/2020/04/why-coronavirus-vaccine-could-take-way-longer-than-a-year">https://www.nationalgeographic.com/science/2020/04/why-coronavirus-vaccine-could-take-way-longer-than-a-year</a>
3	World Health Organisation (WHO). (2003). Consensus document on the epidemiology of severe acute respiratory syndrome (SARS). Geneva: Author. Retrieved 9 April 2020 from <a href="https://www.who.int/csr/sars/en/WHOconsensus.pdf">https://www.who.int/csr/sars/en/WHOconsensus.pdf</a> .
4	World Health Organisation (WHO). (2019). MERS Situation Update: November 2019. Cairo: World Health Organisation (WHO), Eastern Mediterranean Office (EMRO). Page 10. Retrieved 9 April 2020 from <a href="http://applications.emro.who.int/docs/EMRPUB-CSR-241-2019-EN.pdf?ua=1&amp;ua=1&amp;ua=1">http://applications.emro.who.int/docs/EMRPUB-CSR-241-2019-EN.pdf?ua=1&amp;ua=1&amp;ua=1</a> .
5	World Health Organisation (WHO). (2020). Coronavirus disease 2019 (COVID-19): Situation Report – 46. Geneva: Author. Retrieved 9 April 2020 from <a href="https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200306-sitrep-46-covid-19.pdf?sfvrsn=96b04adf_2">https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200306-sitrep-46-covid-19.pdf?sfvrsn=96b04adf_2</a> .
6	'National reserve supply stocks have been developed to ensure that as far as is possible, DHBs and the wider health sector have continued access to essential supplies during large or prolonged emergencies that generate unusual demands on normal health service stocks or supply chains.' See page 1 of Ministry of Health (MOH). (2013). National Health Emergency Plan National Reserve Supplies Management and Usage Policies, 3rd edition. Wellington: Author. Retrieved 9 April 2020 from <a href="https://www.health.govt.nz/system/files/documents/publications/nhep-reserve-supplies-usage-dec-2013-v2.pdf">https://www.health.govt.nz/system/files/documents/publications/nhep-reserve-supplies-usage-dec-2013-v2.pdf</a> .
7	See page 2 of Ministry of Health (MOH). (2009). National Health Emergency Plan National Reserve Supplies Management and Usage Policies, 2nd edition. Wellington: Author. Retrieved 9 April 2020 from Ministry of Health: <a href="https://www.health.govt.nz/system/files/documents/publications/nhep-reserve-supplies-usage-dec-2013-v2.pdf">https://www.health.govt.nz/system/files/documents/publications/nhep-reserve-supplies-usage-dec-2013-v2.pdf</a> .
8	For the 13.5m, see Ministry of Health (MOH). (2020, 28 January). Composition of the national reserve supply. Retrieved 9 April 2020 from <a href="https://www.health.govt.nz/our-work/emergency-management/national-reserve-supplies/composition-national-reserve-supply">https://www.health.govt.nz/our-work/emergency-management/national-reserve-supplies/composition-national-reserve-supply</a> . For the 18m, see (i) Prime Minister, on 'Sunday TVNZ' (29 March 2020) saying 5m in our DHB's and 18m in our National Stores and this article saying 18m masks in its pandemic stockpile.' - see also (28 March 2020). 'Covid 19 coronavirus: Jacinda Ardern reassures health workers worried about protective gear'. Retrieved 9 April 2020 from <a href="https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&amp;objectid=12320552">https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&amp;objectid=12320552</a> and (ii) Clark, Hon D. (27 March 2020). 'Face masks flowing to DHBs'. Retrieved 9 April 2020 from <a href="https://www.beehive.govt.nz/release/face-masks-flowing-dhbs">https://www.beehive.govt.nz/release/face-masks-flowing-dhbs</a>
9	1 News. 'Over 40m masks, 500k gowns and 30k face shields: The staggering PPE order made by Ministry of Health'. Retrieved 9 April 2020 from <a href="https://www.tvnz.co.nz/one-news/new-zealand/over-40m-masks-500k-gowns-and-30k-face-shields-staggering-ppe-order-made-ministry-health">https://www.tvnz.co.nz/one-news/new-zealand/over-40m-masks-500k-gowns-and-30k-face-shields-staggering-ppe-order-made-ministry-health</a>
10	There are many example in the press that illustrate that medical ventilator and P2 masks supply issues are problematic. Here is an assortment. Jeffrey, L., (2020, April 4). 'German, French Officials Accuse U.S. Of Diverting Supplies'. Retrieved 9 April 2020 from <a href="https://www.npr.org/2020/04/04/827321294/german-french-officials-accuse-u-s-of-diverting-supplies">https://www.npr.org/2020/04/04/827321294/german-french-officials-accuse-u-s-of-diverting-supplies</a> Politi, J., Sevastopulo, D. Fedor, L. & Edgecliffe-Johnson, A. (2020, 4 April). 'White House tried to force 3M to send masks from Singapore to US'. Financial Times. Retrieved 9 April 2020 from <a href="https://www.ft.com/content/cee34681-5f47-416b-9c9c-d824e9e6c68e">https://www.ft.com/content/cee34681-5f47-416b-9c9c-d824e9e6c68e</a> . Politico. (2020, April 4). 'Trudeau warns U.S. against denying exports of medical supplies to Canada'. Retrieved 9 April 2020 from <a href="https://www.politico.com/news/2020/04/03/3m-warns-of-white-house-order-to-stop-exporting-masks-to-canada-163060">https://www.politico.com/news/2020/04/03/3m-warns-of-white-house-order-to-stop-exporting-masks-to-canada-163060</a>
11	Personal conversation with Nick Davenport, CEO, Lanaco (Monday, April 6 2020).
12	New Zealand Influenza Pandemic Plan: A framework for action. Page 133. Retrieved 9 April 2020 from Ministry of Health: <a href="https://www.health.govt.nz/system/files/documents/publications/influenza-pandemic-plan-framework-action-2nd-edn-aug17.pdf">https://www.health.govt.nz/system/files/documents/publications/influenza-pandemic-plan-framework-action-2nd-edn-aug17.pdf</a>
13	Mentions 400,000 N95s per week being manufactured by QSi's factory. See NZ Herald. (2020, April 4). 'Air NZ flight carrying thousands of masks lands in Auckland'. Retrieved 9 April 2020 from <a href="https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&amp;objectid=12322634">https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&amp;objectid=12322634</a> Also mentioned that P2 masks are being made at QSi's factory in this article. See Stowell, L. (2020, 1 April). 'Covid 19 coronavirus: Whanganui company QSi cranks up mask manufacture, gets attention of Jacinda Ardern'. NZ Herald. Retrieved 9 April 2020 from <a href="https://www.nzherald.co.nz/bird-flu/news/article.cfm?c_id=560&amp;objectid=12321143">https://www.nzherald.co.nz/bird-flu/news/article.cfm?c_id=560&amp;objectid=12321143</a> .
14	Hufford, A. and Evans, M. (2020, March 7). 'Critical Component of Protective Masks in Short Supply'. Retrieved 9 April 2020 from <a href="https://www.wsj.com/articles/coronavirus-pressures-supply-chain-for-protective-masks-11583552527">https://www.wsj.com/articles/coronavirus-pressures-supply-chain-for-protective-masks-11583552527</a> . See also Jeremy Anderson (Amtech) comment that 'PPE raw material was very difficult to get now'. See Peddington, P., 'Covid-19: 41 million additional face masks coming for frontline health workers'. Retrieved 9 April 2020 from <a href="https://www.rnz.co.nz/news/national/413206/covid-19-41-million-additional-face-masks-coming-for-frontline-health-workers">https://www.rnz.co.nz/news/national/413206/covid-19-41-million-additional-face-masks-coming-for-frontline-health-workers</a> .
15	See page 2 of Ministry of Health (MOH). (2009). National Health Emergency Plan National Reserve Supplies Management and Usage Policies, 2nd edition. Wellington: Author. Retrieved 9 April 2020 from Ministry of Health: <a href="https://www.health.govt.nz/system/files/documents/publications/nhep-reserve-supplies-usage-dec-2013-v2.pdf">https://www.health.govt.nz/system/files/documents/publications/nhep-reserve-supplies-usage-dec-2013-v2.pdf</a> .
16	Mandow, N. (2020, April 12). Two weeks after being promised masks and gloves, many home care workers are still going to their jobs unprotected. Retrieved 12 April 2020 from <a href="https://www.stuff.co.nz/national/health/coronavirus/120973516/coronavirus-carers-forced-to-wash-and-reuse-masks-during-covid19-pandemic?cid=app-iPhone">https://www.stuff.co.nz/national/health/coronavirus/120973516/coronavirus-carers-forced-to-wash-and-reuse-masks-during-covid19-pandemic?cid=app-iPhone</a>
17	The maths would be $1000 \cdot 533 \cdot 247 = 220$ . The figure of 1000 and 11,000 is generated by applying US percentages to the New Zealand population for a 'moderate' and a 'severe' pandemic. (i) See for US percentages from Hurtado, C. (2018). Ventilator Stockpiling and Availability in the US and Internationally. Location: Johns Hopkins Center for Health Security. Retrieved 9 April 2020 from <a href="http://www.centerforhealthsecurity.org/our-work/events/2018_clade_x_exercise/pdfs/Clade-X-ventilator-availability-fact-sheet.pdf?referringSource=articleShare">http://www.centerforhealthsecurity.org/our-work/events/2018_clade_x_exercise/pdfs/Clade-X-ventilator-availability-fact-sheet.pdf?referringSource=articleShare</a> . (ii) See for NZ numbers of ventilators from 'See Clark, D. (2020). Health system scaled up to prepare for COVID-19 [Media release]. Retrieved 9 April 2020 from <a href="https://www.beehive.govt.nz/release/health-system-scaled-prepare-covid-19">https://www.beehive.govt.nz/release/health-system-scaled-prepare-covid-19</a> and Covid-19: NZ sources more ventilators amid rampant global demand'. Retrieved 9 April 2020 from <a href="https://www.rnz.co.nz/news/national/413111/covid-19-nz-sources-more-ventilators-amid-rampant-global-demand">https://www.rnz.co.nz/news/national/413111/covid-19-nz-sources-more-ventilators-amid-rampant-global-demand</a> . Actual number in TVNZ was 247 (RNZ rounded to 250). (iii) The actual Excel model is available from the McGuinness Institute.