

# New Zealand

This document is a compilation of all questions, justifications, and sources used to determine the 2021 Global Health Security Index scores for New Zealand. For a category and indicator-level summary, please see the Country Profile for New Zealand.

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## Category 1: Preventing the emergence or release of pathogens with potential for international concern

### 1.1 ANTIMICROBIAL RESISTANCE (AMR)

#### 1.1.1 AMR surveillance, detection, and reporting

##### 1.1.1a

**Is there a national AMR plan for the surveillance, detection, and reporting of priority AMR pathogens?**

Yes, there is evidence of an AMR plan, and it covers surveillance, detection, and reporting = 2, Yes, there is evidence of an AMR plan, but there is insufficient evidence that it covers surveillance, detection, and reporting = 1, No evidence of an AMR plan = 0

**Current Year Score: 2**

New Zealand has a national AMR plan for surveillance, detection and reporting of priority AMR pathogens. In August 2017, the Ministry of Health published the 'New Zealand Antimicrobial Resistance Action Plan' [1]. This plan outlines the following five strategic objectives to tackle AMR over a five year period (2017- 2022): "1. Improve awareness and understanding of AMR; 2. Strengthen knowledge through surveillance and research; 3. Reduce the incidence of infection; 4. Optimize the use of antimicrobial agents; 5. Ensure sustainable investment in countering antimicrobial resistance" [2]. Through its priority areas and the associated ongoing and planned activities, the document adequately outlines a five year plan for the surveillance and collection of data for priority AMR pathogens, for detection and analysing data for priority AMR pathogens and reporting and presenting findings [1]. This plan is continually monitored and updated. In September 2018, the Ministry of Health published a one-year progress report [3]. The Ministry of Health also published highlights from year two for the five year plan. A progress report is due in year 3 (2020) but has not been published. [4] The Joint External Evaluation for New Zealand published in 2019 further confirms that the national AMR surveillance plan is reviewed annually. [5]

[1] New Zealand Government. Ministry of Health. August 2017. "New Zealand Antimicrobial Resistance Action Plan". <https://www.health.govt.nz/publication/new-zealand-antimicrobial-resistance-action-plan>. Accessed 9 Aug 2020.

[2] New Zealand Government. Ministry of Health. August 2018. 'New Zealand Antimicrobial Resistance Action Plan'. <https://www.health.govt.nz/our-work/diseases-and-conditions/antimicrobial-resistance/new-zealand-antimicrobial-resistance-action-plan>. Accessed 9 Aug 2020..

[3] New Zealand Government. Ministry of Health. September 2018. 'New Zealand Antimicrobial Resistance Action Plan: Year one progress report'. <https://www.health.govt.nz/publication/new-zealand-antimicrobial-resistance-action-plan-year-one-progress-report>. Accessed 9 Aug 2020..

[4] New Zealand Government. Ministry of Health. 'Highlights from year two of the New Zealand Antimicrobial Resistance Plan'. [<https://www.health.govt.nz/our-work/diseases-and-conditions/antimicrobial-resistance/new-zealand-antimicrobial-resistance-action-plan/progress-new-zealand-antimicrobial-resistance-action-plan/highlights-year-two-new-zealand-antimicrobial-resistance-plan>]. Accessed 9 Aug 2020.

[5] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

##### 1.1.1b

**Is there a national laboratory/laboratory system which tests for priority AMR pathogens?**

All 7 + 1 priority pathogens = 2 , Yes, but not all 7+1 pathogens = 1 , No = 0

**Current Year Score: 2**

New Zealand has a national laboratory network which tests for all 7 +1 priority AMR pathogens. New Zealand has a number of diagnostic laboratories that feed into the New Zealand Microbiology Network (NZMN). The NZMN, which connects together clinical microbiology laboratories across New Zealand, was established in March 2014 by the Ministry of Health's Institute of Environmental Science and Research (ESR). Laboratories across the NZMN can test for *E. coli*, *Salmonella* spp., *K. pneumoniae*, *S. pneumoniae*, *S. aureus*, *Shigella* spp, and *Mycobacterium tuberculosis* [1, 2, 3]. New Zealand's public health surveillance website outlines that New Zealand has testing capabilities for *N. Gonorrhoeae* [4, 5]. ESR has designated sentinel sites for influenza [6]. According to the Joint External Evaluation (JEE) for New Zealand published in 2019, the laboratory network shares information between human and animal health laboratories with the whole network able to detect zoonotic diseases under the Ministry for Primary Industries. [7]

[1] Institute of Environmental Science and Research (ESR). "Specialist Testing". <https://www.esr.cri.nz/home/specialist-testing/?DepartmentTitle=>. Accessed 9 Aug 2020.

[2] New Zealand Microbiology Network (NZMN). <http://www.nzmn.org.nz/>. Accessed 9 Aug 2020.

[3] LabPlus. "Microbiology". <http://www.labplus.co.nz/laboratory-services/microbiology/>. Accessed 9 Aug 2020.

[4] New Zealand Ministry of Health. Public Health Surveillance. "Surveillance of Sexually Transmitted Infections". [https://surv.esr.cri.nz/public\\_health\\_surveillance/sti\\_surveillance.php](https://surv.esr.cri.nz/public_health_surveillance/sti_surveillance.php). Accessed 9 Aug 2020.

[5] New Zealand Ministry of Health. Public Health Surveillance. "Neisseria gonorrhoeae". [https://surv.esr.cri.nz/antimicrobial/neisseria\\_gonorrhoeae.php](https://surv.esr.cri.nz/antimicrobial/neisseria_gonorrhoeae.php). Accessed 9 Aug 2020.

[6] Institute of Environmental Science and Research (ESR). "Influenza (flu) and other respiratory virus surveillance". <https://www.esr.cri.nz/our-services/consultancy/flu-surveillance-and-research/influenza-flu-and-other-respiratory-virus-surveillance/>. Accessed 9 Aug 2020.

[7] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

### 1.1.1c

**Does the government conduct environmental detection or surveillance activities (e.g., in soil, waterways) for antimicrobial residues or AMR organisms?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence that New Zealand conducts environmental detection or surveillance activities (e.g. in soil or waterways etc.) for antimicrobial residues or AMR organisms. There is no evidence of such activities on the website for the Ministry of Environment, the Ministry of Health, nor within New Zealand's Antimicrobial Resistance Action Plan of 2017 [1, 2, 3]. Priority Action Area of 3 of Objective 2: Surveillance and Research of New Zealand's Antimicrobial Resistance Action Plan outlines that New Zealand aims to "establish a coordinated national surveillance programme of antimicrobial resistance and antimicrobial use in humans, animals and agriculture" [3]. However, the activities outlined under the priority action area do not include environmental surveillance activities [4]. The Ministry for Primary Industries, that deals with farming, fishing, food, animal welfare, biosecurity, and forestry sectors, surveillance programmes focuses on plants and animals both on land and in water. However, the focus is on the animals/plants -not testing the waterways/soil itself. [5] The Joint External Evaluation for New Zealand published in 2019 does not mention testing of soil and waterways either. [6]

- [1] New Zealand Government. Ministry for the Environment. <http://www.mfe.govt.nz/>. Accessed 9 Aug 2020.
- [2] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 9 Aug 2020.
- [3] New Zealand Government. Ministry of Health. August 2017. "New Zealand Antimicrobial Resistance Action Plan". <https://www.health.govt.nz/publication/new-zealand-antimicrobial-resistance-action-plan>. Accessed 9 Aug 2020.
- [4] New Zealand Government. Ministry of Health. August 2017. "New Zealand Antimicrobial Resistance Action Plan - Objective 2: Surveillance and Research". <https://www.health.govt.nz/our-work/diseases-and-conditions/antimicrobial-resistance/new-zealand-antimicrobial-resistance-action-plan/objective-2-surveillance-and-research#paa3-4>. Accessed 9 Aug 2020.
- [5] Ministry for Primary Industries. "Protection and Response. <https://www.mpi.govt.nz/protection-and-response/finding-and-reporting-pests-and-diseases/surveillance-programmes/>. Accessed 9 Aug 2020.
- [6] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

## 1.1.2 Antimicrobial control

### 1.1.2a

**Is there national legislation or regulation in place requiring prescriptions for antibiotic use for humans?**

Yes = 2 , Yes, but there is evidence of gaps in enforcement = 1 , No = 0

**Current Year Score: 2**

In New Zealand, there is legislation in place requiring prescriptions for antibiotic use for humans. The Medicines Act 1981 and the Medicines Regulations Act 1984 outline those medicines and medical devices that require prescriptions, and antibiotic substances are included among these. [1, 2] This legislation is enacted by MedSafe, the New Zealand Medicines and Medical Devices Safety Authority. MedSafe is a business unit of the Ministry of Health and is the authority responsible for the regulation of therapeutic products in New Zealand. [3] Medsafe is active not only offline but also online, cracking down on illegal sale of prescription and pharmacy-only medicines. People have been prosecuted for such offences. [4] In 2017, 1700 cases of illegally imported antibiotics were seized at the border. [5]

- [1] Parliamentary Counsel Office. New Zealand Legislation. November 2018 (October 1981). "Medicines Act 1981". [http://www.legislation.govt.nz/act/public/1981/0118/latest/whole.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_Medicines+Act+1981\\_resel\\_25\\_a&p=1#DLM53790](http://www.legislation.govt.nz/act/public/1981/0118/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_Medicines+Act+1981_resel_25_a&p=1#DLM53790). Accessed 13 Aug 2020.
- [2] Parliamentary Counsel Office. New Zealand Legislation. October 2018 (June 1981). "Medicines Regulations Act 1984". [http://www.legislation.govt.nz/regulation/public/1984/0143/latest/whole.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_Regulations+1984\\_resel\\_25\\_a&p=1#DLM96863](http://www.legislation.govt.nz/regulation/public/1984/0143/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_Regulations+1984_resel_25_a&p=1#DLM96863). Accessed 13 Aug 2020.
- [3] MedSafe. New Zealand Medicines and Medical Devices Safety Authority. Revised 29 September 2015. "About Us". <https://www.medsafe.govt.nz/other/about.asp>. Accessed 13 Aug 2020.
- [4] Stuff. 09 Aug 2019. "Facebook sales of prescription medicines in New Zealand draw wrath of pharmacist". <https://www.stuff.co.nz/national/health/106133447/facebook-sales-of-prescription-medicines-in-new-zealand-draw-wrath-of-pharmacist>. Accessed 13 Aug 2020.
- [5] One News. 19 May 2019. "Exclusive: Rise in illegally imported antibiotics has NZ medical industry concerned". <https://www.tvnz.co.nz/one-news/new-zealand/exclusive-rise-in-illegally-imported-antibiotics-has-nz-medical-industry-concerned>. Accessed 20 Aug 2020.

### 1.1.2b

**Is there national legislation or regulation in place requiring prescriptions for antibiotic use for animals?**

Yes = 2 , Yes, but there is evidence of gaps in enforcement = 1 , No = 0

**Current Year Score: 2**

In New Zealand, there is legislation in place requiring prescriptions for antibiotic use for animals and there is no evidence of gaps in enforcement. The Medicines Act 1981 and the Medicines Regulations Act 1984 outline those medicines and medical devices that require prescriptions for both animals and humans, and antibiotic substances are included among these [1, 2]. This legislation is enacted by MedSafe, the New Zealand Medicines and Medical Devices Safety Authority [3]. According to the Veterinary Council of New Zealand's Code of Professional Conduct, veterinarians must abide by the Medicines Act 1981 [4]. New Zealand is currently the third lowest user of antibiotics in animals in the Organisation for Economic Co-operation and Development. [5] The Ministry for Primary Industries (MPI) also routinely collects sales data on antibiotics sold. [6]

[1] Parliamentary Counsel Office. New Zealand Legislation. November 2018 (October 1981). "Medicines Act 1981". [http://www.legislation.govt.nz/act/public/1981/0118/latest/whole.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_Medicines+Act+1981\\_resel\\_25\\_a&p=1#DLM53790](http://www.legislation.govt.nz/act/public/1981/0118/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_Medicines+Act+1981_resel_25_a&p=1#DLM53790). Accessed 13 Aug 2020.

[2] Parliamentary Counsel Office. New Zealand Legislation. October 2018 (June 1981). "Medicines Regulations Act 1984". [http://www.legislation.govt.nz/regulation/public/1984/0143/latest/whole.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_Regulations+1984\\_resel\\_25\\_a&p=1#DLM96863](http://www.legislation.govt.nz/regulation/public/1984/0143/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_Regulations+1984_resel_25_a&p=1#DLM96863). Accessed 13 Aug 2020.

[3] MedSafe. New Zealand Medicines and Medical Devices Safety Authority. Revised 29 September 2015. "About Us". <https://www.medsafe.govt.nz/other/about.asp>. Accessed 13 Aug 2020.

[4] Veterinary Council of New Zealand. "Code of Professional Conduct". [http://www.vetcouncil.org.nz/CPC/Introduction/CPC\\_Introduction.php](http://www.vetcouncil.org.nz/CPC/Introduction/CPC_Introduction.php). Accessed 13 Aug 2020.

[5] Gerard Hutching. 10 Nov 2017. "NZ vets want to stop routine use of antibiotics in animals by 2030". Stuff. <https://www.stuff.co.nz/business/farming/98758253/nz-vets-want-to-stop-routine-use-of-antibiotics-in-animals-by-2030>. Accessed 13 Aug 2020.

[6] New Zealand Herald. 28 Nov 2018. "Farmed animal antibiotic sales up but the nasties for humans down". [https://www.nzherald.co.nz/business/news/article.cfm?c\\_id=3&objectid=12167836](https://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=12167836). Accessed 13 Aug 2020.

## 1.2 ZONOTIC DISEASE

### 1.2.1 National planning for zoonotic diseases/pathogens

#### 1.2.1a

**Is there national legislation, plans, or equivalent strategy documents on zoonotic disease?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is sufficient evidence to suggest that New Zealand has a national strategy document on zoonotic disease. Priority action area 10 of the New Zealand Antimicrobial Resistance Action Plan, released 2017, is to "Promote prevention and control of zoonotic infections" and Activity 5 under Priority Area 7 outlines that New Zealand will "review and consider the measures that could be implemented to improve IPC [infection prevention and control] practices across the animal health industry" as well as plans to update national guidelines for resistant pathogens such as methicillin-resistant *Staphylococcus aureus* [1]. New Zealand also has individual control plans for zoonotic diseases as part of the Communicable Disease Control Manual, including Anthrax, Brucellosis, MERS-CoV, Salmonellosis, arboviral diseases and Rabies. The list was updated recently in July 2020. [2]. According to the Joint External Evaluation (JEE) for New Zealand published in 2019, the

Coordinated Incident Management System (CIMS) 3rd edition provides guidelines for communicable disease outbreak and pandemic with clear responsibilities and responses by respective agencies listed. For instance, the Ministry for Primary Industries assumes the lead roles between sub national /national level animal disease response whereas in the case of human-to-human transmissions, the Ministry of Health will assume primary responsibility. [3]

[1] New Zealand Government. Ministry of Health. August 2017. "New Zealand Antimicrobial Resistance Action Plan". <https://www.health.govt.nz/publication/new-zealand-antimicrobial-resistance-action-plan>. Accessed 9 Aug 2020.

[2] New Zealand Government. Ministry of Health. 20 May 2012 (July 2020 update). "Communicable Disease Control Manual". <https://www.health.govt.nz/publication/communicable-disease-control-manual>. Accessed 4 Sept 2020.

[3] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed Sept 4 2020.

### 1.2.1b

**Is there national legislation, plans or equivalent strategy document(s) which includes measures for risk identification and reduction for zoonotic disease spillover events from animals to humans?**

Yes = 1 , No = 0

**Current Year Score: 1**

There are national strategy documents which include measures for risk identification and reduction for zoonotic disease spillover events from animals to humans. The New Zealand Influenza Pandemic Action Plan of 2017 states that the Ministry for Primary Industries and Ministry of Health is responsible to minimize the risk for zoonotic disease spillover events from animals to humans. It also lists the Ministry for Primary Industries to ensure proper workplace guidelines for workers handling animals and micro-organisms as well as informing the public on limiting risk of transmission. [1] The Health and Safety at Work Act of 2015 mandates workers contracting serious infections from working with micro-organisms and animals as a "notifiable injury or illness." [2] Ministry for Primary Industries also have a foodborne virus science programme for foodborne bacterial diseases such as salmonella and campylobacter, and norovirus. For instance, in managing campylobacter, New Zealand has put controls in place for food processors as well as performed research and came up with regulatory limits. [3, 4]

[1] New Zealand Government. Ministry of Health. August 2017. "New Zealand Influenza Pandemic Plan: A framework for action". <https://www.health.govt.nz/publication/new-zealand-influenza-pandemic-plan-framework-action> Accessed 10 Aug 2020.

[2] New Zealand Government. Ministry of Business, Innovation and Employment. 4 Sept 2015. "Health and Safety at Work Act". <http://www.legislation.govt.nz/act/public/2015/0070/latest/DLM5976660.html>. Accessed 20 Aug 2020.

[3] Ministry for Primary Industries. 5 Dec 2017. "Food risk assessment." <https://www.mpi.govt.nz/food-safety/food-safety-and-suitability-research/managing-the-risk-of-campylobacter/>. Accessed 20 Aug 2020.

[4] Ministry for Primary Industries. 5 Dec 2017. "Foodborne viruses." <https://www.mpi.govt.nz/food-safety/food-safety-and-suitability-research/foodborne-viruses/>. Accessed 20 Aug 2020.

### 1.2.1c

**Is there national legislation, plans, or guidelines that account for the surveillance and control of multiple zoonotic pathogens of public health concern?**

Yes = 1 , No = 0

**Current Year Score: 1**

There are plans, guidelines and laws that account for the surveillance and control of multiple zoonotic pathogens of public health concern in New Zealand. The Ministry of Health published Guidance on Infectious Disease Management under the Health Act 1956 in 2017. It provides guidance to assist public health practitioners to use the infectious disease notification, contact tracing and disease management measures incorporated in the Health Act 1956. These measures became law on 4 January 2017 [1, 2]. As part of surveillance, a number of zoonotic pathogens are included on New Zealand's list of notifiable diseases under the Health Act 1956, including but not limited to anthrax, salmonella, giardiasis and brucellosis [3]. In addition, the Ministry of Health's Communicable Disease Control Manual, published by the ministry in December 2018, which includes disease specific plans for a number of zoonotic diseases including but not limited to anthrax, salmonella, giardiasis and brucellosis [4]. The manual describes standard practice for public health services to follow for the prevention and control of notifiable diseases [4].

[1] New Zealand Government. Ministry of Health. February 2017. "Guidance on Infectious Disease Management under the Health Act 1956". <https://www.health.govt.nz/publication/guidance-infectious-disease-management-under-health-act-1956>. Accessed 9 Aug 2020.

[2] Parliamentary Counsel Office. New Zealand Legislation. November 2018 (October 1956). [http://www.legislation.govt.nz/act/public/1956/0065/latest/DLM305840.html?search=ts\\_act%40bill%40regulation%40deem+edreg\\_health+act+1956\\_resel\\_25\\_a&p=1](http://www.legislation.govt.nz/act/public/1956/0065/latest/DLM305840.html?search=ts_act%40bill%40regulation%40deem+edreg_health+act+1956_resel_25_a&p=1). Accessed 9 Aug 2020..

[3] New Zealand Government. Ministry of Health. Updated January 2017. "Notifiable Diseases". <https://www.health.govt.nz/system/files/documents/pages/schedule-of-notifiable-diseases-updated-jan2017.pdf>. Accessed 9 Aug 2020.

[4] New Zealand Government. Ministry of Health. December 2018 (May 2012). "Communicable Disease Control Manual". <https://www.health.govt.nz/publication/communicable-disease-control-manual>. Accessed 9 Aug 2020.

**1.2.1d**

**Is there a department, agency, or similar unit dedicated to zoonotic disease that functions across ministries?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is not enough publicly available evidence to suggest that New Zealand has a department, agency or similar unit dedicated to zoonotic disease that functions across ministries. There was no evidence of such a unit on the Ministry of Health (MOH), the Ministry for Primary Industries(MPI) websites, within the National AMR Plan or the Communicable Disease Control Manual [1, 2, 3, 4]. There is evidence of an Enteric Zoonotic Disease Research Steering Committee which functions across both the Ministry of Health and the Ministry for Primary Industries but the sole aim of the committee is to promote and advance research into enteric zoonotic disease. [5] District health boards (DHBs) are responsible for emergency response of zoonotic influenza according to the New Zealand Influenza Pandemic Plan. The plan does not mention whether this is applicable for other diseases as well. [6] The Joint External Evaluation (JEE) report on New Zealand, published in 2019, states that the MOH and MPI do not have an integrated information review priority zoonotic diseases nor a systematized approach to sharing their surveillance database information. The JEE also explicitly mentions that "there is no formalized, regularly-tested multisectoral mechanism for responding to zoonotic events and emerging diseases". [7] The MPI operates laboratories for veterinary and zoonotic pathogens while DHBs are responsible for public hospitals. [7,8]

[1] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 10 Aug 2020.

[2] New Zealand Government. Ministry of Primary Industries. <https://www.mpi.govt.nz/>. Accessed 10 Aug 2020.

[3] New Zealand Government. Ministry of Health. August 2017. "New Zealand Antimicrobial Resistance Action Plan".

<https://www.health.govt.nz/publication/new-zealand-antimicrobial-resistance-action-plan>. Accessed 10 Aug 2020.

[4] New Zealand Government. Ministry of Health. "Communicable Disease Control Manual".

<https://www.health.govt.nz/publication/communicable-disease-control-manual>. Accessed 10 Aug 2020.

[5] New Zealand Government. Ministry of Primary Industries. "New Zealand science groups". <https://www.mpi.govt.nz/food-safety/food-safety-and-suitability-research/overview/nz-science-groups/>. Accessed 10 Aug 2020.

[6] Ministry of Health. 2017. "New Zealand Influenza Pandemic Plan".

<https://www.health.govt.nz/system/files/documents/publications/influenza-pandemic-plan-framework-action-2nd-edn-aug17.pdf>. Accessed 10 Aug 2020.

[7] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand."

<https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed Sept 4 2020.

[8] Ministry of Health. "District Health Boards." <https://www.health.govt.nz/new-zealand-health-system/key-health-sector-organisations-and-people/district-health-boards>. Accessed 4 Sept 2020

## 1.2.2 Surveillance systems for zoonotic diseases/pathogens

### 1.2.2a

**Does the country have a national mechanism (either voluntary or mandatory) for owners of livestock to conduct and report on disease surveillance to a central government agency?**

Yes = 1 , No = 0

**Current Year Score: 1**

New Zealand has a national mechanism for owners of livestock to conduct and report on disease surveillance to the Ministry for Primary Industries' Biosecurity Department. Biosecurity New Zealand has a voluntary Pest and Disease Hotline that can be used by everyone (not specific to livestock owners) to report signs of disease in plants and animals that they might have come across on land or in water [1]. It also outlines incentives for vets and farmers who take part in New Zealand's transmissible spongiform encephalopathy (TSE) surveillance programme [1].

[1] New Zealand Government. Ministry for Primary Industries. Biosecurity New Zealand. "Report a pest or disease".

<https://www.biosecurity.govt.nz/protection-and-response/finding-and-reporting-pests-and-diseases/report-a-pest-or-disease/>. Accessed 9 Aug 2020.

### 1.2.2b

**Is there legislation and/or regulations that safeguard the confidentiality of information generated through surveillance activities for animals (for owners)?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that New Zealand has any legislation and/or regulations that safeguard the confidentiality of information generated through surveillance activities for animals (for owners). There are both legal protections and operational safeguards in place to protect any personal information the Ministry for Primary Industries (MPI) might receive via the Pest & Disease Hotline. As with all government agencies, all information collected by the MPI in any format is governed by both the Privacy Act 1993 and the Official Information Act 1982 (the OIA) [1, 2]. The Privacy Act 1993 outlines that "an agency (i.e. the Ministry for Primary Industries) that holds personal information that was obtained in connection with one purpose shall not use the information for any other purpose unless the agency believes, on reasonable grounds,

that the use of the information for that other purpose is necessary to prevent or lessen a serious threat to (i) public health of public safety (ii) the life or health of the individual concerned or another individual" and "an agency that holds personal information shall not disclose the information to a person or body or agency unless the agency believes, on reasonable grounds, that the disclosure of the information is necessary to prevent or lessen a serious threat to (i) public health of public safety (ii) the life or health of the individual concerned or another individual" [1]. The OIA allows New Zealand citizens, permanent residents, and anyone who is in New Zealand to request any official information held by government agencies - including the Ministry of Justice [2].

[1] Parliamentary Counsel Office. New Zealand Legislation. December 2018 (May 1993). "Privacy Act 1993". <http://www.legislation.govt.nz/act/public/1993/0028/latest/whole.html#DLM296639>. Accessed 9 August 2020.

[2] Parliamentary Counsel Office. New Zealand Legislation. October 2018 (December 1982). "Official Information Act 1982". <http://www.legislation.govt.nz/act/public/1982/0156/latest/whole.html>. Accessed 9 August 2020.

### 1.2.2c

**Does the country conduct surveillance of zoonotic disease in wildlife (e.g., wild animals, insects, other disease vectors)?**

Yes = 1 , No = 0

**Current Year Score: 1**

New Zealand conducts surveillance of zoonotic disease in wildlife. The Ministry for Primary Industries' (MPI) Biosecurity New Zealand has a number of surveillance programmes, some of which survey zoonotic disease in wildlife. For example, MPI monitors the "southern saltmarsh mosquito ( *Aedes camptorhynchus* ) which can infect humans with Ross River virus." Mosquitos and larvae are sampled each year to ensure exotic species have not arrived. Samples are taken from high-risk areas next to national ports of entry and saltmarsh habitats [1]. MPI also conducts targeted surveillance of wild birds for avian influenza, focusing on resident birds since 2010 [1].

[1] New Zealand Government. Ministry for Primary Industries. Biosecurity New Zealand. July 2018. "Surveillance Programmes". <https://www.biosecurity.govt.nz/protection-and-response/finding-and-reporting-pests-and-diseases/surveillance-programmes/>. Accessed 9 Aug 2020.

## 1.2.3 International reporting of animal disease outbreaks

### 1.2.3a

**Has the country submitted a report to OIE on the incidence of human cases of zoonotic disease for the last calendar year?**

Yes = 1 , No = 0

**Current Year Score: 0**

2019

OIE WAHIS database

## 1.2.4 Animal health workforce

### 1.2.4a

**Number of veterinarians per 100,000 people**

Input number

**Current Year Score: 55.87**

2018

OIE WAHIS database

### 1.2.4b

**Number of veterinary para-professionals per 100,000 people**

Input number

**Current Year Score: 27.46**

2017

OIE WAHIS database

## 1.2.5 Private sector and zoonotic

### 1.2.5a

**Does the national plan on zoonotic disease or other legislation, regulations, or plans include mechanisms for working with the private sector in controlling or responding to zoonoses?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is limited publicly available evidence that there are plans for the surveillance and control of zoonotic pathogens in New Zealand which include mechanisms for working with the private sector. According to the Joint External Evaluation, published in 2019, "The ability of private veterinarians to assist during emergency animal disease responses is maximized by initiatives such as the National Biosecurity Capability Network, overseas training on exotic diseases, and a recently introduced epidemiology training course for veterinarians." [1,2] There is no evidence that the assistance was via established mechanisms for working with the private sector. There is also a web-based surveillance database on behalf of Ministry of Health that private laboratories can report to for positive test results for notifiable diseases (human communicable diseases). [1] According to the Ministry of Primary Industry's NBCN workshop/training given December 2018, there is evidence of MOUs between MPI and NBCN participants being reviewed. It is mentioned that "appropriate participant organizations" are notified in response to a threat as it arises. However, it doesn't mention who the MOUs are with (eg. Private vets or clinics) and the content of it itself. [3] Priority action area 10 of the New Zealand Antimicrobial Resistance Action Plan of 2017 is to "Promote prevention and control of zoonotic infections" and Activity 5 under Priority Area 7 outlines that New Zealand will "review and consider the measures that could be implemented to improve IPC practices across the animal health industry" but neither includes mechanisms for working with the private sector [4]. New Zealand also has individual control plans for zoonotic diseases as part of the Communicable Disease Control Manual, including Anthrax, Brucellosis, MERS-CoV and Rabies, but it does not mention working with the private sector [5]. There is no mention of mechanisms for working with the private sector for the surveillance and control of zoonotic pathogens on the Ministry of Health website, the Institute of Environmental Science and Research or the Ministry for Primary Industries website [6, 7, 8].

[1] World Health Organization. November 2018. "Joint External Evaluation of IHR Core Capabilities of New Zealand." <https://extranet.who.int/sph/sites/default/files/jeeta/New%20Zealand%2026-30%20Nov%202019-eng.pdf>. Accessed 9 Aug

2020.

[2] Ministry for Primary Industries. "Protection and Response." <https://www.mpi.govt.nz/protection-and-response/biosecurity/biosecurity-2025/>. Accessed 5 Sept 2020.

[3] National Biosecurity Capability Network. 4 Dec 2018. "MPI's National Biosecurity Capability Network (NBCN) KVH training/workshop." <https://www.kvh.org.nz/vdb/document/104702>. Accessed 16 Feb 2021.

[4] New Zealand Government. Ministry of Health. August 2017. "New Zealand Antimicrobial Resistance Action Plan". <https://www.health.govt.nz/publication/new-zealand-antimicrobial-resistance-action-plan>. 9 Aug 2020.

[5] New Zealand Government. Ministry of Health. "Communicable Disease Control Manual". <https://www.health.govt.nz/publication/communicable-disease-control-manual>. Accessed 5 Sept 2020.

[6] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 5 Sept 2020.

[7] Institute of Environmental Science and Research. <https://www.esr.cri.nz/>. Accessed 4 February 2019.

[8] New Zealand Government. Ministry for Primary Industries. <https://www.mpi.govt.nz/>. Accessed 5 Sept 2020.

## 1.3 BIOSECURITY

### 1.3.1 Whole-of- government biosecurity systems

#### 1.3.1a

**Does the country have in place a record, updated within the past five years, of the facilities in which especially dangerous pathogens and toxins are stored or processed, including details on inventories and inventory management systems of those facilities?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence that New Zealand has in place a record, updated within the past 5 years, of the facilities in which especially dangerous pathogens and toxins are stored, including details on inventories. According to the Joint External Evaluation (JEE) published in 2019 for New Zealand, pathogenic organisms are regulated under the Biosecurity Act and Hazardous Substances and New Organisms Act which requires laboratories to obtain permission from the Ministry of Primary Industries (MPI) to work with "unwanted organisms". They are also required to submit an "inventory register of receipt, transfer and disposal of pathogens" to be reviewed by the MPI. [1] Approved facilities are reviewed at least once a year by MPI. [2] The Hazardous Substances and New Organisms Act 1996 specifically states that the Environmental Protection Authority must "keep and maintain a register of all exposure limits ... for substances with toxic or ecotoxic properties." The Authority must also keep "a register of all applications for approvals for hazardous substances and new organisms". The latter register requires the name and address of the applicant as well as purpose. However, it doesn't mention a requirement for where the facility for containment will be located. [6] New Zealand's 2017, 2019 and 2020 "Confidence Building Measure Returns", the reporting mechanism set by the Biological Weapons Convention, lists a record of the laboratories and their respective biosafety level in New Zealand but does not have details on inventories and inventory management systems of those facilities [3, 4, 5]. The VERTIC database also lists the Biosecurity Act of 1993, which deals with "risk goods" from imports. The Biosecurity Act did not mention facilities in which especially dangerous pathogens and toxins are stored, including details on inventories. However, it does mandate everyone who suspects the presence of a notifiable organism to report to a chief technical officer.[7] No further evidence is available on record of facilities that includes inventory details on the Ministry for Primary Industries, Ministry of Health or Ministry of Defense public websites. [8,9,10]

[1] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

- [2] Biosecurity New Zealand. <https://www.biosecurity.govt.nz/importing/border-clearance/transitional-and-containment-facilities/responsibilities-of-approved-facilities/>. Accessed 13 Aug 2020 [3] Confidence Building Measures. May 2017. "New Zealand". <https://bwc-ecbm.unog.ch/new-zealand/bwccbm2017newzealand>. Accessed 15 Aug 2020.
- [4] Confidence Building Measures. March 2019. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2019\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2019_new_zealand.pdf). Accessed 15 Aug 2020.
- [5] Confidence Building Measures. 15 April 2020.. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2020\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2020_new_zealand.pdf). Accessed 15 Aug 2020.
- [6] Parliamentary Counsel Office. New Zealand Legislation. December 2018 (June 1996). "Hazardous Substances and New Organisms Act 1996". <http://www.legislation.govt.nz/act/public/1996/0030/latest/DLM381222.html>. Accessed 18 Aug 2020.
- [7] New Zealand Legislation. 1 July 2011 (August 1993). "Biosecurity Act 1993." [https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Biosecurity\\_Act\\_1993.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Biosecurity_Act_1993.pdf). Accessed 18 Aug 2020.
- [8] Ministry for Primary Industries. <https://www.mpi.govt.nz/>. Accessed 5 Sept 2020.
- [9] Ministry of Health. <https://www.health.govt.nz/>. Accessed 5 Sept 2020.
- [10] Ministry of Defense. <https://www.defence.govt.nz/>. Accessed 5 Sept 2020.

### 1.3.1b

**Does the country have in place legislation and/or regulations related to biosecurity which address requirements such as physical containment, operation practices, failure reporting systems, and/or cybersecurity of facilities in which especially dangerous pathogens and toxins are stored or processed?**

Yes = 1 , No = 0

**Current Year Score: 1**

New Zealand has in place legislation related to biosecurity which address requirements such as physical containment, operation practices, failure reporting systems and/or cybersecurity of facilities in which especially dangerous pathogens and toxins are stored or processed. Both the Biosecurity Act 1993, which is administered by the Ministry for Primary Industries, and the Hazardous Substances and New Organisms Act 1996, which is administered by the Ministry of Environment's Environmental Protection Authority (EPA), address issues of containment, operation and security practices [1, 2]. For example, the Biosecurity Act 1993 outlines the EPA controls, including containment, operation and security practices, "to limit the likelihood of escape of any contained hazardous substances or contamination of the facility by hazardous substances", "to exclude organisms from a facility or to control organisms within a facility", "to exclude unauthorised people from the facility", "to prevent unintended release of the substance by experimenters working with the substance" and "to control the effects of any accidental release of the substance" [1]. Article 5 of the Hazardous Substances and New Organisms Act 1996 outlines "measures to reduce or eliminate releases from unintentional production" [2]. The Hazardous Substances and New Organisms Act was amended in 2002, 2005 and most recently in 2010, while the Biosecurity Act 1993 was amended in 2008 [1, 2]. The Biosecurity Act 1993 is currently in the process of "overhaul" as the Ministry of Primary Industries work with multiple stakeholders to come up with an Act "fit for the future." [6] New Zealand's report to the United Nations Office at Geneva (UNOG) in 2017, 2019, and 2020 for the "Confidence Building Measure Return", the reporting mechanism set by the Biological Weapons Convention, outlines that New Zealand has a BSL-3 laboratory "at the site of the National Centre for Biosecurity and Infectious Disease in Upper Hutt, near Wellington" in accordance with the latest edition of the "WHO Laboratory Biosafety Manual and/or the OIE Terrestrial Manual or other equivalent internationally accepted guidelines" [3, 4, 5]. Additionally, the VERTIC databased listed the New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act 1987. [7] The New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act 1987 prohibits any person in the New Zealand Nuclear Free Zone from manufacture or procession of any biological weapon. [8]

[1] Parliamentary Counsel Office. New Zealand Legislation. October 2018 (August 1993). "Biosecurity Act 1993". [http://www.legislation.govt.nz/act/public/1993/0095/latest/whole.html?search=ts\\_act%40bill%40regulation%40deemedreg](http://www.legislation.govt.nz/act/public/1993/0095/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg)

\_security\_resel\_25\_a&p=1#DLM4757599. Accessed 13 Aug 2020..

[2] Parliamentary Counsel Office. New Zealand Legislation. December 2018 (June 1996). "Hazardous Substances and New Organisms Act 1996".

[http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_Hazardous+Substances+and+New+Organisms+Act+1996\\_resel\\_25\\_a&p=1#DLM383190](http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_Hazardous+Substances+and+New+Organisms+Act+1996_resel_25_a&p=1#DLM383190). Accessed 13 Aug 2020.

[3] Confidence Building Measures. May 2017. "New Zealand". <https://bwc-ecbm.unog.ch/new-zealand/bwccbm2017newzealand>. Accessed 13 Aug 2020.

[4] Confidence Building Measures. 29 March 2019. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2019\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2019_new_zealand.pdf). Accessed 13 Aug 2020

[5] Confidence Building Measures. 15 April 2020. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2020\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2020_new_zealand.pdf). Accessed 13 Aug 2020

[6] Ministry of Primary Industries. "Biosecurity Act 1993 overhaul." <https://www.biosecurity.govt.nz/law-and-policy/legal-overviews/biosecurity/biosecurity-act-1993-overhaul/>. Accessed 13 Aug 2020.

[7] VERTIC Database. <https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/n/>. Accessed 20 Aug 2020.

[8] New Zealand Legislation. 8 June 1987. "New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act". [https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Nuclear\\_Free\\_Zone\\_Act\\_1987.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Nuclear_Free_Zone_Act_1987.pdf). Accessed 20 Aug 2020.

### 1.3.1c

**Is there an established agency (or agencies) responsible for the enforcement of biosecurity legislation and regulations?**

Yes = 1, No = 0

**Current Year Score: 1**

There is an established agency responsible for the enforcement of biosecurity legislation and regulations. The Ministry for Primary Industries (MPI) is responsible for the administration of biosecurity legislation and regulations as outlined by the Biosecurity Act 1993 and the Environmental Protection Authority (EPA) enforces the Hazardous Substances and New Organisms Act 1996 [1, 2]. According to the MPI website, they administer the Biosecurity Act by "providing inspectors at the border who manage risks from people, planes, vessels (like ships) and goods coming into the country" and they "also maintain a system for rapidly responding to detections of new, harmful pests and diseases" [3]. Both the Biosecurity Act 1993 and the Hazardous Substances and New Organisms Act 1996 address issues of containment, operation and security practices [1, 2]. For example, the Biosecurity Act 1993 outlines the EPA controls, including containment, operation and security practices, "to limit the likelihood of escape of any contained hazardous substances or contamination of the facility by hazardous substances", "to exclude organisms from a facility or to control organisms within a facility", "to exclude unauthorised people from the facility", "to prevent unintended release of the substance by experimenters working with the substance" and "to control the effects of any accidental release of the substance" [1]. Article 5 of the Hazardous Substances and New Organisms Act 1996 outlines "measures to reduce or eliminate releases from unintentional production" [2]. The Hazardous Substances and New Organisms Act was amended in 2002, 2005 and most recently in 2010, while the Biosecurity Act 1993 was amended in 2008 [1, 2]. There are plans for an "overhaul" of the Biosecurity Act. A terms of reference has been published July 2019 and formal public consultations are planned for a to be announced date. [4] The VERTIC databased listed the Biosecurity Act 1993 and the Hazardous Substances and New Organisms Act 1996 as well as the New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act 1987 and Terrorism Suppression Act 2002. [5] The latter two acts deals with biological weapons with the Nuclear Free Zone, Disarmament, and Arms Control Act 1987 establishing the Public Advisory Committee on Disarmament and Arms Control to assist the Ministry of Foreign Affairs and Trade and Prime Minister on the prohibition of biological weapons [7,8].

- [1] Parliamentary Counsel Office. New Zealand Legislation. October 2018 (August 1993). "Biosecurity Act 1993". [http://www.legislation.govt.nz/act/public/1993/0095/latest/whole.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_security\\_resel\\_25\\_a&p=1#DLM4757599](http://www.legislation.govt.nz/act/public/1993/0095/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_security_resel_25_a&p=1#DLM4757599). Accessed 13 Aug 2020.
- [2] Parliamentary Counsel Office. New Zealand Legislation. December 2018 (June 1996). "Hazardous Substances and New Organisms Act 1996". [http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_Hazardous+Substances+and+New+Organisms+Act+1996\\_resel\\_25\\_a&p=1#DLM383190](http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_Hazardous+Substances+and+New+Organisms+Act+1996_resel_25_a&p=1#DLM383190). Accessed 13 Aug 2020.
- [3] New Zealand Government. Ministry for Primary Industries. "Law & Policy - Biosecurity". <https://www.mpi.govt.nz/law-and-policy/legal-overviews/biosecurity/>. Accessed 13 Aug 2020.
- [4] Ministry for Primary Industries. "Biosecurity Act 1993 overhaul". <https://www.mpi.govt.nz/law-and-policy/legal-overviews/biosecurity/biosecurity-act-1993-overhaul/#:~:text=Our%20biosecurity%20system%20is%20underpinned,make%20it%20into%20the%20country>. Accessed 13 Aug 2020.
- [5] VERTIC Database. <https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/n/>. Accessed 20 Aug 2020.
- [6] New Zealand Legislation. 8 June 1987. "New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act". [https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Nuclear\\_Free\\_Zone\\_Act\\_1987.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Nuclear_Free_Zone_Act_1987.pdf). Accessed 20 Aug 2020.
- [7] New Zealand Legislation. 17 Oct 2002. "Terrorism Suppression Act 2002." [https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Terrorism\\_Suppression\\_Act\\_2002.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Terrorism_Suppression_Act_2002.pdf). Accessed 20 Aug 2020.

### 1.3.1d

**Is there public evidence that shows that the country has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is limited publicly available evidence to show that New Zealand has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities. A Statement of Compliance with the Biological Weapons Convention for 2010 reads, "only a small number of facilities in New Zealand deal with listed human, animal, or plant pathogens" [1]. There is no evidence on the Ministry of Health website, the Institute of Environmental Science and Research, the Ministry for Primary Industries, the New Zealand Microbiology Network (NZMN) or the Ministry of Defence [2, 3, 4, 5, 6]. New Zealand's report to the United Nations Office at Geneva (UNOG) in 2017, 2019 and 2020 for the "Confidence Building Measure Return", the reporting mechanism set by the Biological Weapons Convention, does not mention inventories of especially dangerous pathogens and toxins [7, 8, 9]. The VERTIC database did not list a document that could provide such evidence either. [10] The Joint External Evaluation report published in 2019 mentions that pathogens are regulated and are only held at facilities approved for containment levels with inventory reviewed by Ministry for Primary Industries. However, it did not mention whether or not the inventories are consolidated into a minimum number of facilities. [11]

[1] The United Nations Office of Geneva (UNOG). 2010. "New Zealand. Statement of Compliance with the Biological Weapons Convention for 2010 Calendar Year".

[https://www.unog.ch/80256EDD006B8954/\(httpAssets\)/3D8756D5405697FAC12578CD0032E0A8/\\$file/BWC\\_CBM\\_2011\\_New+Zealand.pdf](https://www.unog.ch/80256EDD006B8954/(httpAssets)/3D8756D5405697FAC12578CD0032E0A8/$file/BWC_CBM_2011_New+Zealand.pdf) Accessed 10 Aug 2020.

[2] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 10 Aug 2020.

- [3] Institute of Environmental Science and Research (ESR). <https://www.esr.cri.nz/>. Accessed 10 Aug 2020.
- [4] New Zealand Government. Ministry for Primary Industries. <https://www.mpi.govt.nz/>. Accessed 10 August 2020.
- [5] New Zealand Microbiology Network (NZMN). <http://www.nzmn.org.nz/>. Accessed 10 Aug 2020.
- [6] New Zealand Government. Ministry of Defence. <https://www.defence.govt.nz/>. Accessed 10 Aug 2020.
- [7] Confidence Building Measures. May 2017. "New Zealand". <https://bwc-ecbm.unog.ch/new-zealand/bwccbm2017newzealand>. Accessed 10 Aug 2020
- [8] Confidence Building Measures. March 2019. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2019\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2019_new_zealand.pdf). Accessed 10 Aug 2020
- [9] Confidence Building Measures. 15 April 2020.. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2020\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2020_new_zealand.pdf). Accessed 10 Aug 2020.
- [10] VERTIC Database. <https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/n/>. Accessed 20 Aug 2020.
- [11] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed Sept 4 2020.

### 1.3.1e

**Is there public evidence of in-country capacity to conduct Polymerase Chain Reaction (PCR)–based diagnostic testing for anthrax and/or Ebola, which would preclude culturing a live pathogen?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no evidence that New Zealand has in-country capacity to conduct PCR-based diagnostic testing for Ebola and there is not enough publicly available information to confirm that New Zealand has in-country capacity to conduct PCR-based diagnostic testing for Anthrax. For Ebola, the Ministry of Health has arrangements in place for PCR-based diagnostic testing to be undertaken at the Victorian Infectious Diseases Reference Laboratory (VIDRL), Peter Doherty Institute, Victoria, Australia [1]. For anthrax, the Ministry of Health Anthrax information page states that "if anthrax is suspected, discuss testing with the Institute of Environmental Science and Research (ESR)" [2]. However, there is no information on the ESR website regarding anthrax testing, including on the Specialist Testing search page [3]. Bacteriology tests for anthrax can be conducted at the National Animal Health Laboratory [4]. There is no information regarding PCR testing on the Ministry of Defence website [5]. The Joint External Evaluation (JEE) report on New Zealand, published in 2019 explicitly states that New Zealand relies on specimen referral arrangements with international laboratories for Ebola virus. Anthrax was not mentioned in the JEE report. [6]

- [1] New Zealand Government. Ministry of Health. 13 January 2016. "Ebola virus disease, a comprehensive document for the management of EVD - updated". <https://www.health.govt.nz/our-work/diseases-and-conditions/ebola-updates/ebola-information-health-professionals>. Accessed 10 Aug 2020.
- [2] New Zealand Government. Ministry of Health. May 2012. "Anthrax". <https://www.health.govt.nz/our-work/diseases-and-conditions/communicable-disease-control-manual/anthrax>. Accessed 10 Aug 2020.
- [3] New Zealand Government. Ministry of Health. Institute of Environmental Science and Research (ESR). "Specialist Testing". <https://www.esr.cri.nz/our-services/testing/water-quality/specialist-testing/?DepartmentTitle=>. Accessed 10 Aug 2020.
- [4] New Zealand Government. Ministry of Primary Industries. Biosecurity New Zealand. "Tests and Charges". <https://www.mpi.govt.nz/protection-and-response/laboratories/national-animal-health-laboratory/tests-and-charges/>. Accessed 10 Aug 2020.
- [5] New Zealand Government. Ministry of Defence. <https://www.defence.govt.nz/>. Accessed 10 Aug 2020.
- [6] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand."

<https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

## 1.3.2 Biosecurity training and practices

### 1.3.2a

**Does the country require biosecurity training, using a standardized, required approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential?**

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient publicly available evidence to confirm that New Zealand requires biosecurity training, using a standardised approach, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential. According to the Joint External Evaluation (JEE) published in 2019 for New Zealand, the laboratory and containment standards and compliance requires regular training which are "audited internally and verified externally by the Ministry of Primary Industries". The JEE mentions that "training needs assessments are conducted regularly both by facility operators (at least annually) and by Ministry of Primary Industries." Although there is evidence of training being standard, it is unsure whether training itself is required and/or is held regularly. [1] The Department of the Prime Minister and Cabinet (DPMC) publishes some of the exercises conducted in National Exercise Programme schedule that includes biosecurity. Inquiries can be made to DPMC to enquire a complete list. [2] The Hazardous Substances and New Organisms Act 1996, does mention training programmes at the national level but it is not listed as a requirement. [3] There was no further evidence of such a training programme on the Ministry of Health website, the Ministry for Primary Industries website, the Biosecurity New Zealand website, the Biosecurity Act 1993, nor the Institute of Environmental Science and Research, the Ministry of Environment website and the Environmental Protection Authority website [4, 5, 6, 7, 8, 9]. New Zealand reports to the United Nations Office at Geneva (UNOG) every year for the "Confidence Building Measure Return", which is a reporting mechanism set by the Biological Weapons Convention. There is no evidence in New Zealand's 2017, 2019, and 2020 report of mandatory biosecurity training for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential. [10,11,12]. The VERTIC databased listed several other legislation such as the New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act 1987 as well as the the Terrorism Suppression Act of 2002 (amended 2007) and more recently Customs Export Prohibition Order 2011 which none provided any mention of biosecurity training. [13, 14, 15, 16]

[1] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

[2] Department of the Prime Minister and Cabinet. "National Exercise Programme". <https://dpmc.govt.nz/our-programmes/national-security-and-intelligence/national-exercise-programme>. Accessed 13 Aug 2020.

[3] Parliamentary Counsel Office. New Zealand Legislation. December 2018 (June 1996). "Hazardous Substances and New Organisms Act 1996". [http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_Hazardous+Substances+and+New+Organisms+Act+1996\\_resel\\_25\\_a&p=1#whole](http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_Hazardous+Substances+and+New+Organisms+Act+1996_resel_25_a&p=1#whole). Accessed 10 Aug 2020

[4] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 10 Aug 2020

[5] New Zealand Government. Ministry of Primary Industries. <https://www.mpi.govt.nz/>. Accessed 10 Aug 2020

[6] New Zealand Government. The Institute of Environmental Science and Research. <https://www.esr.cri.nz/>. Accessed 10 Aug 2020.

- [7] Environmental Protection Authority. <https://www.epa.govt.nz>. Accessed 10 Aug 2020
- [8] New Zealand Government. Ministry of Defence. <https://www.defence.govt.nz/>. Accessed 10 Aug 2020
- [9] New Zealand Government. Ministry of Transport. <https://www.transport.govt.nz/>. Accessed 10 Aug 2020
- [10] Confidence Building Measures. May 2017. "New Zealand". <https://bwc-ecbm.unog.ch/new-zealand/bwccbm2017newzealand>. Accessed 10 Aug 2020
- [11] Confidence Building Measures. March 2019. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2019\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2019_new_zealand.pdf). Accessed 10 Aug 2020
- [12] Confidence Building Measures. 15 April 2020.. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2020\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2020_new_zealand.pdf). Accessed 10 Aug 2020.
- [13] VERTIC Database. <https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/n/>. Accessed 20 Aug 2020.
- [14] New Zealand Legislation. 8 June 1987. "New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act". [https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Nuclear\\_Free\\_Zone\\_Act\\_1987.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Nuclear_Free_Zone_Act_1987.pdf). Accessed 20 Aug 2020.
- [15] New Zealand Legislation. 17 Oct 2002 (amended 2007). "Terrorism Suppression Act 2002" [https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Terrorism\\_Suppression\\_Act\\_2002.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Terrorism_Suppression_Act_2002.pdf). Accessed 20 Aug 2020.
- [16] New Zealand Legislation. 27 June 2011. "Customs Export Prohibition Order". [https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Customs\\_Export\\_Prohibition\\_Order\\_2011.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Customs_Export_Prohibition_Order_2011.pdf). Accessed 20 Aug 2020.

### 1.3.3 Personnel vetting: regulating access to sensitive locations

#### 1.3.3a

**Do regulations or licensing conditions specify that security and other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential are subject to the following checks: drug testing, background checks, and psychological or mental fitness checks?**

Personnel are subject to all three of these checks = 3, Personnel are subject to two of these checks = 2, Personnel are subject to one of these checks = 1, Personnel are not subject to any of these checks = 0

**Current Year Score: 0**

There is no publicly available evidence to confirm that security and other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential are subject to drug testing, background checks, and psychological or mental fitness checks. The Hazardous Substances and New Organisms Act 1996 allows for the authority (the Environmental Protection Authority) to prescribe control and requirements relating to hazardous substances including prescribing "qualifications and other requirements that persons must hold or meet in order to obtain or handle (i) hazardous substances and (ii) hazardous substances with ecotoxic substances" [1]. However, there is no information about such requirements on the EPA website [2]. Nor was there was evidence on the Ministry of Health website, the Institute of Environmental Science and Research (ESR), the Ministry for Primary Industries website, Biosecurity New Zealand website, Worksafe New Zealand or the Ministry of Defence website [3, 4, 5, 6, 7, 8]. New Zealand reports to the United Nations Office at Geneva (UNOG) every year for the "Confidence Building Measure Return", which is a reporting mechanism set by the Biological Weapons Convention [9]. The reporting includes data on Biosafety Level (BSL) facilities, their level, location, floor area of the laboratory, types of pathogens stored and processed, the organisational structure of the facilities, etc. As per the report covering data for 2017, 2019, and 2020, there is no evidence in New Zealand's report of regulations or licensing conditions specifying that security and other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential are subject to the following checks: drug testing, background checks, and psychological or

mental fitness checks. [9, 10,11] The Joint External Evaluation (JEE) for New Zealand published in 2019 does not list such requirements either. [12] The VERTIC database did not list a document that could provide such evidence either. [13]

[1] Parliamentary Counsel Office. New Zealand Legislation. December 2018 (June 1996). "Hazardous Substances and New Organisms Act 1996".

[http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts\_act%40bill%40regulation%40deemedreg\_Hazardous+Substances+and+New+Organisms+Act+1996\_resel\_25\_a&p=1#DLM383190]. Accessed 10 Aug 2020.

[2] Environmental Protection Authority. <https://www.epa.govt.nz/>. Accessed 10 Aug 2020.

[3] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 10 Aug 2020.

[4] Institute of Environmental Science and Research (ESR). <https://www.esr.cri.nz/>. Accessed 10 Aug 2020.

[5] New Zealand Government. Ministry of Primary Industries. <https://www.mpi.govt.nz/>. Accessed 10 Aug 2020.

[6] New Zealand Government. Ministry of Primary Industries. Biosecurity New Zealand.

<https://www.biosecurity.govt.nz/biosecuritynz/>. Accessed 10 Aug 2020.

[7] Worksafe New Zealand. <https://worksafe.govt.nz/>. Accessed 10 Aug 2020.

[8] New Zealand Government. Ministry of Defence. <https://www.defence.govt.nz/>. Accessed 10 Aug 2020

[9] Confidence Building Measures. May 2017. "New Zealand". <https://bwc-ecbm.unog.ch/new-zealand/bwccbm2017newzealand>. Accessed 10 Aug 2020.

[10] Confidence Building Measures. March 2019. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2019\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2019_new_zealand.pdf). Accessed 10 Aug 2020

[11] Confidence Building Measures. 15 April 2020.. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2020\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2020_new_zealand.pdf). Accessed 10 Aug 2020

[12] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

[13] VERTIC Database. <https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/n/>. Accessed 20 Aug 2020.

## 1.3.4 Transportation security

### 1.3.4a

**Does the country have publicly available information on national regulations on the safe and secure transport of infectious substances (specifically including Categories A and B)?**

Yes = 1 , No = 0

**Current Year Score: 1**

New Zealand has publicly available information on national regulations on the safe and secure transport of infectious substances (Category A and B). The New Zealand Transport Agency has published the "Land Transport Rule: Dangerous Goods 2005" which sets out the requirements for the safe transport of dangerous goods on land in New Zealand. The Rule covers the packaging, identification and documentation of dangerous goods; the segregation of incompatible goods; transport procedures and the training and responsibilities of those involved in the transport of dangerous goods", including both Category A and Category B infectious substances [1, 2]. The Land Transport Rule: Dangerous Goods 2005 specifically defines Category A as "infectious substances are those that are transported in a form that is capable of causing permanent disability, life-threatening or fatal disease in humans or animals that are exposed to them" and Category B as "infectious substances are those that do not meet the criteria for inclusion in Category A" and covers the responsibilities from the consignor to drivers of the road vehicle. [2] The Rule aligns transport controls with regulations made under the Hazardous Substances and New Organisms Act 1996, which imposes controls for all phases of the life cycle of hazardous substances [3].

New Zealand reports to the United Nations Office at Geneva (UNOG) every year for the "Confidence Building Measure Return", which is a reporting mechanism set by the Biological Weapons Convention [4]. As per the report covering data for 2017, 2019 and 2020, there is no mention in New Zealand's report of national regulations on the safe and secure transport of infectious substances (Categories A and B) [4, 5, 6]. The Joint External Evaluation (JEE) published in 2019 for New Zealand also confirms that there are regulations with oversight (both internal and external) of the laboratory specimen transport system. [7] The VERTIC Database lists more documents regarding prohibitions on biological weapons such as the prohibition of procession/transport . [8]

- [1] New Zealand Transport Agency. "Transporting Dangerous or Hazardous Goods". <https://www.nzta.govt.nz/driver-licences/getting-a-licence/licences-by-vehicle-type/transporting-dangerous-or-hazardous-goods/>. Accessed 9 Aug 2020.
- [2] New Zealand Transport Agency. "Land Transport Rule: Dangerous Goods 2005". <https://www.nzta.govt.nz/assets/resources/rules/docs/dangerous-goods-2005-as-at-1-october-2016.pdf> Accessed 9 Aug 2020.
- [3] Parliamentary Counsel Office. New Zealand Legislation. December 2018 (June 1996). "Hazardous Substances and New Organisms Act 1996". [\[http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_Hazardous+Substances+and+New+Organisms+Act+1996\\_resel\\_25\\_a&p=1#DLM383190\]](http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_Hazardous+Substances+and+New+Organisms+Act+1996_resel_25_a&p=1#DLM383190). Accessed 9 Aug 2020.
- [4] Confidence Building Measures. May 2017. "New Zealand". <https://bwc-ecbm.unog.ch/new-zealand/bwccbm2017newzealand>. Accessed 9 Aug 2020.
- [5] Confidence Building Measures. March 2019. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2019\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2019_new_zealand.pdf). Accessed 10 Aug 2020
- [6] Confidence Building Measures. 15 April 2020.. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2020\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2020_new_zealand.pdf). Accessed 10 Aug 2020
- [7] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.
- [8] VERTIC Database. <https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/n/>. Accessed 20 Aug 2020.

### 1.3.5 Cross-border transfer and end-user screening

#### 1.3.5a

**Is there legislation and/or regulations in place to oversee the cross-border transfer and end-user screening of especially dangerous pathogens, toxins, and pathogens with pandemic potential?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that New Zealand has a national legislation and regulation in place to oversee the cross-border transfer of especially dangerous pathogens, toxins and pathogens with pandemic potential, and evidence of end-user screening. With regards to importing pathogens, the Import Health Standards (IHS) are documents issued under section 24A of the Biosecurity Act 1993 [1, 2]. They state the requirements that must be met before risk goods, including microorganisms (protozoa, fungi, bacteria, viruses, unicellular algae), can be imported into New Zealand [1, 3]. The Import Health Standards for Cell Cultures from all Countries, published in January 2010, outline that "a permit to import is required for all cell cultures imported under this standard and must be issued prior to importation" and "to be eligible for biosecurity direction (written authority from an Inspector, given under section 25 of the Biosecurity Act 1993, to move uncleared goods from a transitional facility, containment facility or biosecurity control area to another transitional facility, containment facility or biosecurity

control area, or to export those goods from New Zealand), the consignment must meet the requirements of this import health standard" [4]. With regards to exporting pathogens, the Biosecurity Act 1993 defines organisms as "something that does not include a human being or a genetic structure derived from a human being: (b) includes a micro-organism". [2] Human pathogens, zoonoses and "toxins" which covers live cultures are placed covered under the New Zealand Strategic Goods Lists, Dual Use List, Category 1. The New Zealand Strategic Goods List last reviewed September 2019 includes dual-use goods and technologies under which covers "Materials, Chemicals, Microorganisms and Toxins." [9] This includes "Viruses, whether natural, enhanced or modified, either in the form of "isolated live cultures" or as material including living material which has been deliberately inoculated or contaminated with such cultures" as well as "Bacteria, whether natural, enhanced or modified, either in the form of "isolated live cultures" or as material including living material which has been deliberately inoculated or contaminated with such cultures." [5] The VERTIC Database further lists the Customs Export Prohibition Order of 2011 which prohibits weapons and dual-use weapon related exports (including biological agents). [7,8] According to the Ministry of Foreign Affairs and Trade, most cases will require end-user certificates for exporting strategic goods. [5, 6] However, there is no evidence of a requirement for end-user screening. [1, 2, 3, 4, 5, 6, 7, 8, 9]

[1] New Zealand Government. Ministry of Primary Industries. "Import Health Standards". <https://www.mpi.govt.nz/law-and-policy/requirements/ihs-import-health-standards/>. Accessed 15 Aug 2020.

[2] Parliamentary Counsel Office. New Zealand Legislation. October 2018 (August 1993). "Biosecurity Act 1993". [http://www.legislation.govt.nz/act/public/1993/0095/latest/whole.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_security\\_resel\\_25\\_a&p=1#DLM4757599](http://www.legislation.govt.nz/act/public/1993/0095/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_security_resel_25_a&p=1#DLM4757599). Accessed 15 Aug 2020.

[3] New Zealand Government. Ministry of Primary Industries. "Importing Microorganisms". <https://www.mpi.govt.nz/importing/biological-products-and-organisms/importing-microorganisms/>. Accessed 15 Aug 2020.

[4] New Zealand Government. Ministry of Primary Industries. January 2010. "Import Health Standards for Cell Cultures from all Countries". <https://www.mpi.govt.nz/importing/biological-products-and-organisms/importing-cell-cultures/>. Accessed 15 Aug 2020.

[5] Department of Defense. "Online DSGL Tool." <https://dsgl.defence.gov.au/dsglcontent/Pages/1C351.aspx>. Accessed 15 Aug 2020.

[6] Ministry of Foreign Affairs and Trade. "How to export military and dual-use goods". <https://www.mfat.govt.nz/en/trade/trading-weapons-and-controlled-chemicals/how-to-export-military-and-dual-use-goods/#importing#importing>. Accessed 15 Aug 2020.

[7] VERTIC Database. <https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/n/>. Accessed 20 Aug 2020.

[8] New Zealand Government. June 2011. "Customs Export Prohibition Order". [https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Customs\\_Export\\_Prohibition\\_Order\\_2011.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Customs_Export_Prohibition_Order_2011.pdf). Accessed 20 Aug 2020.

[9] Ministry of Foreign Affairs and Trade. "Which Goods Are Controlled." <https://www.mfat.govt.nz/en/trade/trading-weapons-and-controlled-chemicals/which-goods-are-controlled/>. Accessed 5 Sept 2020.

## 1.4 BIOSAFETY

### 1.4.1 Whole-of-government biosafety systems

#### 1.4.1a

Does the country have in place national biosafety legislation and/or regulations?

Yes = 1 , No = 0

Current Year Score: 1

New Zealand has national biosafety legislation in place. The Hazardous Substances and New Organisms Act 1996, though not specifically referring to 'biosafety', outlines the measures necessary to prevent accidents that involve the release of harmful substances, including and excluding genetically modified organisms [1]. Part 2 - "Matters to be addressed by containment controls for new organisms excluding genetically modified organisms" and Part 3 - "Matters to be addressed by EPA containment controls for contained hazardous substances" both outline the measures necessary to prevent accidents involving the release of harmful substances [1]. In addition, PC3 laboratories in New Zealand must follow the requirements of AS/NZS 2243.3:2010 Safety in laboratories - Microbiological safety and containment" [2]. This standard prescribes the appropriate biosafety and physical containment requirements when handling Security Sensitive Biological Agents (SSBAs). The AS/NZS 2243.3:2010 sets out "requirements, responsibilities and general guidelines relating to safe handling and containment of microorganisms and prions in laboratories and outlines the "organisational arrangements for the implementation and monitoring of biosafety" [2]. AS/NZS 2243.3:2010 specifies how to manage principles of containment, microbiological spills, cleaning, and the use of personal protective equipment (PPE) and special equipment, among others, for laboratory containment facilities, plant containment facilities, invertebrate containment facilities, and animal containment facilities [2]. New Zealand's report to the United Nations Office at Geneva (UNOG) in 2017 for the "Confidence Building Measure Return", the reporting mechanism set by the Biological Weapons Convention, outlines that New Zealand has a BSL-3 laboratory "at the site of the National Centre for Biosecurity and Infectious Disease in Upper Hutt, near Wellington" in accordance with the latest edition of the "WHO Laboratory Biosafety Manual and/or the OIE Terrestrial Manual or other equivalent internationally accepted guidelines" [3]. The Hazardous Substances and New Organisms Act was amended in 2002, 2005 and most recently in 2010, while the Biosecurity Act 1993 was amended in 2008 [4, 5]. There are plans for an "overhaul" of the Biosecurity Act. A terms of reference has been published July 2019 and formal public consultations are planned for a to be announced date. [6, 7] The VERTIC database lists both the Biosecurity Act 1993 and Hazardous Substances and New Organisms Act 1996 . [8]

[1] Parliamentary Counsel Office. New Zealand Legislation. December 2018 (June 1996). "Hazardous Substances and New Organisms Act 1996".

[[http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_Hazardous+Substances+and+New+Organisms+Act+1996\\_resel\\_25\\_a&p=1#DLM383190](http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_Hazardous+Substances+and+New+Organisms+Act+1996_resel_25_a&p=1#DLM383190)]. Accessed 09 Aug 2020.

[2] Standards New Zealand. "Australian New Zealand Standard AS / NZS 2243.3:2010 Safety in Laboratories - Microbiological Safety and Containment." <https://archive.org/details/as-nzs.2243.3.2010>. Accessed 09 Aug 2020.

[3] Confidence Building Measures. May 2017. "New Zealand". <https://bwc-ecbm.unog.ch/new-zealand/bwccbm2017newzealand>. Accessed 09 Aug 2020.

[4] Parliamentary Counsel Office. New Zealand Legislation. October 2018 (August 1993). "Biosecurity Act 1993". [http://www.legislation.govt.nz/act/public/1993/0095/latest/whole.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_security\\_resel\\_25\\_a&p=1#DLM4757599](http://www.legislation.govt.nz/act/public/1993/0095/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_security_resel_25_a&p=1#DLM4757599). Accessed 13 Aug 2020.

[5] Parliamentary Counsel Office. New Zealand Legislation. December 2018 (June 1996). "Hazardous Substances and New Organisms Act 1996". [http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_Hazardous+Substances+and+New+Organisms+Act+1996\\_resel\\_25\\_a&p=1#DLM383190](http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_Hazardous+Substances+and+New+Organisms+Act+1996_resel_25_a&p=1#DLM383190). Accessed 13 Aug 2020.

[6] New Zealand Government. Ministry of Primary Industries. "Law & Policy - Biosecurity". <https://www.mpi.govt.nz/law-and-policy/legal-overviews/biosecurity/>. Accessed 13 Aug 2020.

[7] Ministry of Primary Industries. "Biosecurity Act 1993 overhaul". <https://www.mpi.govt.nz/law-and-policy/legal-overviews/biosecurity/biosecurity-act-1993-overhaul/#:~:text=Our%20biosecurity%20system%20is%20underpinned,make%20it%20into%20the%20country>. Accessed 13 Aug 2020.

[8] VERTIC Database. <https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/n/>. Accessed 20 Aug 2020.

### 1.4.1b

**Is there an established agency responsible for the enforcement of biosafety legislation and regulations?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence of an established agency responsible for the enforcement of biosafety legislation and regulations in New Zealand. WorkSafe New Zealand, the nation's primary workplace health and safety regulator, is responsible for biosafety in laboratories. As outlined by the Hazardous Substances and New Organisms Act 1996, the Environmental Protection Authority (EPA) oversees biosafety legislation [1, 4]. As outlined on the EPA website, they enforce biosafety legislation by creating " the rules to make sure the people who make and use these substances do so in a way that's safe for them and the environment. We also make sure the rules are followed (along with WorkSafe New Zealand and other agencies)". EPA with several different agencies depending on the activities involved. For instance, EPA works with the Ministry for Primary Industries, who "enforces the standards of cleanliness for incoming vessels, rigs or equipment, including biofouling on ships' hulls." [3] However, WorkSafe New Zealand, under the Hazardous Substances and New Organisms Act 1996 and Health and Safety at Work (Hazardous Substances) Regulations 2017 is the main enforcer of hazardous substance disposal rules as well as the rules regarding storage and handling of hazardous substance in the workplace. [7] WorkSafe New Zealand outlines the different roles responsibilities under the law between WorkSafe and the EPA. While the EPA is responsible for classification, labelling, importation, etc of hazardous substances, WorkSafe New Zealand is responsible for the "use, storage and handling of hazardous substances in workplaces." [4] The VERTIC database also mentions the New Zealand Nuclear Free Zone Act of 1987. The act established the Public Advisory Committee on Disarmament and Arms Control that works with the Minister of Foreign Affairs and the Prime Minister in the prohibition of biological weapons. [5,6]

[1] Parliamentary Counsel Office. New Zealand Legislation. December 2018 (June 1996). "Hazardous Substances and New Organisms Act 1996".

[[http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_Hazardous+Substances+and+New+Organisms+Act+1996\\_resele\\_25\\_a&p=1#DLM383190](http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_Hazardous+Substances+and+New+Organisms+Act+1996_resele_25_a&p=1#DLM383190)]. Accessed 9 Aug 2020.

[2] Environmental Protection Agency. "What We Do". <https://www.epa.govt.nz/about-us/what-we-do/>. Accessed 9 Aug 2020.

[3] Environmental Protection Agency. " Role of the EPA and other agencies". <https://www.epa.govt.nz/industry-areas/eez-marine-activities/roles-and-responsibilities/role-of-each-agency-in-nzs-offshore-waters/>. Accessed 6 Sept 2020.

[4] WorkSafe New Zealand. "Role of EPA and WorkSafe". <https://worksafe.govt.nz/topic-and-industry/hazardous-substances/regulations/role-of-epa-and-worksafe>. Accessed 9 Aug 2020.

[5] VERTIC Database. <https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/n/>. Accessed 20 Aug 2020.

[6] New Zealand Legislation. 8 June 1987. "New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act". [https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Nuclear\\_Free\\_Zone\\_Act\\_1987.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Nuclear_Free_Zone_Act_1987.pdf). Accessed 20 Aug 2020.

[7] Worksafe. "Role of EPA and Worksafe." <https://worksafe.govt.nz/topic-and-industry/hazardous-substances/regulations/role-of-epa-and-worksafe>. Accessed 07 Sept 2020.

## 1.4.2 Biosafety training and practices

### 1.4.2a

**Does the country require biosafety training, using a standardized, required approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient publicly available evidence New Zealand require biosafety training, using a standardized, required approach, such as through a common curriculum or a train the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential. The Joint External Evaluation published in 2019 for New Zealand explicitly states that "regular training is required under laboratory and containment standards and compliance. [1] There is a Hazardous Substances Toolbox website which help guides organizations who are under the Hazardous Substances and New Organisms 1996 (HSNO) Act and Health and Safety at Work Act 2015 (HSWA). [2,3, 4] It is noted that some rules were transferred from HSNO to Health and Safety at Work (Hazardous Substances) Regulations in December 2017. The website also requires the organizations to "Train [your] workers about the substances they use and how to protect themselves". [2, 5] The Hazardous Substances and New Organisms Act 1996 requires parties bound by the Act of "training of workers, scientists, educators and technical and managerial personnel" as well as development and implementation of training programmes. However, it does not specify a a standard or a common curriculum. [4] Even though biosafety training is required, it is unclear whether or not the training is standardized through a common curriculum. The VERTIC database does not have any other documents that mandates biosafety training using a standardized required approach. [6]There is no further evidence of such requirements on the Ministry of Health website, the Ministry for Primary Industries, the Institute of Environmental Science and Research. [7, 8, 9]

[1] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed Sept 4 2020.

[2] Hazardous Substances Toolbox. <https://www.hazardoussubstances.govt.nz/>. Accessed 7 Sept 2020.

[3] New Zealand Government. 2015. "Health and Safety at Work Act." <http://www.legislation.govt.nz/act/public/2015/0070/latest/DLM5976660.html>. Accessed 7 Sept 2020.

[4] New Zealand Government. 1996. "Hazardous Substances and New Organisms." <http://www.legislation.govt.nz/act/public/1996/0030/93.0/DLM381222.html>. Accessed 7 Sept 2020.

[5] New Zealand Government. 2017. "Health and Safety at Work (Hazardous Substances) Regulations". <http://www.legislation.govt.nz/regulation/public/2017/0131/latest/DLM7309401.html>. Accessed 07 Sept 2020.

[6] VERTIC Database. <https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/n/>. Accessed 20 Aug 2020.

[7] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 20 Aug 2020

[8] New Zealand Government. Ministry of Primary Industries. <https://www.mpi.govt.nz/>. Accessed 20 Aug 2020.

[9] New Zealand Government. The Institute of Environmental Science and Research. <https://www.esr.cri.nz/>. Accessed 20 Aug 2020.

## 1.5 DUAL-USE RESEARCH AND CULTURE OF RESPONSIBLE SCIENCE

### 1.5.1 Oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research

#### 1.5.1a

Is there publicly available evidence that the country has conducted an assessment to determine whether ongoing research is occurring on especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence that New Zealand has conducted an assessment to determine whether ongoing research is occurring on especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research. Research in New Zealand has to follow the "National Ethical Standards for Health and Disability Research and Quality Improvement" where researchers have to get ethical approval from their respective approved ethics committee for their research proposals (eg. There are separated committees for humans and animals). [1] However, there is no mention of dual-use research on the National Ehtics Advisory Committee website. [2]The Joint External Evaluation (JEE) for New Zealand published in 2019, does not have language that states that there is an ongoing and/or past assessments on ongoing research pathogens, toxins, and/or other dual-use research. [3] The VERTIC Database lists more documents regarding biological weapons such as the prohibition of production/procession/transport of biological weapons under the New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act 1987. However, they do not have further evidence regarding assessments on whether or not ongoing dual-use research is occurring. [4,5] There is no further evidence of such an assessment on the Ministry of Health website, the Ministry for Primary Industries website, including the National Biocontainment Laboratory website, the Ministry of Defence website, the Institute of Environmental Science and Research (ESR) or the Worksafe New Zealand public websites. [6, 7, 8, 9, 10]. New Zealand's report to the United Nations Office at Geneva (UNOG) in 2017, 2019 and 2020 for the "Confidence Building Measure Return", the reporting mechanism set by the Biological Weapons Convention, do not include publicly available evidence that the country has conducted an assessment to determine whether ongoing research is occurring on especially dangerous pathogens, toxins, pathogens with pandemic potential, and/or other dual use research. New Zealand has no national biological defence research and development programme [11,12,13]

[1] National Ethics Advisory Committee. "Research in the New Zealand context." <https://neac.health.govt.nz/national-ethical-standards-health-and-disability-research-and-quality-improvement/part-one/research>. Accessed Sept 4 2020.

[2] National Ethics Advisory Committee. <https://neac.health.govt.nz/search/results/dual-use>. Accessed 7 Sept 2020.

[3] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed Sept 4 2020.

[4] VERTIC Database. <https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/n/>. Accessed 20 Aug 2020.

[5] New Zealand Legislation. 8 June 1987. "New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act". [https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Nuclear\\_Free\\_Zone\\_Act\\_1987.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Nuclear_Free_Zone_Act_1987.pdf). Accessed 20 Aug 2020.

[6] Ministry of Health. <https://www.health.govt.nz/>. Accessed Sept 4 2020.

[7] Ministry for Primary Industries. <https://www.mpi.govt.nz/>. Accessed Sept 4 2020.

[8] Ministry of Defence. <https://www.defence.govt.nz/>. Accessed Sept 4 2020.

[9] Institute of Environmental Science and Research (ESR). <https://www.esr.cri.nz/>. Accessed Sept 4 2020.

[10] Worksafe. [https://worksafe.govt.nz/search/SearchForm/?Search=dual-use&action\\_results=Go](https://worksafe.govt.nz/search/SearchForm/?Search=dual-use&action_results=Go). Accessed Sept 7 2020.

[11] Confidence Building Measures. May 2017. "New Zealand". <https://bwc-ecbm.unog.ch/new-zealand/bwccbm2017newzealand>. Accessed Sept 4 2020.

[12] Confidence Building Measures. March 2019. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2019\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2019_new_zealand.pdf). Accessed Sept 4 2020.

[13] Confidence Building Measures. 15 April 2020.. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2020\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2020_new_zealand.pdf). Accessed Sept 4 2020.

### 1.5.1b

**Is there legislation and/or regulation requiring oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence that New Zealand has legislation and/or regulation requiring oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research. Research in New Zealand has to follow the "National Ethical Standards for Health and Disability Research and Quality Improvement" where researchers have to get ethical approval from their respective approved ethics committee for their research proposals (eg. There are separated committees for humans and animals). [1] However, there is no mention of dual-use research on the National Ethics Advisory Committee website. [2] New Zealand scored a "5" in both categories of biosafety and biosecurity Joint External Evaluation (JEE) for New Zealand published in 2019 indicating that New Zealand has reached the required International Health Regulations (2005) biosafety and biosecurity capabilities and is able to sustain its capability overtime. However, the report does not mention legislation/regulation regarding oversight of research for dangerous pathogens, toxins, and/or other dual-use research. [3] The VERTIC Database lists documents regarding biological weapons such as the prohibition of production/procession/transport of biological weapons under the New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act 1987. The Customs Export Prohibition Order 2011 prohibits the dual-use weapon-related exports and "the development, production, or deployment of biological weapons" imposed by the Secretary of Foreign Affairs and Trade. However, none mention oversight of research for dangerous pathogens/dual-use research. [4, 5, 6] New Zealand's report to the United Nations Office at Geneva (UNOG) in 2017, 2019 and 2020 for the "Confidence Building Measure Return", the reporting mechanism set by the Biological Weapons Convention, do not include publicly available evidence of a national policy requiring oversight of dual use research, such as research with especially dangerous pathogens, toxins, and/or pathogens with pandemic potential. [7,8,9] There is no further evidence of such an assessment on the Ministry of Health, the Ministry for Primary Industries (including the National Biocontainment Laboratory website under Ministry for Primary Industries), the Ministry of Defence, the Institute of Environmental Science and Research (ESR) or the Worksafe New Zealand public websites. [10,11,12,13, 14]

[1] National Ethics Advisory Committee. "Research in the New Zealand context." <https://neac.health.govt.nz/national-ethical-standards-health-and-disability-research-and-quality-improvement/part-one/research>. Accessed Sept 4 2020.

[2] National Ethics Advisory Committee. <https://neac.health.govt.nz/search/results/dual-use>. Accessed 7 Sept 2020.

[3] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

[4] VERTIC Database. <https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/n/>. Accessed 20 Aug 2020.

[5] New Zealand Legislation. 8 June 1987. "New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act". [https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Nuclear\\_Free\\_Zone\\_Act\\_1987.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Nuclear_Free_Zone_Act_1987.pdf). Accessed 20 Aug 2020.

[6] New Zealand Legislation. 27 June 2011. "Customs Export Prohibition Order". [https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Customs\\_Export\\_Prohibition\\_Order\\_2011.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Customs_Export_Prohibition_Order_2011.pdf). Accessed 20 Aug 2020.

[7] Confidence Building Measures. May 2017. "New Zealand". <https://bwc-ecbm.unog.ch/new-zealand/bwccbm2017newzealand>. Accessed Sept 4 2020.

[8] Confidence Building Measures. March 2019. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2019\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2019_new_zealand.pdf). Accessed Sept 4 2020.

[9] Confidence Building Measures. 15 April 2020.. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2020\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2020_new_zealand.pdf). Accessed Sept 4 2020

[10] Ministry of Health. <https://www.health.govt.nz/>. Accessed Sept 4 2020.

[11] Ministry for Primary Industries. <https://www.mpi.govt.nz/>. Accessed Sept 4 2020.

[12] Ministry of Defence. <https://www.defence.govt.nz/>. Accessed Sept 4 2020.

[13] Institute of Environmental Science and Research (ESR). <https://www.esr.cri.nz/>. Accessed Sept 4 2020.

[14] Worksafe. [https://worksafe.govt.nz/search/SearchForm/?Search=dual-use&action\\_results=Go](https://worksafe.govt.nz/search/SearchForm/?Search=dual-use&action_results=Go). Accessed Sept 7 2020.

### 1.5.1c

#### Is there an agency responsible for oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?

Yes = 1, No = 0

**Current Year Score: 0**

There is no publicly available evidence that New Zealand has an agency responsible for the oversight of dual use research, such as research with especially dangerous pathogens, toxins, and/or pathogens with pandemic potential. Ministry of Foreign Affairs and Trade is responsible for the regulation of export/import of dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research. [1] Research in New Zealand has to follow the "National Ethical Standards for Health and Disability Research and Quality Improvement" where researchers have to get ethical approval from their respective approved ethics committee for their research proposals (eg. There are separated committees for humans and animals). [2] WorkSafe New Zealand, the nation's primary workplace health and safety regulator, is responsible for biosafety in laboratories. [3] However, there is no mention of oversight of dual-use research in the agencies' websites. [1,2,3] New Zealand scored a "5" in both categories of biosafety and biosecurity Joint External Evaluation (JEE) for New Zealand published in 2019 indicating that New Zealand has reached the required International Health Regulations (2005) biosafety and biosecurity capabilities and is able to sustain its capability overtime. [4] The VERTIC Database lists more documents regarding biological weapons such as the prohibition of production/procession/transport of biological weapons under the New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act 1987. However, they do not have further evidence regarding legislation/regulation appointing an agency/government body on oversight of ongoing dual-use research [5, 6] New Zealand's report to the United Nations Office at Geneva (UNOG) in 2017, 2019 and 2020 for the "Confidence Building Measure Return", the reporting mechanism set by the Biological Weapons Convention, do not include publicly available evidence that the country has an agency is responsible for oversight of ongoing research is occurring on especially dangerous pathogens, toxins, pathogens with pandemic potential, and/or other dual use research. New Zealand has no national biological defence research and development programme [7,8, 9]. There is no further evidence of such an assessment on the Ministry of Health website, the Ministry for Primary Industries website, including the National Biocontainment Laboratory website, the Ministry of Defence website, or the Institute of Environmental Science and Research (ESR). [10,11,12,13].

[1] Ministry of Foreign Affairs and Trade. "How to export military and dual-use goods".

<https://www.mfat.govt.nz/en/trade/trading-weapons-and-controlled-chemicals/how-to-export-military-and-dual-use-goods/#importing#importing>. Accessed 15 Aug 2020.

[2] National Ethics Advisory Committee. "Research in the New Zealand context." <https://neac.health.govt.nz/national-ethical-standards-health-and-disability-research-and-quality-improvement/part-one/research>. Accessed 15 Aug 2020.

[3] WorkSafe New Zealand. "Role of EPA and WorkSafe". <https://worksafe.govt.nz/topic-and-industry/hazardous-substances/regulations/role-of-epa-and-worksafe>. Accessed 04 Sept 2020

[4] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand."

<https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

[4] VERTIC Database. <https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/n/>. Accessed 05 Sept 2020.

[5] New Zealand Legislation. 8 June 1987. "New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act".

[https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Nuclear\\_Free\\_Zone\\_Act\\_1987.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Nuclear_Free_Zone_Act_1987.pdf). Accessed 20 Aug 2020.

- [6] New Zealand Legislation. 27 June 2011. "Customs Export Prohibition Order". [https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Customs\\_Export\\_Prohibition\\_Order\\_2011.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Customs_Export_Prohibition_Order_2011.pdf). Accessed 20 Aug 2020.
- [7] Confidence Building Measures. May 2017. "New Zealand". <https://bwc-ecbm.unog.ch/new-zealand/bwccbm2017newzealand>. Accessed Sept 4 2020.
- [8] Confidence Building Measures. March 2019. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2019\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2019_new_zealand.pdf). Accessed Sept 4 2020.
- [9] Confidence Building Measures. 15 April 2020.. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2020\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2020_new_zealand.pdf). Accessed Sept 4 2020
- [10] Ministry of Health. <https://www.health.govt.nz/>. Accessed Sept 4 2020.
- [11] Ministry for Primary Industries. <https://www.mpi.govt.nz/>. Accessed Sept 4 2020.
- [12] Ministry of Defence. <https://www.defence.govt.nz/>. Accessed Sept 4 2020.
- [13] Institute of Environmental Science and Research (ESR). <https://www.esr.cri.nz/>. Accessed Sept 4 2020

## 1.5.2 Screening guidance for providers of genetic material

### 1.5.2a

**Is there legislation and/or regulation requiring the screening of synthesized DNA (deoxyribonucleic acid) against lists of known pathogens and toxins before it is sold?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient publicly available evidence to confirm that New Zealand has legal restrictions or a requirement that synthesised DNA pass through a screener or code reader looking for dangerous sequences before sale is authorised in New Zealand. According to the Joint External Evaluation (JEE) published in 2019 for New Zealand, the New Zealand biosecurity system regulates all new organisms that encompasses genetically modified organisms. [1] However, there was no further evidence within the Hazardous Substances and New Organisms Act 1996, the Ministry of Health, the Ministry for Primary Industries, the Institute of Environmental Science and Research (ESR), the Environmental Protection Authority, the Ministry of Defence website, the Ministry of Transport website, nor New Zealand's 2017, 2019 and 2020 Confidence Building Measures report for the United Nations Biological Weapons Convention [ 2, 3, 4, 5, 6, 7, 8, 9, 10,11]. The VERTIC databased listed several other legislation such as the New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act 1987 as well as the the Terrorism Suppression Act of 2002 (amended 2007) and more recently Customs Export Prohibition Order 2011 which none provided any mention of synthesised DNA/GMO. [12, 13, 14, 15]

- [1] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 15 Aug 2020.
- [2] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 15 Aug 2020
- [3] New Zealand Government. Ministry of Primary Industries. <https://www.mpi.govt.nz/>. Accessed 15 Aug 2020.
- [4] New Zealand Government. The Institute of Environmental Science and Research. <https://www.esr.cri.nz/>. Accessed 15 Aug 2020.
- [5] Environmental Protection Authority. <https://www.epa.govt.nz/>. Accessed 15 Aug 2020.
- [6] New Zealand Government. Ministry of Defence. <https://www.defence.govt.nz/>. Accessed 15 Aug 2020.
- [7] New Zealand Government. Ministry of Transport. <https://www.transport.govt.nz/>. Accessed 15 Aug 2020.
- [8] Parliamentary Counsel Office. New Zealand Legislation. December 2018 (June 1996). "Hazardous Substances and New Organisms Act 1996".

[http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_Hazardous+Substances+and+New+Organisms+Act+1996\\_resele\\_25\\_a&p=1#whole](http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_Hazardous+Substances+and+New+Organisms+Act+1996_resele_25_a&p=1#whole). Accessed 26 January 2019.

[9] Confidence Building Measures. May 2017. "New Zealand". <https://bwc-ecbm.unog.ch/new-zealand/bwccbm2017newzealand>. Accessed 15 Aug 2020.

[10] Confidence Building Measures. March 2019. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2019\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2019_new_zealand.pdf). Accessed 15 Aug 2020.

[11] Confidence Building Measures. 15 April 2020. "New Zealand". [https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc\\_cbm\\_2020\\_new\\_zealand.pdf](https://bwc-ecbm.unog.ch/system/files/form-pdf/bwc_cbm_2020_new_zealand.pdf). Accessed 15 Aug 2020

[12] VERTIC Database. <https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/n/>. Accessed 20 Aug 2020.

[13] New Zealand Legislation. 8 June 1987. "New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act". [https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Nuclear\\_Free\\_Zone\\_Act\\_1987.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Nuclear_Free_Zone_Act_1987.pdf). Accessed 20 Aug 2020.

[14] New Zealand Legislation. 17 Oct 2002 (amended 2007). "Terrorism Suppression Act 2002" [https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Terrorism\\_Suppression\\_Act\\_2002.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Terrorism_Suppression_Act_2002.pdf). Accessed 20 Aug 2020.

[15] New Zealand Legislation. 27 June 2011. "Customs Export Prohibition Order". [https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Customs\\_Export\\_Prohibition\\_Order\\_2011.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Customs_Export_Prohibition_Order_2011.pdf). Accessed 20 Aug 2020.

## 1.6 IMMUNIZATION

### 1.6.1 Vaccination rates

#### 1.6.1a

**Immunization rate (measles/MCV2)**

Immunization rate (measles/MCV2), 95% or greater = 2, 80-94.9% = 1, Less than 80%, or no data = 0

**Current Year Score: 1**

2019

World Health Organization

#### 1.6.1b

**Are official foot-and-mouth disease (FMD) vaccination figures for livestock publicly available through the OIE database?**

Yes = 1, No = 0

**Current Year Score: 1**

2020

OIE WAHIS database

## Category 2: Early detection and reporting for epidemics of potential international concern

### 2.1 LABORATORY SYSTEMS STRENGTH AND QUALITY

#### 2.1.1 Laboratory testing for detection of priority diseases

##### 2.1.1a

**Does the national laboratory system have the capacity to conduct diagnostic tests for at least 5 of the 10 WHO-defined core tests?**

Evidence they can conduct 5 of the 10 core tests and these tests are named = 2, Evidence they can conduct 5 of the 10 core tests and the tests are not named = 1, No evidence they can conduct 5 of the 10 core tests = 0

**Current Year Score: 2**

There is publicly available evidence to confirm that New Zealand's national laboratory system has the capacity to conduct diagnostic tests for at least 5 of the 10 WHO-defined core tests. New Zealand's national laboratory system has the capacity to conduct PCR testing for influenza, virus culture for poliovirus (polio), serology for HIV, and bacterial culture for Salmonella enteritidis serotype Typhi (typhoid) [1, 2, 3, 4]. There is no publicly available evidence that the national laboratory system conducts microscopy for mycobacterium tuberculosis (tuberculosis/TB). Instead, the laboratory network uses PCR testing and antigen testing to rapidly detect mycobacterium tuberculosis [5, 6]. For malaria, the Ministry of Health website outlines that "positive antigen tests should be confirmed by blood film microscopy to identify the species. Nucleic acid testing can also be used to confirm Plasmodium species" for Malaria but there is no mention of rapid diagnostic testing [7]. The Joint External Evaluation report on New Zealand, published in 2019 mentions that "laboratories can test, or have access to testing" listing "polymerase chain reaction (PCR) testing for influenza virus; virus culture for poliovirus; serology for HIV; microscopy for M. tuberculosis; rapid diagnostic testing for Plasmodium spp.; bacterial culture for Salmonella enteritidis serotype Typhi; characterization of Neisseria meningitidis; Bordetella pertussis; PCR and genotyping of measles virus; and PCR for Haemophilus influenzae (Hib) gene detection" [8]

[1] Institute of Environmental Science and Research (ESR). "Influenza Virus PCR". <https://www.esr.cri.nz/home/specialist-testing/show/1219>. Accessed 9 Aug 2020.

[2] Institute of Environmental Science and Research (ESR). "Enteric Virus Culture". <https://www.esr.cri.nz/home/specialist-testing/show/1210>. Accessed 9 Aug 2020.

[3] Institute of Environmental Science and Research (ESR). "HIV 1 and HIV 2 Confirmation". <https://www.esr.cri.nz/home/specialist-testing/show/754>. Accessed 9 Aug 2020.

[4] Institute of Environmental Science and Research (ESR). "Salmonella serotyping and phage typing". <https://www.esr.cri.nz/home/specialist-testing/show/1188>. Accessed 10 Aug 2020.

[5] LabPlus. "Laboratory Services". <http://www.labplus.co.nz/laboratory-services/>. Accessed 9 Aug 2020.

[6] LabPlus. "Laboratory Services - Microbiology". <http://www.labplus.co.nz/laboratory-services/microbiology/>. Accessed 9 Aug 2020.

[7] New Zealand Government. Ministry of Health. "Communicable Disease Control Manual - Malaria". <https://www.health.govt.nz/our-work/diseases-and-conditions/communicable-disease-control-manual/malaria>. Accessed 10 Aug 2020.

[8] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

2020.

### 2.1.1b

**Is there a national plan, strategy or similar document for conducting testing during a public health emergency, which includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing?**

Yes, there is evidence of a plan, and it includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing = 2, Yes, there is evidence of a plan, but there is insufficient evidence that it includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing = 1, No evidence of a plan = 0

**Current Year Score: 1**

There is insufficient evidence of a national plan for conducting testing during a public health emergency, which includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing. However, New Zealand does have a specific testing plan for COVID published in January 2021 effective Dec 2020- June 2021. The Plan outlines 3 settings for testing as well as 5 objectives that includes identifying cases, evaluating effectiveness, generating knowledge for the public, monitoring equity and encouraging/creating confidence and participation from the public and other stakeholder for the pandemic response. The plan also outlines roles and responsibilities of the Ministry of Health, Institute of Environmental Science and Research, District Health Boards and Public Health Units as well as Primary Health Organizations. [3] Furthermore, the New Zealand Influenza Pandemic Action Plan of 2017 describes testing for novel influenza and scaling capacity. It states that when there is indication of a pandemic spread, the Ministry of Primary Industries would assist the Ministry of Health with laboratory testing. The Institute of Environmental Science and Research (ESR) would also help coordinate the testing required during the response. For novel strains of influenzas, samples will be testing with real-time polymerase chain reaction (RT-PCR) for novel influenza virus. If the samples for novel strains of influenza came out positive, the samples are to be sent to the World Health Organization Collaborating Center to be confirmed. [1] The Guidelines for the Investigation and Control of Disease Outbreaks (ESR 2012) defines the goals for testing as to "(a) to ensure that the problem has been accurately diagnosed, (b) to rule out laboratory error or changes in laboratory practice as the basis for the increase in diagnosed cases, and (c) to rule out changes in clinical practice." [2] There is no further evidence on the website of the Ministry of Health. [4]

[1] New Zealand Government. Ministry of Health. August 2017. "New Zealand Influenza Pandemic Plan: A framework for action". <https://www.health.govt.nz/publication/new-zealand-influenza-pandemic-plan-framework-action> Accessed 10 Aug 2020.

[2] Ministry of Health. Institute of Environmental Science & Research Limited. April 2012. "Guidelines for the Investigation and Control of Disease Outbreaks". <https://surv.esr.cri.nz/episurv/Manuals/GuidelinesForInvestigatingCommDiseaseOBs>. Accessed 20 Aug 2020.

[3] Ministry of Health. 26 Jan 2021. "Aotearoa New Zealand's COVID-19 Surveillance Strategy". <https://www.health.govt.nz/system/files/documents/pages/covid19-surveillance-strategy-26jan2021.pdf>. Accessed 16 Feb 2021.

[4] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 16 Feb 2021

## 2.1.2 Laboratory quality systems

### 2.1.2a

**Is there a national laboratory that serves as a reference facility which is accredited (e.g., International Organization for Standardization [ISO] 15189:2003, U.S. Clinical Laboratory Improvement Amendments [CLIA])?**

Yes = 1 , No = 0

**Current Year Score: 1**

The reference laboratories under the Institute of Environmental Science & Research (ESR) are accredited either with ISO15189:2012 or ISO 17025:2005. Laboratories are accredited through International Accreditation New Zealand (IANZ) [1, 2]. ESR outlines that their "microbiological public health reference laboratories are accredited as Medical Diagnostic Laboratories under ISO 15189:2012 and operate as part of an international network to detect, identify and classify the bacteria, viruses and anti-microbial resistance that cause disease" [3].

[1] International Accreditation New Zealand. "Directory". <https://www.ianz.govt.nz/directory/>. Accessed 9 Aug 2020.

[2] Institute of Environmental Science & Research (ESR). "Our Health Laboratories". <https://www.esr.cri.nz/our-people/our-science-team/our-health-laboratories/>. Accessed 9 Aug 2020.

[3] Institute of Environmental Science & Research (ESR). "About ESR's Public Health expertise". <https://www.esr.cri.nz/our-expertise/public-health/>. Accessed 9 Aug 2020.

### 2.1.2b

**Is there a national laboratory that serves as a reference facility which is subject to external quality assurance review?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence to show that reference laboratories are subject to external quality assurance review. The reference laboratories under the Institute of Environmental Science & Research (ESR) are accredited either with ISO15189:2012 or ISO 17025:2005. Laboratories are accredited through International Accreditation New Zealand (IANZ) [1, 2]. ESR outlines that their "microbiological public health reference laboratories are accredited as Medical Diagnostic Laboratories under ISO 15189:2012 and operate as part of an international network to detect, identify and classify the bacteria, viruses and anti-microbial resistance that cause disease" [3]. ISO 15189 certifications require external quality assurance reviews. [4]

[1] International Accreditation New Zealand. "Directory". <https://www.ianz.govt.nz/directory/>. Accessed 9 Aug 2020.

[2] Institute of Environmental Science & Research (ESR). "Our Health Laboratories". <https://www.esr.cri.nz/our-people/our-science-team/our-health-laboratories/>. Accessed 9 Aug 2020.

[3] Institute of Environmental Science & Research (ESR). "About ESR's Public Health expertise". <https://www.esr.cri.nz/our-expertise/public-health/>. Accessed 9 Aug 2020..

[4] World Health Organisation. "Content Sheet 10-1: Overview of External Quality Assessment (EQA)". [[http://www.who.int/ihr/training/laboratory\\_quality/10\\_b\\_eqa\\_contents.pdf](http://www.who.int/ihr/training/laboratory_quality/10_b_eqa_contents.pdf)]. Accessed 9 Aug 2020.

## 2.2 LABORATORY SUPPLY CHAINS

### 2.2.1 Specimen referral and transport system

#### 2.2.1a

**Is there a nationwide specimen transport system?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is publicly available evidence of a specimen transport system in New Zealand. According to the Joint External Evaluation (JEE) published in 2019 for New Zealand, the Ministry of Primary Industries is responsible for training collecting

and transporting specimens. It states that " Specimen collection, transport and laboratory services span the country and the entire population has access to diagnostic laboratory testing. Courier systems are in place to transport specimens from collection centres to testing laboratories". [1] There is a specimen transport system outlined in the "National Laboratory Guidelines for Pandemic Influenza, Collection and Handling of Human Specimens for Laboratory Diagnosis of Influenza with Pandemic Potential" [2]. It outlines how human samples suspected of containing pandemic influenza can be transported to the WHO National Influenza Centre in the Institute of Environmental Science and Research (ESR) via a "free courier service" as well. [2]

[1] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

[2] New Zealand Government. Ministry of Health. August 2017. "New Zealand Influenza Pandemic Plan: A framework for action". <https://www.health.govt.nz/publication/new-zealand-influenza-pandemic-plan-framework-action>. Accessed 10 Aug 2020.

## 2.2.2 Laboratory cooperation and coordination

### 2.2.2a

**Is there a plan in place to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak?**

Yes = 2 , Yes, but there is evidence of gaps in implementation = 1 , No = 0

**Current Year Score: 2**

There is publicly available evidence to claim that there are plans in place to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak. The New Zealand Influenza Pandemic Plan, published 2017, states that the District Health Boards do not need further authority and can prepare for an expansion in demand of laboratory services during a public health emergency. The plan also mandates the Ministry of Health to review course of action and provide course of action especially concerning laboratory capacity and capability. [1] The New Zealand Influenza Pandemic Plan (2017) also recognizes a network of virology laboratories that can supplement testing and coordination during a response . The Joint External Evaluation (JEE) published in 2019 for New Zealand describes in detail for how the National Health Coordination Centre (NHCC) would prepare Emergency Operations Centers for emergency response but does not mention how the laboratory system would respond to a health emergency apart from detection, surveillance and reporting capabilities. [2]For the ongoing COVID-19 pandemic, New Zealand's District Health Boards were able to quickly mobilize and implement pop-up and mobile testing centers, that surged the health sector's capacity threefold, across the city of the breakout. [3, 4]

[1] New Zealand Government. Ministry of Health. August 2017. "New Zealand Influenza Pandemic Plan: A framework for action".<https://www.health.govt.nz/publication/new-zealand-influenza-pandemic-plan-framework-action> Accessed 10 Aug 2020.

[2] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

[3] Counties Manukau Health. 12 Aug 2020. "Seven new pop-up COVID-19 Testing Centres open in Auckland". <https://www.countiesmanukau.health.nz/news/seven-new-pop-up-covid-19-testing-centres-open-in-auckland/>. Accessed 10 Aug 2020.

[4] New Zealand Doctor. 29 June 2020. "Metropolitan Auckland district health boards increase COVID-19 testing capacity".

<https://www.nzdoctor.co.nz/article/undoctored/metropolitan-auckland-district-health-boards-increase-covid-19-testing-capacity>. Accessed 20 Aug 2020.

## 2.3 REAL-TIME SURVEILLANCE AND REPORTING

### 2.3.1 Indicator and event-based surveillance and reporting systems

#### 2.3.1a

**Is there evidence that the country is conducting ongoing event-based surveillance and analysis for infectious disease?**

Yes, there is evidence of ongoing event-based surveillance and evidence that the data is being analyzed on a daily basis = 2,  
Yes, there is evidence of ongoing event-based surveillance, but no evidence that the data are being analyzed on a daily basis  
= 1, No = 0

**Current Year Score: 1**

There is publicly available evidence that New Zealand is conducting ongoing event-based surveillance and analysis for infectious disease, but no evidence that the data is being analysed on a daily basis The Institute of Environmental Science and Research (ESR) operates the national notifiable disease surveillance database, EpiSurv, on behalf of the Ministry of Health. EpiSurv collates notifiable disease information on a real-time basis from Public Health Services (PHS) in New Zealand [1]. ESR's 2018 Annual Report outlines that their "nationwide public health surveillance system involves collecting, collating, analysing, and interpreting data from a wide range of sources including laboratories, GPs, emergency departments and even social media to provide the health sector with intelligence to support its response to public health threats" [2]. No additional reports have been published since. [3] The Joint External Evaluation (JEE) published in 2019 for New Zealand reports weekly briefings and reports for event-based surveillance but does not mention whether or not the data is analyzed on a daily basis. [4]

[1] Institute of Environmental Science and Research. Public Health Surveillance. "EpiSurv".  
<https://surv.esr.cri.nz/episurv/index.php>. Accessed 15 Aug 2020.

[2] Institute of Environmental Science and Research (ESR). "Annual Report 2018". <https://www.esr.cri.nz/assets/Uploads/ESR-ANNUAL-REPORT-2018-WEB-FINAL2.pdf>. Accessed 15 Aug 2020.

[3] Institute of Environmental Science and Research (ESR). "Publication Dates for Annual Reports and Statistics"[https://surv.esr.cri.nz/surveillance/annual\\_publicationdates.php](https://surv.esr.cri.nz/surveillance/annual_publicationdates.php). Accessed 15 Aug 2020

[4] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand."  
<https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

#### 2.3.1b

**Is there publicly available evidence that the country reported a potential public health emergency of international concern (PHEIC) to the WHO within the last two years?**

Yes = 1, No = 0

**Current Year Score: 0**

There is no publicly available evidence that New Zealand reported a potential public health emergency of international concern (PHEIC) to the WHO within the last two years. The Joint External Evaluation (JEE) published in 2019 for New Zealand claims that New Zealand reports diseases internationally promptly according to WHO requirements and the International Health Regulations (2005) guidelines. The JEE also stated that New Zealand has been reporting human and animal diseases of

significance to the required authorities (WHO, OIE and FAO) immediately. [1]When WHO declared covid-19 a PHEIC on 30 Jan 2020, New Zealand health officials worked together with WHO as per the IHR (2005) which requires countries to share information with WHO regarding disease outbreaks, information on the disease and its evolution. Not only did New Zealand share information, it also collaborated with the WHO on infection prevention and control. [2] However, there is no evidence that the country reported covid-19 as a PHEIC to the WHO. [3, 4]

[1] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 16 Feb 2020.

[2] World Health Organization. 15 July 2020. "New Zealand takes early and hard action to tackle COVID-19". <https://www.who.int/westernpacific/news/feature-stories/detail/new-zealand-takes-early-and-hard-action-to-tackle-covid-19>. Accessed 15 Aug 2020.

[3] World Health Organization. Disease Outbreak News (DON).

## 2.3.2 Interoperable, interconnected, electronic real-time reporting systems

### 2.3.2a

**Does the government operate an electronic reporting surveillance system at both the national and the sub-national level?**

Yes = 1 , No = 0

**Current Year Score: 1**

New Zealand operates an electronic reporting surveillance system at the national and sub-national level. The Institute of Environmental Science and Research (ESR) operates the national notifiable disease surveillance database, EpiSurv, on behalf of the Ministry of Health. "EpiSurv collates notifiable disease information on a real-time basis from the Public Health Services (PHS) in New Zealand" and collects surveillance information for all of New Zealand's notifiable diseases, including anthrax, brucellosis and salmonellosis among others [1, 2]. Data collected includes case demographics, clinical features and risk factors [1]. According to the ESR's public health surveillance website, notifiable disease surveillance activities are carried out by both local and national authorities. Data is reported to the Medical Officer of Health at each public health unit (PHU) by medical clinicians and is entered via a secure web-based portal into the EpiSurv national database. The "near real-time data" is collated and analysed by the Institute of Environmental Science and Research Ltd (ESR) on behalf of the Ministry of Health [3]. It is a centralized, web-based database that is accessible by both public and private laboratories across the country to notify any positive test results from any defined notifiable diseases. [4]

[1] Institute of Environmental Science and Research (ESR). Public Health Surveillance. "EpiSurv". <https://surv.esr.cri.nz/episurv/index.php>. Accessed 10 Aug 2020.

[2] New Zealand Government. Ministry of Health. "Notifiable diseases". <https://www.health.govt.nz/our-work/diseases-and-conditions/notifiable-diseases>. Accessed 10 Aug 2020..

[3] Institute of Environmental Science and Research (ESR). Public Health Surveillance. "Notifiable Disease Surveillance". [https://surv.esr.cri.nz/public\\_health\\_surveillance/notifiable\\_disease\\_surveillance.php#Q6](https://surv.esr.cri.nz/public_health_surveillance/notifiable_disease_surveillance.php#Q6). Accessed 10 Aug 2020.

[4] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020

### 2.3.2b

**Does the electronic reporting surveillance system collect ongoing or real-time laboratory data?**

Yes = 1 , No = 0

**Current Year Score: 1**

New Zealand's electronic reporting surveillance system collects ongoing/real time laboratory data. The Institute of Environmental Science and Research (ESR) operates the national notifiable disease surveillance database, EpiSurv, on behalf of the Ministry of Health. "EpiSurv collates notifiable disease information on a real-time basis from the Public Health Services (PHS) in New Zealand" [1]. Data is reported to the Medical Officer of Health at each public health unit (PHU) by laboratories and is entered via a secure web-based portal into the EpiSurv national database [2]. The ESR also hosts LabSurv on the same website as EpiSurv. LabSurv is a national messaging system for the Direct Laboratory Notification of notifiable disease and "supports the notification process by allowing laboratories to send high quality, standardised and secure health information in a timely manner. This information is displayed to Public Health Services (PHS) in New Zealand, aiding in the investigation of disease outbreaks" [3]. Both public and private laboratories across the country can notify any positive test results from any defined notifiable diseases to the web-based surveillance system. Real-time reports on EpiSurv can be accessed by PHUs, ESR and the Ministry of Health. [4]

[1] Institute of Environmental Science and Research (ESR). Public Health Surveillance. "EpiSurv".

<https://surv.esr.cri.nz/episurv/index.php>. Accessed 10 Aug 2020.

[2] Institute of Environmental Science and Research (ESR). Public Health Surveillance. "Notifiable Disease Surveillance".

[https://surv.esr.cri.nz/public\\_health\\_surveillance/notifiable\\_disease\\_surveillance.php#Q6](https://surv.esr.cri.nz/public_health_surveillance/notifiable_disease_surveillance.php#Q6). Accessed 10 Aug 2020.

[3] Institute of Environmental Science and Research (ESR). Public Health Surveillance. "LabSurv".

<https://surv.esr.cri.nz/LabSurv/index.php>. Accessed 10 Aug 2020.

[4] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand."

<https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

## 2.4 SURVEILLANCE DATA ACCESSIBILITY AND TRANSPARENCY

### 2.4.1 Coverage and use of electronic health records

#### 2.4.1a

**Are electronic health records commonly in use?**

Electronic health records are commonly in use = 2, Electronic health records are not commonly in use, but there is evidence they are used = 1, No evidence electronic health records are in use = 0

**Current Year Score: 1**

Electronic health records are not commonly in use, but there is evidence they are used in New Zealand. However, New Zealand's Ministry of Health has established "Digital Health 2020" to progress the core digital technologies presented in the New Zealand Health Strategy 2016. It guides the strategic digital investments that are expected to occur across the health and disability sector in the next five years, 2016-2020. It has five core components, one of which is establishing an "electronic health record for New Zealanders" [1, 2]. There is no record of EHRs in the World Health Organisation's eHealth Atlas 2015 [3]. The Digital Health Strategic Framework is still in its nascent stages. [6] The Ministry of Health publishes reports on its digital health initiatives. [4] The latest one available was published November 2019 and mentions that the National Digital Health Strategic Framework is still in its interim stages with further plans to align investments and implementations. [5] The Ministry of Health also reports that a little more than 1 million New Zealanders (1/5 of the population) utilize secure online portals to access their health information. No further information is available on the Ministry of Health or the Institute for Environmental Science and Research (ESR) website. [7, 9] The Joint External Evaluation published in 2019 for New Zealand

mentions a web-based national notifiable disease surveillance database but did not have any mention of digital/electronic health record systems. [8]

- [1] New Zealand Government. Ministry of Health. "Digital Health 2020". <https://www.health.govt.nz/our-work/ehealth/digital-health-2020>. Accessed 16 Aug 2020.
- [2] New Zealand Government. Ministry of Health. "Electronic Health Records". <https://www.health.govt.nz/our-work/ehealth/digital-health-2020/electronic-health-record>. Accessed 16 Aug 2020.
- [3] World Health Organisation. 2015. "Atlas of eHealth country profiles". [https://apps.who.int/iris/bitstream/handle/10665/204523/9789241565219\\_eng.pdf?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/204523/9789241565219_eng.pdf?sequence=1). Accessed 16 Aug 2020.
- [4] Ministry of Health. "Monthly reports on digital health initiatives". <https://www.health.govt.nz/our-work/digital-health/monthly-reports-digital-health-initiatives>. Accessed 16 Aug 2020.
- [5] Ministry of Health. November 2019. "Digital Health Portfolio - November 2019". [https://www.health.govt.nz/system/files/documents/pages/digital\\_health\\_portfolio\\_report\\_nov\\_2019-290120.pdf](https://www.health.govt.nz/system/files/documents/pages/digital_health_portfolio_report_nov_2019-290120.pdf). Accessed 16 Aug 2020.
- [6] Ministry of Health. "Digital Health Strategic Framework" <https://www.health.govt.nz/our-work/digital-health/digital-health-strategic-framework>. Accessed 16 Aug 2020.
- [7] Ministry of Health. "Patient Portals". <https://www.health.govt.nz/our-work/digital-health/other-digital-health-initiatives/patient-portals>. Accessed 16 Aug 2020.
- [8] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed Sept 4 2020.
- [9] Institute for Environmental Science and Research (ESR). <https://www.esr.cri.nz/>. Accessed 07 Sept 2020.

### 2.4.1b

**Does the national public health system have access to electronic health records of individuals in their country?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is publicly evidence that the New Zealand public health system has access to electronic health records of individuals in their country. The Ministry of Health publishes reports on its digital health initiatives. [1, 3] The latest one available was published November 2019 and mentions that the National Digital Health Strategic Framework is still in its interim stages with further plans to align investments and implementations. [2] The Ministry of Health also reports that a little more than 1 million New Zealanders (1/5 of the population) utilize secure online portals to access their health information. [4] According to a report by the Controller and Auditor-General published in 2017, the patient portals developed and run by private companies, contain personal health information of New Zealanders and governed under the Privacy Act 1993 and the Health Information Privacy Code 1994. [5] Anyone who receives healthcare in New Zealand receives a National Health Index number (NHI number) which contains the person's name (including alternative names such as maiden names), NHI number, address, date of birth, as well as pharmaceutical labels and discharge summaries. [5] The national and regional clinical databases (eg. Patient immunization records, patient information) are available to approved health providers. The Ministry of Health uses a "coded form of the NHI number, encrypts and use for its statistical databases. [6] The Privacy Act 1993 states that disclosure may be authorized to an agency in the special circumstance that the public interest of the breach outweighs the interference to the individual and/or "disclosure involves a clear benefit to the individual concerned that outweighs any interference with the privacy of the individual that could result from that collection or, as the case requires, that use or that disclosure". [7] Rule 11 of the Health Information Privacy Code 1994 states that health information held by a health agency can't be used for any other purpose unless it endangers a threat to "public health or public safety or the life or health of the individual concerned or another individual" and mandates the information to be disclosed "to avoid prejudice to the

maintenance of the law by any public sector agency, including the prevention, detection, investigation, prosecution, and punishment of offences." [8] Therefore, the New Zealand public health system has very limited access to the electronic health records unless it is authorized under the Privacy Act 1993 and the Health Information Privacy Code 1994. There is no further evidence on the Ministry of Health or the Institute of Environmental Science and Research public websites. [9,10]

[1] Ministry of Health. "Monthly reports on digital health initiatives". <https://www.health.govt.nz/our-work/digital-health/monthly-reports-digital-health-initiatives>. Accessed 16 Aug 2020.

[2] Ministry of Health. November 2019. "Digital Health Portfolio - November 2019". [https://www.health.govt.nz/system/files/documents/pages/digital\\_health\\_portfolio\\_report\\_nov\\_2019-290120.pdf](https://www.health.govt.nz/system/files/documents/pages/digital_health_portfolio_report_nov_2019-290120.pdf). Accessed 16 Aug 2020.

[3] Ministry of Health. "Digital Health Strategic Framework" <https://www.health.govt.nz/our-work/digital-health/digital-health-strategic-framework>. Accessed 16 Aug 2020.

[4] Ministry of Health. "Patient Portals". <https://www.health.govt.nz/our-work/digital-health/other-digital-health-initiatives/patient-portals>. Accessed 16 Aug 2020.

[5] Ministry of Health. "National Health Index overview". <https://www.health.govt.nz/our-work/health-identity/national-health-index/national-health-index-overview>. Accessed 16 Aug 2020.

[6] Ministry of Health. "National Health Index and Medical Warnings System statement of use" <https://www.health.govt.nz/our-work/health-identity/national-health-index/nhi-information-health-consumers/national-health-index-and-medical-warnings-system-statement-use>. Accessed 16 Aug 2020

[7] New Zealand Governmnet. 1993. "Privacy Act." <http://www.legislation.govt.nz/act/public/1993/0028/latest/DLM296639.html%20>. Accessed 7 Sept 2020.

[8] New Zealand Governmnet. 1994. "Health Information Privacy Code." <https://www.privacy.org.nz/the-privacy-act-and-codes/codes-of-practice/health-information-privacy-code-1994/rule-11/>. Accessed 7 Sept 2020.

[9] Ministry of Health. <https://www.health.govt.nz/>. Accessed 7 Sept 2020.

[10] Institute of Environmental Science and Research. <https://www.esr.cri.nz/>. Accessed 7 Sept 2020.

### 2.4.1c

#### Are there data standards to ensure data is comparable (e.g., ISO standards)?

Yes = 1 , No = 0

**Current Year Score: 1**

There are data standards to ensure data is comparable for New Zealand's health sector. The Health Information Standards Organization (HISO) supports the government of New Zealand in the nation's health data standardization programme. [1] The HISO 10029:2015 Health Information Security Framework provides standard for the New Zealand health and disability sector and is based on the ISO 27000 standards series as "the Ministry of Health has a copyright licence to use parts of this ISO publication". The website also states the Frameworks to be consistent with AS/NZS ISO/IEC 27001:2013. [2, 3] The standardization, National Health Index, is a unique identifier for every person under New Zealand's health and disability services. [4]

[1] Ministry of Health. "Health information standards". <https://www.health.govt.nz/our-work/digital-health/digital-health-sector-architecture-standards-and-governance/health-information-standards-0>. Accessed 17 Aug 2020.

[2] Ministry of Health. 2015. "HISO 10029:2015 Health Information Security Framework." <https://www.health.govt.nz/system/files/documents/publications/health-information-security-framework-dec2015.pdf>. Accessed 07 Sept 2020.

[3] Ministry of Health. 2015. "HISO 10029:2015 Health Information Security Framework." <https://www.health.govt.nz/publication/hiso-100292015-health-information-security-framework> Accessed 07 Sept 2020.

[4] Ministry of Health. "National Health Index." <https://www.health.govt.nz/our-work/health-identity/national-health-index>. Accessed 17 Aug 2020.

[5] Ministry of Health. "Health Information Standards." <https://www.health.govt.nz/our-work/digital-health/digital-health-sector-architecture-standards-and-governance/health-information-standards-0>. Accessed 16 Feb 2020.

## 2.4.2 Data integration between human, animal, and environmental health sectors

### 2.4.2a

**Is there evidence of established mechanisms at the relevant ministries responsible for animal, human, and wildlife surveillance to share data (e.g., through mosquito surveillance, brucellosis surveillance)?**

Yes = 1, No = 0

**Current Year Score: 0**

There is no evidence of an established mechanism at the relevant ministries responsible for animal, human and wildlife surveillance to share data. The Institute of Environmental Science and Environment under contract with the Ministry of Health (MoH) contributes to the national public health surveillance effort through a centralised Public Health Surveillance database [1]. The Ministry for Primary Industries' Biosecurity New Zealand controls surveillance for pests and diseases [2]. However, there is no evidence of an established mechanism for sharing surveillance between the two. There is no evidence of such a mechanism on the Ministry of Health website, the Ministry for the Environment nor the Environmental Protection Authority [3, 4, 5]. The Joint External Evaluation (JEE) published in 2019 for New Zealand specially states that the Ministry of Health and Ministry of Primary Industries "do not have structured approaches to information sharing and comparing their surveillance database information." They do not have established platforms for joint review of existing data/programmes as well. [6]

[1] The Institute of Environmental Science and Research. <https://surv.esr.cri.nz/index.php>. Accessed 10 Aug 2020

[2] New Zealand Government. Ministry of Primary Industries. Biosecurity New Zealand. "Biosecurity Surveillance Guide". <https://www.mpi.govt.nz/mpi-surveillance-guide/?url=/mpi-surveillance-guide#/>. Accessed 10 Aug 2020

[3] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 10 Aug 2020

[4] New Zealand Government. Ministry for the Environment. <http://www.mfe.govt.nz/>. Accessed 10 Aug 2020

[5] Environmental Protection Authority. <https://www.epa.govt.nz>. Accessed 10 Aug 2020.

[6] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

## 2.4.3 Transparency of surveillance data

### 2.4.3a

**Does the country make de-identified health surveillance data on infectious diseases publicly available via reports (or other format) on government websites (such as the Ministry of Health, Ministry of Agriculture, or similar)?**

Yes = 1, No = 0

**Current Year Score: 0**

Although New Zealand makes de-identified health surveillance data on disease outbreaks publicly available via reports on the Ministry of Health's Institute of Environmental Science and Research's (ESR) Public Health Surveillance website, there is no evidence that this is done at least on a weekly basis. The surveillance reports are analyses and interpretation of surveillance

data, primarily from notifiable diseases, influenza and sexually transmitted infections. ESR publishes an annual surveillance report and a number of additional reports on, including but not limited to, Tuberculosis, Meningococcal disease, Rotavirus infection and Zika virus infection. ESR published a total of 7 publications in 2019 between February, March, May, July and September. [1, 2]. There are also Monthly Surveillance Reports for notifiable diseases with the latest published for December 2020. [3,4] For the ongoing COVID-19 outbreak, New Zealand has a Dashboard by the Ministry of Health and ESR that is updated daily. [5]

[1] Institute of Environmental Science and Research (ESR). "Surveillance Reports".

<https://surv.esr.cri.nz/surveillance/surveillance.php>. Accessed 16 Aug 2020.

[2] Public Health Surveillance. "Publication Dates for Annual Reports and Statistics"

[https://surv.esr.cri.nz/surveillance/annual\\_publicationdates.php](https://surv.esr.cri.nz/surveillance/annual_publicationdates.php). Accessed 16 Aug 2020.

[3] Public Health Surveillance. "Monthly Surveillance Report." [https://surv.esr.cri.nz/surveillance/monthly\\_surveillance.php](https://surv.esr.cri.nz/surveillance/monthly_surveillance.php). Accessed 16 Feb 2020.

[4] Public Health Surveillance. "Monthly Notifiable Disease Surveillance Report- Dec 2020."

[https://surv.esr.cri.nz/surveillance/monthly\\_surveillance.php?we\\_objectID=5133](https://surv.esr.cri.nz/surveillance/monthly_surveillance.php?we_objectID=5133). Accessed 16 Feb 2020/

[5] ESR. "NZ COVID-19 Dashboard." <https://nzcoviddashboard.esr.cri.nz/#/>. Accessed 16 Aug 2020.

### 2.4.3b

**Does the country make de-identified COVID-19 surveillance data (including details such as daily case count, mortality rate, etc) available via daily reports (or other formats) on government websites (such as the Ministry of Health, or similar)?**

Yes = 1 , No = 0

**Current Year Score: 1**

New Zealand make de-identified COVID-19 surveillance data available on government websites. For the ongoing COVID-19 outbreak, New Zealand has a dashboard by Ministry of Health's Institute of Environmental Science and Research's (ESR) that is updated daily that includes details such as daily case count, mortality rate, incidence count by district, etc. [1]

[1] Institute of Environmental Science and Research (ESR). "NZ COVID-19 Dashboard."

<https://nzcoviddashboard.esr.cri.nz/#/>. Accessed 16 Aug 2020.

## 2.4.4 Ethical considerations during surveillance

### 2.4.4a

**Is there legislation and/or regulations that safeguard the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities?**

Yes = 1 , No = 0

**Current Year Score: 1**

There are laws that safeguard the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities. The Privacy Act 1993 outlines that "an agency (i.e. the Ministry of Health) that holds personal information that was obtained in connection with one purpose shall not use the information for any other purpose unless the agency believes, on reasonable grounds, that the use of the information for that other purpose is necessary to prevent or lessen a serious threat to (i) public health or public safety (ii) the life or health of the individual concerned or another individual" and "an agency that holds personal information shall not disclose the information to a person or body or agency unless the agency believes, on reasonable grounds, that the disclosure of the information is necessary to prevent or

lessen a serious threat to (i) public health or public safety (ii) the life or health of the individual concerned or another individual" [1].

[1] Parliamentary Counsel Office. New Zealand Legislation. December 2018 (May 1993). "Privacy Act 1993". <http://www.legislation.govt.nz/act/public/1993/0028/latest/whole.html#DLM296639>. Accessed 15 Aug 2020.

#### 2.4.4b

**Is there legislation and/or regulations safeguarding the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities, include mention of protections from cyber attacks (e.g., ransomware)?**

Yes = 1, No = 0

**Current Year Score: 0**

There is no evidence that the laws safeguarding the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities, include mention of protection from cyber attacks (e.g., ransomware). The Privacy Act 1993, the Ministry of Health website and the Public Health Surveillance website do not make mention of cyber attacks [1, 2, 3]. New Zealand's Intelligence and Security Act 2017 refers to cybersecurity but it merely contains provisions for "establishing intelligence and security agencies" [4]. The Joint External Evaluation (JEE) published in 2019 for New Zealand does not mention protection from cyber attacks either. [5]

[1] Parliamentary Counsel Office. New Zealand Legislation. December 2018 (May 1993).

<http://www.legislation.govt.nz/act/public/1993/0028/latest/whole.html#DLM296639>. Accessed 10 Aug 2020.

[2] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 10 Aug 2020.

[3] Institute of Environmental Science and Research (ESR). Public Health Surveillance. <https://surv.esr.cri.nz/index.php>. Accessed 10 Aug 2020.

[4] Parliamentary Counsel Office. New Zealand Legislation. March 2017.

[http://www.legislation.govt.nz/act/public/2017/0010/latest/DLM6920823.html?search=qs\\_act%40bill%40regulation%40deemedreg\\_Intelligence+and+Security+Act\\_resele\\_25\\_h&p=1&sr=1](http://www.legislation.govt.nz/act/public/2017/0010/latest/DLM6920823.html?search=qs_act%40bill%40regulation%40deemedreg_Intelligence+and+Security+Act_resele_25_h&p=1&sr=1). Accessed 10 Aug 2020.

[5] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand."

<https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

### 2.4.5 International data sharing

#### 2.4.5a

**Has the government made a commitment via public statements, legislation and/or a cooperative agreement to share surveillance data during a public health emergency with other countries in the region?**

Yes, commitments have been made to share data for more than one disease, Yes, commitments have been made to share data only for one disease = 1, No = 0

**Current Year Score: 0**

There is not enough evidence to confirm that New Zealand has made a commitment via public statements, legislation and/or cooperative agreement to share surveillance data during a public health emergency with other countries in the Pacific. There is no evidence of such a commitment in the National Health Emergency Plan, published 2015, or the New Zealand Influenza Pandemic Plan (2017) or on the Institute of Environmental Science and Research (ESR) Public Health Surveillance website or

the Ministry of Health website [1, 2, 3,4] New Zealand is not a partner of the Global Outbreak Alert and Response Network (GOARN) [5]. New Zealand is a member of the Communicable Diseases Network Australia (CDNA) and the Institute of Environmental Science and Research (ESR) is an allied member of the Pacific Public Health Surveillance Network but New Zealand has not made a public statement regarding the sharing of surveillance data during an emergency [6, 7]. New Zealand provides financial assistance to the Pacific Public Health Surveillance Network. It is unclear whether or not New Zealand made a commitment share surveillance data during a public health emergency to the network. [7] When the World Health Organization (WHO) declared coronavirus a PHEIC on 30 Jan 2020, New Zealand health officials worked together with WHO as per the International Health Regulations(2005) which requires countries to share information with WHO regarding disease outbreaks, information on the disease and its evolution. However, it is unclear whether it was just a report on the outbreak or surveillance data was shared. [8] According to the Joint External Evaluation (JEE) published in 2019 for New Zealand, the Ministry of Primary Industries and Ministry of Health databases are shared and available to the public along with any important outbreaks reported as required to WHO and World Organization for Animal Health. It has no mention of New Zealand's commitment to share data with other countries in the Pacific. [9]

[1] New Zealand Government. Ministry of Health. 2015. "National Health Emergency Plan". <https://www.health.govt.nz/our-work/emergency-management/national-health-emergency-plan>. Accessed 07 Sept 2020.

[2] Ministry of Health. 2017. "New Zealand Influenza Pandemic Plan." <https://www.health.govt.nz/system/files/documents/publications/influenza-pandemic-plan-framework-action-2nd-edn-aug17.pdf>. Accessed 07 Sept 2020.

[3] Institute of Environmental Science and Research (ESR). Public Health Surveillance. <https://surv.esr.cri.nz/>. Accessed 15 Aug 2020.

[4] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 15 Aug 2020.

[5] World Health Organization (WHO). "Partners: Global Outbreak Alert and Response Network (GOARN)". <http://www.who.int/csr/disease/ebola/partners/en/>. Accessed 15 Aug 2020.

[6] New Zealand Government. Ministry of Health. "About Communicable Disease Network Australia". <http://www.health.gov.au/internet/main/publishing.nsf/content/cda-cdna-cdna.htm>. Accessed 15 Aug 2020.

[7] Pacific Public Health Surveillance Network. "Allied Members". <http://pfs.spc.int/PPHSN/Structure/AlliedMembers.htm>. Accessed 07 Sept 2020

[8] World Health Organization. 15 July 2020. "New Zealand takes early and hard action to tackle COVID-19". <https://www.who.int/westernpacific/news/feature-stories/detail/new-zealand-takes-early-and-hard-action-to-tackle-covid-19>. Accessed 15 Aug 2020.

[9] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 07 Sept 2020

## 2.5 CASE-BASED INVESTIGATION

### 2.5.1 Case investigation and contact tracing

#### 2.5.1a

**Is there a national system in place to provide support at the sub-national level (e.g. training, metrics standardization and/or financial resources) to conduct contact tracing in the event of a public health emergency?**

Yes, there is evidence that the national government supports sub-national systems to prepare for future public health emergencies = 2, Yes, there is evidence that the national government supports sub-national systems, but only in response to active public health emergencies = 1, No = 0

**Current Year Score: 2**

There is a national system in place to provide support at the sub-national level (e.g. training, metrics standardization and/or financial resources) to conduct contact tracing in the event of a public health emergency as well as to prepare for future public health emergencies. The New Zealand Influenza Pandemic Plan from 2017 lists utilizing contract-tracing information management collected from World Health Organization passenger locator forms by the Ministry of Health, Public Health Units (PHU) and border agencies under the Customs and Excise Act 1996, as possible border management initiatives. There are also guidelines by the Public Health Units from the Ministry of Health to manage clusters in a pandemic as well as "border control" phases. It explicitly lists all the resources that will help the District Health Boards (DHBs) through consultation with to help with control activities such as the PHUs, hospitals, police, local government, education, veterinarians and the biosecurity sector as well as encouraging voluntary home quarantines. [1] PHUs are responsible for case and contact management (contact tracing) during outbreaks of communicable diseases like measles and mumps as well as routine contact tracing for tuberculosis. [2] During an emergency response, the related expenses will be covered by the DHBs according to the Operation Policy Framework, as mentioned in the National Health Emergency Plan (2015). The plan also mandates cooperation with other PHUs and coordination with DHBs and the Ministry of Health for "emergency planning capability-building and exercises". In an emergency response, "the extent of additional resources and enhancements required will vary according to the existing level of surveillance infrastructure". [3] For the ongoing COVID-19 pandemic, the Ministry of Health has rolled out the mobile application "NZ COVID Tracer". Businesses and services under Alert Levels 2 and 3 are mandated to display the NZ COVID Tracer Quick Response code where visitors are required to register so the users have a record of places they have visited in the application. [4]

[1] New Zealand Government. Ministry of Health. August 2017. "New Zealand Influenza Pandemic Plan: A framework for action". <https://www.health.govt.nz/publication/new-zealand-influenza-pandemic-plan-framework-action> Accessed 10 Aug 2020.

[2] Verrall, Ayesha. April 2020. "Rapid Audit of Contact Tracing for Covid-19 in New Zealand". [https://www.health.govt.nz/system/files/documents/publications/contact\\_tracing\\_report\\_verrall.pdf](https://www.health.govt.nz/system/files/documents/publications/contact_tracing_report_verrall.pdf). Accessed 07 Sept 2020.

[3] Ministry of Health. 15 Oct 2015. "National Health Emergency Plan - A framework for the health and disability sector". <https://www.health.govt.nz/publication/national-health-emergency-plan-framework-health-and-disability-sector>. Accessed 07 Sept 2020.

[4] Ministry of Health. 30 July 2020. "How NZ COVID Tracer works". <https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-novel-coronavirus-resources-and-tools/nz-covid-tracer-app/how-nz-covid-tracer-works>. Accessed 20 Aug 2020.

**2.5.1b**

**Does the country provide wraparound services to enable infected people and their contacts to self-isolate or quarantine as recommended, particularly economic support (paycheck, job security) and medical attention?**

Yes, both economic support and medical attention are provided = 2, Yes, but only economic support or medical attention is provided = 1, No = 0

**Current Year Score: 0**

There is insufficient publicly available evidence to claim that New Zealand provides wraparound services to enable cases and suspected cases to self-isolate as recommended, particularly economic support (paycheck, job security) and medical attention. For the ongoing COVID-19 pandemic, upon isolating in a managed isolation facility, health professionals are available for medical assessments as well as COVID-19 testing. Prescriptions needs are also provided as well. [1] However, there are charges for managed isolation if certain criteria are not met (eg. New Zealand citizen or resident that left New

Zealand before August 11, 2020 and is entering the country for less than 90 days) . Even if there is medical attention for those self -isolation , it is only for special cases and not applicable to the general public. [2] The COVID-19 self-isolation guide also did not mention economic support and medical attention apart from the general “If you are unwell, you can leave home to access health services, but you need to tell the service in advance that you are in self-isolation”. [11] There is a general \$107.6 million fund to provide housing with \$31 million side aside for wrap-around services for people's needs. These includes providing homes for homeless people so they can self-isolate. However, these services are not specific to cases and suspected cases. There is no mention of what the wrap-around services in addition to motels will include. [3,4] Additional funding of \$17 million was put towards supporting health and disabilities services as well as health message dissemination in Pacific languages. [10] Other general financial supports by the New Zealand government includes, rent freezes as well as wage subsidies and small loans from banks. [5] There is no further evidence on the New Zealand Government Work and Income, Ministry of Health, Ministry of Primary Industries public websites or the New Zealand Influenza Pandemic Plan (2017). [6, 7, 8, 9]

- [1] The New Zealand Government. Managed Isolation and Quarantine. "Entering isolation." <https://www.miq.govt.nz/being-in-managed-isolation/entering-isolation/>. Accessed 21 Aug 2020.
- [2] The New Zealand Government. Managed Isolation and Quarantine. "Charges for managed isolation". <https://www.miq.govt.nz/being-in-managed-isolation/charges-for-managed-isolation/>. Accessed 21 Aug 2020.
- [3] The Spinoff. 26 April 2020. "Covid-19 live updates, April 26: Nine new cases in NZ, McDonalds plans under fire". <https://thespinoff.co.nz/society/26-04-2020/covid-19-live-updates-april-26-who-says-immunity-passports-a-bad-idea/>. Accessed 21 Aug 2020.
- [4] 1 News. 26 April 2020. "Government pledges \$107 million to house rough sleepers during and after pandemic". <https://www.tvnz.co.nz/one-news/new-zealand/government-pledges-107-million-house-rough-sleepers-during-and-after-pandemic>. Accessed 21 Aug 2020.
- [5] The Royal Australian & New Zealand College of Psychiatrists. April 2020. "Financial support during COVID-19 (New Zealand)". [https://www.ranzcp.org/news-policy/covid-19-information-hub/practice-support-during-covid-19/financial-support-during-covid-19-\(new-zealand\)](https://www.ranzcp.org/news-policy/covid-19-information-hub/practice-support-during-covid-19/financial-support-during-covid-19-(new-zealand)). Accessed 21 Aug 2020.
- [6] The New Zealand Government. Work and INcome. <https://workandincome.govt.nz/covid-19/index.html>. Accessed 21 Aug 2020.
- [7] Ministry of Health. <https://www.health.govt.nz/search/results/covid%20case>. Accessed 21 Aug 2020.
- [8] Ministry of Primary Industries. <https://www.mpi.govt.nz/mpisearch#stq=covid&stp=1>. Accessed 21 Aug 2020.
- [9] New Zealand Government. Ministry of Health. August 2017. "New Zealand Influenza Pandemic Plan: A framework for action". <https://www.health.govt.nz/publication/new-zealand-influenza-pandemic-plan-framework-action> Accessed 10 Aug 2020.
- [10] Radio New Zealand. 26 Aug 2020. "Covid-19: Funding boost to support Pacific communities". <https://www.rnz.co.nz/news/national/424492/covid-19-funding-boost-to-support-pacific-communities>. Accessed 07 Sept 2020.
- [11] Ministry of Health. 23 August 2020. “COVID-19: Self-isolation.” <https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-health-advice-general-public/covid-19-self-isolation-close-contacts-and-travellers#unwell-self-isolating>. Accessed 16 Feb 2020.

### 2.5.1c

**Does the country make de-identified data on contact tracing efforts for COVID-19 (including the percentage of new cases from identified contacts) available via daily reports (or other format) on government websites (such as the Ministry of Health, or similar)?**

Yes = 1 , No = 0

**Current Year Score: 1**

New Zealand makes de-identified data on contact tracing efforts for COVID-19 (including the percentage of new cases from identified contacts) available via daily reports (on the Ministry of Health, Institute of Environmental Science and Research). The New Zealand COVID-19 Dashboard provides data that is updated at 9:00am everyday listing the known sources for confirmed cases. They are categorized into: imported cases; imported-related case; locally acquired case, epidemiologically linked; locally acquired case, unknown source. Visitors can also download data on the number of incidences in a particular region. [1]

[1] Ministry of Health and Institute of Environmental Science and Research. "NZ COVID-19 Dashboard". <https://nzcoviddashboard.esr.cri.nz/#/>. Accessed 21 Aug 2020.

## 2.5.2 Point of entry management

### 2.5.2a

**Is there a joint plan or cooperative agreement between the public health system and border control authorities to identify suspected and potential cases in international travelers and trace and quarantine their contacts in the event of a public health emergency?**

Yes, plan(s)/agreement(s) are in place to prepare for future public health emergencies = 2, Yes, but plan(s)/agreement(s) are in place only in response to active public health emergencies = 1, No = 0

**Current Year Score: 2**

There is a joint plan between the public health system and border control authorities to identify suspected and potential cases in international travelers and trace and quarantine their contacts in the event of a public health emergency as well as for future public health emergencies. The New Zealand Influenza Pandemic Plan, published 2017, lists utilizing contact-tracing information management collected from World Health Organization passenger locator forms by the Ministry of Health, Public Health Units (PHUs) and border agencies under the Customs and Excise Act 1996, as possible border management initiatives. There are also guidelines by the Public Health Units from the Ministry of Health to manage clusters in a pandemic as well as "border control" phases. It explicitly lists central government agencies and their respective roles and responsibilities under Part A, Border Work Stream section. There is additional Border Management section triggered upon verification of human-to-human transmissions that includes provides additional actions as well as assigned responsibilities for border management in emergencies. For example, the PHUs are responsible to "Establish public health presence at points of entry and implement processes for referral, assessment and screening of travellers" where Airlines and New Zealand Customs Service are required to pass around the New Zealand mandatory form or the World Health Organization passenger locator form for contact tracing efforts. [1] For the ongoing COVID-19 pandemic, the Ministry of Health has rolled out the mobile application "NZ COVID Tracer". Businesses and services under Alert Levels 2 and 3 are mandated to display the NZ COVID Tracer Quick Response code where visitors are required to register so the users have a record of places they have visited in the application. [2] The National Health Emergency Plan published in 2015 provides an emergency response management framework covering (but not limited to) animal and plant pests and diseases, infectious human pandemics and hazardous substance incidents for the health and disability sector. The plan mandates that public health units work with key stakeholders such as Border Working Group, airlines and airport authorities and work according to the International Health Regulations 2005 to manage symptomatic and exposed travelers for measures such as contact tracing, isolation, quarantine. [3] For COVID-19, all returning New Zealanders into the country (foreigners are barred into the country) have to go under managed isolation or quarantine for 14 days and return a negative test before being released into the community. [4]

- [1] New Zealand Government. Ministry of Health. August 2017. "New Zealand Influenza Pandemic Plan: A framework for action". <https://www.health.govt.nz/publication/new-zealand-influenza-pandemic-plan-framework-action> Accessed 10 Aug 2020.
- [2] Ministry of Health. 30 July 2020. "How NZ COVID Tracer works". <https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-novel-coronavirus-resources-and-tools/nz-covid-tracer-app/how-nz-covid-tracer-works>. Accessed 20 Aug 2020.
- [3] Ministry of Health. 15 Oct 2015. "National Health Emergency Plan - A framework for the health and disability sector". <https://www.health.govt.nz/publication/national-health-emergency-plan-framework-health-and-disability-sector>. Accessed 07 Sept 2020
- [4] Ministry of Health. 5 September 2020 (last updated). "COVID-19 Border Controls." <https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-current-situation/covid-19-border-controls>. Accessed 07 Sept 2020.

## 2.6 EPIDEMIOLOGY WORKFORCE

### 2.6.1 Applied epidemiology training program, such as the field epidemiology training program, for public health professionals and veterinarians (e.g., Field Epidemiology Training Program [FETP] and Field Epidemiology Training Program for Veterinarians [FETPV])

#### 2.6.1a

Does the country meet one of the following criteria?

- Applied epidemiology training program (such as FETP) is available in country
- Resources are provided by the government to send citizens to another country to participate in applied epidemiology training programs (such as FETP)

Needs to meet at least one of the criteria to be scored a 1 on this measure. , Yes for both = 1 , Yes for one = 1 , No for both = 0

**Current Year Score: 1**

New Zealand has an applied epidemiology training program available in country but there is no public evidence of resources provided by the government to send citizens to another country to participate in applied epidemiology training programs. New Zealand has an "Epidemiological skills development programme", instructed by the Institute of Environmental Science and Research (ESR), which "provides training and development of personnel to enhance New Zealand's ability to investigate and respond to infectious disease events" [1]. The course includes Effective Case Investigation, an Outbreak Investigation Refresher, a module on New Zealand's EpiSurv (national notifiable disease surveillance database), Outbreak Investigation and Control, Introduction to EpiInfo (statistical software for epidemiology) , Laboratory Investigation, Advanced Outbreak Investigation and Teaching Methods [1]. However, New Zealand does not have an official FETP programme [1, 2]. According to the Joint External Evaluation (JEE) for New Zealand published in 2019, New Zealand is the only country in Australasia that has a University offering veterinary epidemiology programme at Massey University. [2] Neither New Zealand or a University from New Zealand is a member of Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). [3] There is not enough publicly available evidence on the Ministry of Health website, Ministry for Primary Industries website and the Institute of Environmental Science and Research (ESR) to indicate that the government provides resources to send citizens to another country to participate [4, 5, 6].

[1] Institute of Environmental Science and Research (ESR). "Epidemiological skills development programme". <https://www.esr.cri.nz/our-services/consultancy/epidemiological-skills-development-programme/>. Accessed 10 Aug 2020.

[2] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand."

<https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020

[3] Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). "Partners." <https://www.tephinet.org/about/partners>. Accessed 6 Sept 2020.

[4] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 4 Sept 2020.

[5] New Zealand Government. Ministry of Primary Industries. <https://www.mpi.govt.nz/>. Accessed 10 Aug 2020.

[6] Institute of Environmental Science and Research (ESR). <https://www.esr.cri.nz/>. Accessed 6 Sept 2020.

### 2.6.1b

**Are the available field epidemiology training programs explicitly inclusive of animal health professionals or is there a specific animal health field epidemiology training program offered (such as FETPV)?**

Yes = 1 , No = 0

**Current Year Score: 1**

Although there is no field epidemiology training programs explicitly inclusive of animal health professionals, there is publicly available evidence that specific animal health field epidemiology training programs are offered. According to the Joint External Evaluation (JEE) for New Zealand published in 2019, New Zealand is the only country in Australasia that has a University offering veterinary epidemiology programme (Massey University). [1] The website states the EpiCenter as an World Organization for Animal Health Collaborating Center and the largest veterinary epidemiology training and research center. They have held workshops such as "Analysis of Time-to-Event Data for Medical and Veterinary Epidemiologists" in 2014 as well as offer undergraduate/postgraduate education as well as training. [2, 3] New Zealand is a member of the Pacific Public Health Surveillance Network. [4] Even though New Zealand does not have an official FETP program, New Zealand has an "Epidemiological skills development programme", instructed by the Institute of Environmental Science and Research (ESR), which "provides training and development of personnel to enhance New Zealand's ability to investigate and respond to infectious disease events". The course includes Effective Case Investigation, an Outbreak Investigation Refresher, a module on New Zealand's EpiSurv, Outbreak Investigation and Control, Introduction to EpiInfo, Laboratory Investigation, Advanced Outbreak Investigation and Teaching Methods [1, 5].

[1] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

[2] Massey University. "The EpiCenter". [https://www.massey.ac.nz/massey/learning/departments/centres-research/epicentre/epicentre\\_home.cfm](https://www.massey.ac.nz/massey/learning/departments/centres-research/epicentre/epicentre_home.cfm). Accessed 10 Aug 2020.

[3] Massey University. "Past Workshops." <https://www.massey.ac.nz/massey/learning/departments/centres-research/epicentre/short-courses/past-workshops-courses.cfm>. Accessed 10 Aug 2020.

[4] Pacific Public Health Surveillance Network. <https://www.pphsn.net/index.htm>. Accessed 10 Aug 2020

[5] Institute of Environmental Science and Research (ESR). "Epidemiological skills development programme". <https://www.esr.cri.nz/our-services/consultancy/epidemiological-skills-development-programme/>. Accessed 10 Aug 2020

## 2.6.2 Epidemiology workforce capacity

### 2.6.2a

**Is there public evidence that the country has at least 1 trained field epidemiologist per 200,000 people?**

Yes = 1 , No = 0

Current Year Score: 1

2020

Completed JEE assessments; Economist Impact analyst qualitative assessment based on official national sources, which vary by country

## Category 3: Rapid response to and mitigation of the spread of an epidemic

### 3.1 EMERGENCY PREPAREDNESS AND RESPONSE PLANNING

#### 3.1.1 National public health emergency preparedness and response plan

##### 3.1.1a

**Does the country have an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential?**

Evidence that there is a plan in place, and the plan is publicly available = 2, Evidence that the plan is in place, but the plan is not publicly available OR, Disease-specific plans are in place, but there is no evidence of an overarching plan = 1, No evidence that such a plan or plans are in place = 0

Current Year Score: 2

New Zealand has an overarching public health emergency response plan which addresses planning for multiple communicable diseases with pandemic potential. The Ministry of Health has a "National Health Emergency Plan", published in 2015. Among the types of hazards, diseases with pandemic potential are mentioned [1]. Specifically, the National Health Emergency Plan: "1) creates the strategic framework to guide the health and disability sector in its approach to planning for, responding to and recovering from health-related risks and consequences of significant hazards in New Zealand; 2) clarifies how the health and disability sector fits within the context of New Zealand emergency management; 3) specifies roles and responsibilities required to be provided for and carried out by health and disability agencies and providers in emergency planning, risk reduction, readiness, response and recovery; 4) supports government agencies and other organisations with contextual information on the health and disability sector's emergency management strategic framework and response structure" [1]. The plan articulates an "all-hazards, all-risks, multi-agency, integrated and community-focused approach, in accordance with the National Civil Defence Emergency Management Strategy (MCDEM 2008) and World Health Organization (WHO) strategies for risk reduction and emergency preparedness" [1]. The plan only mentions specific diseases (anthrax, plague, cholera, small-pox, yellow fever and influenza) in relation to cremation and burial regulations [1]. New Zealand also published a National Health Emergency Plan: Infectious Diseases in 2004 but the webpage that hosts the plan on the Ministry of Health website has not been updated since 2011 [2]. The National Health Emergency Plan: Infectious Diseases (2004) specifically mentions emerging infectious diseases (EIDs) such as SARS, Ebola, and Influenza [2].

[1] New Zealand Government. Ministry of Health. October 2015. "National Health Emergency Plan".

<https://www.health.govt.nz/publication/national-health-emergency-plan-framework-health-and-disability-sector>. Accessed 15 Aug 2020.

[2] New Zealand Government. Ministry of Health. July 2004. "National Health Emergency Plan: Infectious Diseases".

<https://www.health.govt.nz/publication/national-health-emergency-plan-infectious-diseases>. Accessed 15 Aug 2020.

### 3.1.1b

**If an overarching plan is in place, has it been updated in the last 3 years?**

Yes = 1 , No /no plan in place= 0

**Current Year Score: 0**

In New Zealand, there is no evidence to demonstrate that the Ministry of Health's "National Health Emergency Plan" has been updated in the last three years. The plan was published in October 2015 and has not been updated since [1]. The webpage that hosts the plans on the Ministry of Health website has not been updated since 2011 [2].

[1] New Zealand Government. Ministry of Health. October 2015. "National Health Emergency Plan".

<https://www.health.govt.nz/publication/national-health-emergency-plan-framework-health-and-disability-sector>. Accessed 17 Aug 2020.

[2] New Zealand Government. Ministry of Health. 09 September 2011. "National Health Emergency Plan".

<https://www.health.govt.nz/our-work/emergency-management/national-health-emergency-plan>. Accessed 17 Aug 2020.

### 3.1.1c

**If an overarching plan is in place, does it include considerations for pediatric and/or other vulnerable populations?**

Yes = 1 , No /no plan in place= 0

**Current Year Score: 1**

There is an overarching plan that includes considerations for pediatric and/or other vulnerable population. There is a framework for the health and disability sector that is a subplan from the National Health Emergency Plan, published in 2015, that covers 17 types of hazards including infectious human disease pandemics, animal and plant pests and disease and hazardous substance incidents. The plan takes situations where dependents -young, elderly or disabled- are isolated/orphaned from their principle caregiver as well as the communication needs of hard-to-reach communities. One of the plan's main guiding principle ensures that there would be special provisions made "for vulnerable people and hard-to-reach communities" so that existing inequalities aren't exacerbated or the emergency response does not create "new inequalities or vulnerabilities." The plan recognizes that some groups may have limited access or may not be able to take full advantage of emergency preparedness, response and/or recovery resources. Strategies to mitigate the risk involved includes developing policies and plans in collaboration with local people so that "emergency health and welfare services address the specific needs of individuals, families, whānau and communities where practicable". [1] There are is also the 'Guide for DHB Emergency Management Staff: Infant feeding in an emergency for babies aged 0-12 months' (published 2015) for addressing infant feeding needs with the local Civil Defence and Emergency Management (CDEM) Groups or the National Controller responsible for procurement and supply essential feeding supplies. The guideline also mandates the planning includes consultation with "relevant DHB nutrition, dietetic, lactation and/or paediatrics staff." The plan even includes sterilization equipment. [2] The framework for Psychosocial Support in Emergencies published 2016 defines vulnerable population that includes "children and adolescents, older adults, response workers, people with disabilities, disadvantaged and marginalised groups, people with pre-existing mental health disorders and those affected by secondary stressors." The framework then lists several coordination measures between Ministry of Health and district health boards (DHBs) as well as training personnel. It also mentions targeted psychosocial support measures for the vulnerable population such as outreach, monitoring behaviors (substance misuse, self-harm). [3]

[1] Ministry of Health. 15 Oct 2015. "https://www.health.govt.nz/publication/national-health-emergency-plan-framework-health-and-disability-sector". Accessed 17 Aug 2020.

[2]

[2] Ministry of Health. November 2015. "Guide for DHB Emergency Management Staff: Infant feeding in an emergency for babies aged 0-12 months". https://www.health.govt.nz/system/files/documents/publications/infant-feeding-in-an-emergency-guide-for-dhbs-dec15.pdf. Accessed 20 Aug 2020.

[3] Ministry of Health. 2016. "Framework for Psychosocial Support in Emergencies."

https://www.health.govt.nz/system/files/documents/publications/framework-psychosocial-support-emergencies-dec16-v2.pdf. Accessed 20 Aug 2020.

### 3.1.1d

**Does the country have a publicly available plan in place specifically for pandemic influenza preparedness that has been updated since 2009?**

Yes = 1 , No = 0

**Current Year Score: 1**

2020

WHO Strategic Partnership for IHR and Health Security (SPH)

## 3.1.2 Private sector involvement in response planning

### 3.1.2a

**Does the country have a specific mechanism(s) for engaging with the private sector to assist with outbreak emergency preparedness and response?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence to demonstrate that New Zealand has a specific mechanism for engaging with the private sector to assist with outbreak emergency preparedness and response. The Ministry of Health's National Health Emergency Plan, published in 2015, outlines the responsibilities of "community and private providers" during a public health emergency. For example, it outlines that the role of community and private providers in readiness and reduction is to "a. Ensure the provision of continuity of care for existing patients, the management of increased demand for services, including the provision of surge capacity, and assistance with the recovery of services, including business continuity management. b. Prepare and maintain incident and emergency management plans that are integrated across the community-care sector and are aligned with the plans of the DHB, other emergency services and the regional group plan and with public health planning and responses. c. Be represented on committees of DHB regional groups and CDEM Groups as required. d. Contribute to emergency planning capability-building and exercises in conjunction with DHBs and the Ministry of Health, as required" [1]. The Ministry of Civil Defence & Emergency Management's Business Plan 2016-2020, published in October 2016, outlines that the Ministry is "increasing its links with the private sector and engaging them in matters of risk and resilience" [2]. According to the plan, "the Canterbury experience (referring to the earthquake in 2011) has reinforced how important it is for businesses to also be prepared for emergencies and to participate during response and recovery... The Ministry will explore how we can work more closely with the private sector and business communities in the 2016/17 year and beyond" [2]. According to the Joint External Evaluation (JEE) published in 2019 for New Zealand, there are "processes and procedures" in place through contracts with private industries "across all product lines" executed by Medsafe and Pharmaceutical Management Agency

(PHARMAC). Regarding preparedness, public and private hospitals all have infection, prevention and control (IPC) committees as per the New Zealand Infection Prevention and Control Standard 8134.3.2008. The National Biosecurity Capability Network also ensures that private veterinarians are able to assist with responding to emergency animal disease outbreaks. Private laboratories also report positive test results of notifiable diseases through a centralized, web-based surveillance database. [4]

[1] New Zealand Government. Ministry of Health. October 2015. "National Health Emergency Plan".

<https://www.health.govt.nz/publication/national-health-emergency-plan-framework-health-and-disability-sector>. Accessed 10 Aug 2020.

[2] New Zealand Government. Ministry of Civil Defence & Emergency Management. October 2016. "Business Plan 2016-

2020". <https://www.civildefence.govt.nz/assets/Uploads/publications/MCDEM-Business-Plan-2016-2020-v2.pdf>. Accessed 10 Aug 2020.

[3] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand."

<https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

### 3.1.3 Non-pharmaceutical interventions planning

#### 3.1.3a

**Does the country have a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic?**

Yes, a policy, plan and/or guidelines are in place for more than one disease = 2, Yes, but the policy, plan and/or guidelines exist only for one disease = 1, No = 0

**Current Year Score: 1**

New Zealand has a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic for more than one disease. The New Zealand Influenza Pandemic Plan (NZIPAP), published 2017, specifies the "Stamp It Out" triggered when a novel influenza/pandemic virus is detected in New Zealand with key decisions that include "close educational facilities in affected areas, as appropriate; restrict regional public gatherings and venues as appropriate and isolate the New Zealand areas affected, if possible". The Ministry of Health leads Public Health Units, District Health Boards and in addition to other government agencies for "closure of the education sector, social distancing, advice on staying home, focusing on hygiene, reduction or restriction of travel, restrictions on public gatherings and venues, and voluntary quarantine of contacts." The document explicitly states that "The NZIPAP has been designed to ensure it can be readily adapted for mild or severe pandemics." A pandemic is defined as "an epidemic that becomes very widespread and affects a whole region, a continent or the world". [1]

[1] New Zealand Government. Ministry of Health. August 2017. "New Zealand Influenza Pandemic Plan: A framework for action". <https://www.health.govt.nz/publication/new-zealand-influenza-pandemic-plan-framework-action> Accessed 17 Feb 2020.

## 3.2 EXERCISING RESPONSE PLANS

### 3.2.1 Activating response plans

#### 3.2.1a

**Does the country meet one of the following criteria?**

- Is there evidence that the country has activated their national emergency response plan for an infectious disease outbreak

in the past year?

- Is there evidence that the country has completed a national-level biological threat-focused exercise (either with WHO or separately) in the past year?

Needs to meet at least one of the criteria to be scored a 1 on this measure. , Yes for both = 1 , Yes for one = 1 , No for both = 0

**Current Year Score: 1**

There is evidence that New Zealand has activated their national emergency response plan for an infectious disease outbreak in the past year. There is also evidence that New Zealand completed a national-level biological threat-focused exercise (either with WHO or separately) in the past year. New Zealand activated their national emergency response plan for the COVID-19 pandemic response. New Zealand introduced disease prevention measures just three days after the World Health Organization declared coronavirus a public health emergency of international concern. [1] The COVID-19 Health and Disability System Response Plan established a framework to prepare for and manage the national response to the outbreak in New Zealand. This Plan was derived from the framework provided by the New Zealand Influenza Pandemic Plan (2017). [2] The Department of the Prime Minister and Cabinet (DPMC) publishes some of the exercises conducted in National Exercise Programme schedule that includes biosecurity. In the published schedule of the National Civil Defense Emergency Management Exercise Programme 2018-19, EXERCISE Mataara on biosecurity was carried out by the Ministry of Primary Industries under the National Security System National Exercise Programme. [3, 4]

[1] World Health Organization. 15 July 2020. "New Zealand takes early and hard action to tackle COVID-19". <https://www.who.int/westernpacific/news/feature-stories/detail/new-zealand-takes-early-and-hard-action-to-tackle-covid-19>. Accessed 21 Aug 2020.

[2] New Zealand Ministry of Health. 15 April 2020. "COVID-19 Health and Disability System Response Plan." [<https://www.health.govt.nz/publication/covid-19-health-and-disability-system-response-plan>] Accessed 1 April 2021.

[3] Department of the Prime Minister and Cabinet. "National Exercise Programme". <https://dpmc.govt.nz/our-programmes/national-security-and-intelligence/national-exercise-programme>. Accessed 13 Aug 2020.

[4] National Emergency Management Agency. "National CDEM Exercise Programme 2018-19". <https://www.civildefence.govt.nz/cdem-sector/exercises/cdem-exercise-calendar/national-cdem-exercise-programme-2018-19/>. Accessed 20 Aug 2020.

### 3.2.1b

Is there evidence that the country in the past year has identified a list of gaps and best practices in response (either through an infectious disease response or a biological-threat focused exercise) and developed a plan to improve response capabilities?

Yes, the country has developed and published a plan to improve response capacity = 2 , Yes, the country has developed a plan to improve response capacity, but has not published the plan = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence that New Zealand, in the past year has identified a list of gaps and best practices in response (either through an infectious disease response or a biological-threat focused exercise) and developed a plan to improve response capabilities. Between Oct 2017 to May 2018, the Ministry of Health led Exercise Pomare, an all-of-government national pandemic response exercise with an after-action report published in November 2018. There is no evidence of a planned Exercise Pomare for 2019/2020 listed. [1,2]. The Department of the Prime Minister and Cabinet (DPMC) publishes some of the exercises conducted in National Exercise Programme schedule that includes biosecurity. In the published schedule of the National Civil Defense Emergency Management Exercise Programme 2018-19, EXERCISE Mataara on biosecurity was carried out by the Ministry of Primary Industries under the National Security System National Exercise

Programme. [3, 4] However, an after-action review is not published on the Ministry of Health nor DPMC website. [5, 6] There is no further biosecurity focused nor infectious disease response exercises planned on the National Emergency Management Agency's exercise calendar as well. [7] The World Health Organization has no after action reviews published for New Zealand nor have simulation exercises scheduled for New Zealand. [8,9]

- [1] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.
- [2] Ministry of Health. November 2018. "Exercise Pomare: Post Exercise Report". <https://www.health.govt.nz/publication/exercise-pomare-post-exercise-report#:~:text=Exercise%20POMARE%20was%20an%20all,and%20after%20a%20pandemic%20response>. Accessed 20 Aug 2020.
- [3] Department of the Prime Minister and Cabinet. "National Exercise Programme". <https://dpmc.govt.nz/our-programmes/national-security-and-intelligence/national-exercise-programme>. Accessed 13 Aug 2020.
- [4] National Emergency Management Agency. "National CDEM Exercise Programme 2018-19". <https://www.civildefence.govt.nz/cdem-sector/exercises/cdem-exercise-calendar/national-cdem-exercise-programme-2018-19/>. Accessed 20 Aug 2020.
- [5] Ministry of Health. <https://www.health.govt.nz/search/results/mataara>. Accessed 20 Aug 2020.
- [6] Department of the Prime Minister and Cabinet. <https://dpmc.govt.nz/our-programmes/national-security-and-intelligence/national-exercise-programme>. Accessed 20 Aug 2020.
- [7] National Emergency Management Agency. "CDEM exercise calendar". <https://www.civildefence.govt.nz/cdem-sector/exercises/cdem-exercise-calendar/>. Accessed 20 Aug 2020.
- [8] World Health Organization. "After Action Review." <https://extranet.who.int/sph/after-action-review>. Accessed 20 Aug 2020.
- [9] World Health Organization. "Simulation Exercise." <https://extranet.who.int/sph/simulation-exercise>. Accessed 20 Aug 2020.

## 3.2.2 Private sector engagement in exercises

### 3.2.2a

**Is there evidence that the country in the past year has undergone a national-level biological threat-focused exercise that has included private sector representatives?**

Yes = 1, No = 0

**Current Year Score: 0**

There is no publicly available evidence that New Zealand, in the past year, has undergone a national-level biological threat-focused exercise that has included private sector representatives. Between Oct 2017 to May 2018, the Ministry of Health led Exercise Pomare, an all-of-government national pandemic response exercise with an after-action report published in November 2018. There is no mention of private sector representatives in the post exercise report [1,2]. The Department of the Prime Minister and Cabinet (DPMC) publishes some of the exercises conducted in National Exercise Programme schedule that includes biosecurity. In the published schedule of the National Civil Defense Emergency Management Exercise Programme 2018-19, EXERCISE Mataara on biosecurity was carried out by the Ministry of Primary Industries under the National Security System National Exercise Programme. Again, private sector representatives were not mentioned in the participants. [3, 4] There were no mentions of the private sector being present on biological threat-focused exercises on the Ministry of Health, DPMC website, Ministry for Primary Industries, National Emergency Management Agency's exercise calendar nor the Joint External Evaluation (JEE) for New Zealand published in 2019. The World Health Organization has no

simulation exercises scheduled for New Zealand. [1, 5, 6, 7, 8, 9]

[1] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

[2] Ministry of Health. November 2018. "Exercise Pomare: Post Exercise Report". <https://www.health.govt.nz/publication/exercise-pomare-post-exercise-report#:~:text=Exercise%20POMARE%20was%20an%20all,and%20after%20a%20pandemic%20response>. Accessed 20 Aug 2020.

[3] Department of the Prime Minister and Cabinet. "National Exercise Programme". <https://dpmc.govt.nz/our-programmes/national-security-and-intelligence/national-exercise-programme>. Accessed 13 Aug 2020.

[4] National Emergency Management Agency. "National CDEM Exercise Programme 2018-19". <https://www.civildefence.govt.nz/cdem-sector/exercises/cdem-exercise-calendar/national-cdem-exercise-programme-2018-19/>. Accessed 20 Aug 2020.

[5] Ministry of Health. <https://www.health.govt.nz/search/results/mataara>. Accessed 20 Aug 2020.

[7] Ministry for Primary Industries. <https://www.mpi.govt.nz/mpisearch#stq=private%20sector%20representatives&stp=1>. Accessed 20 Aug 2020.

[8] Department of the Prime Minister and Cabinet. <https://dpmc.govt.nz/our-programmes/national-security-and-intelligence/national-exercise-programme>. Accessed 20 Aug 2020.

[7] National Emergency Management Agency. "CDEM exercise calendar". <https://www.civildefence.govt.nz/cdem-sector/exercises/cdem-exercise-calendar/>. Accessed 20 Aug 2020.

[9] World Health Organization. "Simulation Exercise." <https://extranet.who.int/sph/simulation-exercise>. Accessed 20 Aug 2020.

## 3.3 EMERGENCY RESPONSE OPERATION

### 3.3.1 Emergency response operation

#### 3.3.1a

**Does the country have in place an Emergency Operations Center (EOC)?**

Yes = 1 , No = 0

**Current Year Score: 1**

New Zealand has an Emergency Operations Centre (EOC). The National Crisis Management Centre (NCMC), operated by the Ministry of Civil Defence & Emergency Management (MCDEM), acts as New Zealand's EOC. The NCMC "facilitates the Central Government crisis management arrangements and offers inter-agency and scalable operability to deal with any type of emergency" [1]. The National Health Coordination Centre (NHCC) acts as the Ministry of Health's emergency operations centre "that operates during nationally led responses to a broad range of health threats such as pandemics and earthquakes" [2]. The NHCC takes the lead role in responding to infectious diseases or pandemics and plays a supporting role for all-of-government emergency management. [3]

[1] Ministry of Civil Defence & Emergency Management. "National Crisis Management Centre". <https://www.civildefence.govt.nz/about/national-crisis-management-centre/>. Accessed 10 Aug 2020.

[2] Institute of Environmental Science and Research (ESR). "Annual Report 2018". <https://www.esr.cri.nz/assets/Uploads/ESR-ANNUAL-REPORT-2018-WEB-FINAL2.pdf>. Accessed 10 Aug 2020.

[3] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand."

<https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

### 3.3.1b

**Is the Emergency Operations Center (EOC) required to conduct a drill for a public health emergency scenario at least once per year or is there evidence that they conduct a drill at least once per year?**

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient publicly evidence that the National Crisis Management Centre (NCMC) or the National Health Coordination Centre are required to conduct public health emergency drill at least once per year, or that there is an annual health-focused drill. New Zealand's Emergency Operations Centre, the NCMC is required to conduct a drill at least once per year but the exercises test emergency responses to a wide range of hazards [1]. The interagency National Exercise Programme was established in 2013 with the aim of ensuring New Zealand "is prepared to effectively respond to national security events on or offshore" [1]. In May 2018, the Hazard Risk Board approved a schedule of exercises to take place between 2018 - 2023. There is at least one general exercise (not specifically a public health emergency drill) scheduled for each financial year. A Biosecurity exercise was held in 2019 [1]. These exercises are predominantly operated from NCMC. The Ministry of Civil Defence & Emergency Management (MCDEM) also holds fortnightly NCMC training sessions for its staff [2, 3]. In 2012, 2015 and 2018, the MCDEM conducted a national earthquake drill (ShakeOut) [4]. The National Health Emergency Plan, published in 2015, outlines that "exercising is a key component of capability building which should be undertaken as part of a wider programme of training, education and development" but it does not mention annual drills [5]. According to the Joint External Evaluation (JEE) published in 2019 for New Zealand, the country conduct health emergency exercises "regularly at national, regional and local levels" under the National Exercise Programme. However, there were no details on how "regular" the exercises were. [6] The Department of the Prime Minister and Cabinet (DPMC) publishes some of the exercises conducted in National Exercise Programme schedule. Inquiries can be made to DPMC to enquire a complete list. [7] Although there are drills conducted on biosecurity, there is limited evidence of public health emergency drills that are required and/or conducted every year. No further evidence is available on record of facilities that includes inventory details on the Ministry for Primary Industries, Ministry of Health or Ministry of Defense public websites. [8,9,10]

[1] Department of the Prime Minister and Cabinet. "National Exercise Programme". <https://dPMC.govt.nz/our-programmes/national-security-and-intelligence/national-exercise-programme>. Accessed 13 Aug 2020.

[2] Ministry of Civil Defence & Emergency Management. "National Crisis Management Centre". <https://www.civildefence.govt.nz/about/national-crisis-management-centre/>. Accessed 13 Aug 2020.

[3] Ministry of Civil Defence & Emergency Management. "Exercises". <https://www.civildefence.govt.nz/cdem-sector/exercises/>. Accessed 13 Aug 2020.

[4] New Zealand ShakeOut. <https://www.shakeout.govt.nz/>. Accessed 13 Aug 2020.

[5] New Zealand Government. Ministry of Health. October 2015. "National Health Emergency Plan". <https://www.health.govt.nz/publication/national-health-emergency-plan-framework-health-and-disability-sector>. Accessed 13 Aug 2020.

[6] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

[7] Department of the Prime Minister and Cabinet. "National Exercise Programme". <https://dPMC.govt.nz/our-programmes/national-security-and-intelligence/national-exercise-programme>. Accessed 13 Aug 2020.

[8] Ministry for Primary Industries. <https://www.mpi.govt.nz/>. Accessed 7 Sept 2020.

[9] Ministry of Health. <https://www.health.govt.nz/>. Accessed 7 Sept 2020.

[10] Ministry of Defense. <https://www.defence.govt.nz/>. Accessed 7 Sept 2020.

### 3.3.1c

**Is there public evidence to show that the Emergency Operations Center (EOC) has conducted within the last year a coordinated emergency response or emergency response exercise activated within 120 minutes of the identification of the public health emergency/scenario?**

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient public evidence to show that the Emergency Operations Center (EOC) has conducted within the last year a coordinated emergency response or emergency response exercise activated within 120 minutes of the identification of the public health emergency/scenario. New Zealand's Emergency Operations Centre, the NCMC is required to conduct a drill at least once per year but the exercises test emergency responses to a wide range of hazards [1]. The interagency National Exercise Programme was established in 2013 with the aim of ensuring New Zealand "is prepared to effectively respond to national security events on or offshore" [1]. According to the Joint External Evaluation (JEE) published in 2019 for New Zealand, the country conduct health emergency exercises "regularly at national, regional and local levels" under the National Exercise Programme. However, there were no details on how "regular" the exercises were. [2] The Department of the Prime Minister and Cabinet (DPMC) publishes some of the exercises conducted in National Exercise Programme schedule. Inquiries can be made to DPMC to enquire a complete list. The ones publicly available do not mention an emergency response exercise activated within 120 minutes of the identification of the public health emergency/scenario. [3]

[1] Department of the Prime Minister and Cabinet. "National Exercise Programme". <https://dpmc.govt.nz/our-programmes/national-security-and-intelligence/national-exercise-programme>. Accessed 13 Aug 2020

[2] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

[3] Department of the Prime Minister and Cabinet. "National Exercise Programme". <https://dpmc.govt.nz/our-programmes/national-security-and-intelligence/national-exercise-programme>. Accessed 13 Aug 2020.

## 3.4 LINKING PUBLIC HEALTH AND SECURITY AUTHORITIES

### 3.4.1 Public health and security authorities are linked for rapid response during a biological event

#### 3.4.1a

Does the country meet one of the following criteria?

- Is there public evidence that public health and national security authorities have carried out an exercise to respond to a potential deliberate biological event (i.e., bioterrorism attack)?
- Are there publicly available standard operating procedures, guidelines, memorandums of understanding (MOUs), or other agreements between the public health and security authorities to respond to a potential deliberate biological event (i.e., bioterrorism attack)?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 0**

There is insufficient publicly available evidence that public health and national security authorities have carried out an exercise to respond to a potential deliberate biological event (i.e., bioterrorism attack). There is no evidence to claim that are standard operating procedures, guidelines between the public health and security authorities to respond to a potential deliberate biological event (i.e., bioterrorism attack). The Department of the Prime Minister and Cabinet (DPMC) publishes some of the exercises conducted in National Exercise Programme schedule that includes biosecurity. In the published schedule of the National Civil Defense Emergency Management Exercise Programme 2018-19, EXERCISE Mataara on biosecurity was carried out in 2019 by the Ministry of Primary Industries under the National Security System National Exercise Programme. The exercise was led by the Ministry of Primary Industries. However, a list of participants were not available on the Department of the Prime Minister and Cabinet nor the National Emergency Management Agency website. [1, 2] According to the Joint External Evaluation (JEE) published in 2019 for New Zealand, the Ministry for Primary Industries works together with International Accreditation New Zealand and WorkSafe NZ, New Zealand's primary workplace health and safety regulator, in implementing biosecurity requirements. [3] The Ministry of Foreign Affairs and Trade and Ministry of Justice is responsible for suppression of terrorism (including biological attacks) as per the Terrorism Suppression Act of 2002. The Act does not mention cooperation with other Ministries. [4] The Biosecurity Act of 1993 mandates any person who wants to respond to a condition caused or probably caused by an organism shall "consult the chief executives of&mdash; (a) the New Zealand Customs Service; and (b) the Ministry of Agriculture and Forestry". [5] There is no further evidence on the Ministry for Primary Industries, Ministry of Defense, Ministry of Health and National Emergency Management Agency public websites. [6,7,8,9]

[1] Department of the Prime Minister and Cabinet. "National Exercise Programme". <https://dpmc.govt.nz/our-programmes/national-security-and-intelligence/national-exercise-programme>. Accessed 13 Aug 2020.

[2] National Emergency Management Agency. "National CDEM Exercise Programme 2018-19".

<https://www.civildefence.govt.nz/cdem-sector/exercises/cdem-exercise-calendar/national-cdem-exercise-programme-2018-19/>. Accessed 20 Aug 2020.

[3] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand."

<https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed Sept 4 2020.

[4] New Zealand Legislation. 17 Oct 2002 (amended 2007). "Terrorism Suppression Act 2002"

[https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Terrorism\\_Suppression\\_Act\\_2002.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Terrorism_Suppression_Act_2002.pdf). Accessed 20 Aug 2020.

[5] New Zealand Legislation. 1 July 2011 (August 1993). "Biosecurity Act 1993."

[https://www.vertic.org/media/National%20Legislation/New\\_Zealand/NZ\\_Biosecurity\\_Act\\_1993.pdf](https://www.vertic.org/media/National%20Legislation/New_Zealand/NZ_Biosecurity_Act_1993.pdf). Accessed 18 Aug 2020..

[6] Ministry for Primary Industries. <https://www.mpi.govt.nz/>. Accessed 7 Sept 2020.

[7] Ministry of Defense. <https://www.defence.govt.nz/>. Accessed 7 Sept 2020.

[8] Ministry of Health. <https://www.health.govt.nz/>. Accessed 7 Sept 2020.

[9] National Emergency Management Agency. <https://www.civildefence.govt.nz/>. Accessed 7 Sept 2020.

## 3.5 RISK COMMUNICATIONS

### 3.5.1 Public communication

#### 3.5.1b

Does the risk communication plan (or other legislation, regulation or strategy document used to guide national public health response) outline how messages will reach populations and sectors with different communications needs (eg different languages, location within the country, media reach)?

Yes = 1 , No = 0

**Current Year Score: 1**

New Zealand's risk communication plan outlines how messages will reach populations and sectors with different communication needs. The National Health Emergency Plan, published in October 2015, outlines that "effective public information management involves identifying the need for information or advice, appropriate presentation and dissemination, media liaison and monitoring" and "achieving these outcomes requires the provision of rapid, honest, frequent and open communication to target audiences. Other considerations are both the nature of the message (taking into account, for example, language and literacy levels) and the best mechanisms for disseminating it, in terms of what will be most effective for its intended audiences" [1]. Under "Primary Health Care", the National Health Emergency Plan: Infectious Diseases outlines that District Health Boards (DHBs) must "display appropriate visible signage, with content based on national-level advice, advising patients and others of any restrictions or required actions (this signage may need to be in other languages in some localities" [2]. In many of New Zealand's infectious disease and emergency response documents, Māori communities and beliefs are also considered. For example, the Communicable Disease Control Manual, revised in December 2018, outlines that "there are a number of issues to consider when working with Māori whānau, hapū and iwi who have been in contact with others who have had a serious communicable disease" and "there are some additional issues to consider to ensure an effective response when working with Māori" including but not limited to using "Māori health professionals who may be better prepared to work in Māori-specific environments, using media (for example, iwi radio stations), disseminating health education information in a culturally effective manner by working in partnership with kaumātua and whānau to access and work with affected Māori communities and minimising barriers to using health education material by providing such material in te reo Māori as well as English where possible" [3].

[1] New Zealand Government. Ministry of Health. October 2015. "National Health Emergency Plan". <https://www.health.govt.nz/publication/national-health-emergency-plan-framework-health-and-disability-sector>. Accessed 13 Aug 2020.

[2] New Zealand Government. Ministry of Health. July 2004. "National Health Emergency Plan: Infectious Diseases". <https://www.health.govt.nz/system/files/documents/publications/nationalhealthemergencyplan.pdf>. Accessed 13 Aug 2020.

[3] New Zealand Government. Ministry of Health. December 2018 (May 2012). "Communicable Disease Control Manual". <https://www.health.govt.nz/publication/communicable-disease-control-manual>. Accessed 13 Aug 2020.

### 3.5.1 Risk communication planning

#### 3.5.1a

**Does the country have in place, either in the national public health emergency response plan or in other legislation, regulation, or strategy documents, a section detailing a risk communication plan that is specifically intended for use during a public health emergency?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence that New Zealand has a risk communication section within its national public health emergency response plan and within national legislation. The 2015 National Health Emergency Plan (pages 34-43) outlines communication protocols for the Ministry of Health and partners to follow during an emergency, including considerations for social media; communicating with local, national, and international emergency agencies; and issuing public alerts and warnings [1]. The plan also considers communicating with marginalized and/or minority communities such as LGBT and refugee communities as well as the disability sector. The Department of the Prime Minister and Cabinet mobilizes additional surge staff of risk communication. [3] Furthermore, there is a risk communication section within the National Civil Defence Emergency

Management Plan Order 2015 [2]. There are sections on national warnings and advisories, sections outlining the communication responsibilities of "welfare agencies," a protocol for reporting information during an emergency, and principles regarding information management during an emergency [3].

[1] New Zealand Government. Ministry of Health. October 2015. "National Health Emergency Plan".

<https://www.health.govt.nz/publication/national-health-emergency-plan-framework-health-and-disability-sector>. Accessed 10 Aug 2020.

[2] New Zealand Legislation. June 2015. "National Civil Defence Emergency Management Plan Order 2015".

<http://www.legislation.govt.nz/regulation/public/2015/0140/latest/DLM6486453.html?src=qs%20>. Accessed 10 Aug 2020.

[3] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand."

<https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

### 3.5.1c

**Does the risk communication plan (or other legislation, regulation or strategy document used to guide national public health response) designate a specific position within the government to serve as the primary spokesperson to the public during a public health emergency?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no evidence that the risk communication plan designated a specific position within the government to serve as the primary spokesperson to the public during a public health emergency. The 2015 National Health Emergency Plan (pages 34-43) outlines communication protocols for the Ministry of Health (MOH) and partners to follow during an emergency, including considerations for social media; communicating with local, national, and international emergency agencies; and issuing public alerts and warnings. The document, however, does not list a designated spokesperson. [1] Furthermore, there is a risk communication section within the National Civil Defence Emergency Management Plan Order 2015 [2]. There are sections on national warnings and advisories, sections outlining the communication responsibilities of "welfare agencies," a protocol for reporting information during an emergency, and principles regarding information management during an emergency [2]. The Joint External Evaluation (JEE) published in 2019 for New Zealand describes a specifically states that there are "different levels of operational development, implementation and maturity" even between the two agencies (MOH and Ministry of Primary Industries). [3]

[1] New Zealand Government. Ministry of Health. October 2015. "National Health Emergency Plan".

<https://www.health.govt.nz/publication/national-health-emergency-plan-framework-health-and-disability-sector>. Accessed 10 Aug 2020.

[2] New Zealand Legislation. June 2015. "National Civil Defence Emergency Management Plan Order 2015".

<http://www.legislation.govt.nz/regulation/public/2015/0140/latest/DLM6486453.html?src=qs%20>. Accessed 10 Aug 2020.

[3] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand."

<https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

## 3.5.2 Public communication

### 3.5.2a

**In the past year, is there evidence that the public health system has actively shared messages via online media platforms (e.g. social media, website) to inform the public about ongoing public health concerns and/or dispel rumors, misinformation or disinformation?**

Public health system regularly shares information on health concerns = 2, Public health system shares information only during active emergencies, but does not regularly utilize online media platforms = 1, Public health system does not regularly utilize online media platforms, either during emergencies or otherwise = 0

**Current Year Score: 2**

There is evidence that the New Zealand government utilises media platforms to inform the public about public health emergencies. The National Health Emergency Plan (October 2015) outlines that "in an emergency the Ministry will place information specific to the health and disability sector on its website. In this way, health providers, other agencies and the general public have direct access to the information. Health providers should make use of and monitor the information on this website during an emergency" [1]. The Ministry of Health website also outlines that it "uses Twitter (@minhealthnz) for the distribution of alerts, news and event updates. It may also used during health emergencies to engage directly with the public and its stakeholders" [2]. It also outlines that "the Ministry will use hashtags when providing emergency communications through appropriately authorised staff" [2]. Furthermore, the Ministry of Civil Defence & Emergency Management, which manages central government's response and recovery functions for national emergencies, also uses a multi-channel approach for emergency management alerts and warnings [3]. The Ministry states that it uses "radio and television, websites, social media and others such as apps and sirens." Emergency Mobile Alerts are also sent out to capable mobile phones [3]. The Joint External Evaluation (JEE) published in 2019 for New Zealand also highlights that Ministry of Primary Industries have a social media team that monitors social media activity daily to allow for the Ministry to combat misinformation in real time. District Health Boards also have a "strong focus on social media" with designated social media team for content tailored to local audiences. [4] New Zealand also have a public website dedicated to the ongoing coronavirus 2019 pandemic for all resources relating to COVID-19 including daily media conference video updates. [5]

[1] New Zealand Government. Ministry of Health. October 2015. "National Health Emergency Plan". <https://www.health.govt.nz/publication/national-health-emergency-plan-framework-health-and-disability-sector>. Accessed 10 Aug 2020.

[2] New Zealand Government. Ministry of Health. "Social Media". <https://www.health.govt.nz/about-site/social-media>. Accessed 10 Aug 2020.

[3] New Zealand Government. Ministry of Civil Defence & Emergency Management. "Civil Defence Emergency Management Alerts & Warnings". <https://www.civildefence.govt.nz/get-ready/civil-defence-emergency-management-alerts-and-warnings/>. Accessed 10 Aug 2020.

[4] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

[5] Unite Against COVID-19. <https://covid19.govt.nz/>. Accessed 15 Aug 2020.

### 3.5.2b

**Is there evidence that senior leaders (president or ministers) have shared misinformation or disinformation on infectious diseases in the past two years?**

No = 1, Yes = 0

**Current Year Score: 1**

There is no publicly available evidence senior leaders (president or ministers) have shared misinformation or disinformation on infectious diseases in the past two years. There has been no reports or news of such in major media new outlets such as on the New Zealand Herald, Radio New Zealand, Stuff, or the state-owned Television New Zealand. [1,2,3,4] Ministry of Health has no press releases that provide such kind of evidence of as well. [5] In response to the most recent outbreak in mid-august, the new Minister of Health Chris Hipkins has been rigorous in informing the public of contract tracing efforts and restrictions such as border control measures. [6] The Prime Minister Jacinda Arden, in fact, as being hailed as a success story in getting 5 million New Zealanders to abide to lockdown rules for the COVID-19 pandemic. [7] During the measles outbreak of Sept 2019, the Prime Minister was actively urging New Zealanders to get immunization shots as the Associate Health Minister Julie Anne Genter activated a National Health Coordination Center. [8]

[1] New Zealand Herald. <https://www.nzherald.co.nz/>. Accessed 9 Sept 2020.

[2] Radio New Zealand. <https://www.rnz.co.nz/news/national>. Accessed 9 Sept 2020.

[3] Stuff. <https://www.stuff.co.nz/>. Accessed 9 Sept 2020.

[4] Television New Zealand. <https://www.tvnz.co.nz/one-news>. Accessed 9 Sept 2020.

[5] Ministry of Health. <https://www.health.govt.nz/>. Accessed 9 Sept 2020.

[6] New Zealand Herald. 19 Aug 2020. "Covid 19 coronavirus: Health Minister Chris Hipkins rules out Auckland moving to alert level 4." [https://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=12357747](https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12357747). Accessed 21 Aug 2020.

[7] Damien Cave. 13 Aug 2020. "Jacinda Ardern Sold a Drastic Lockdown With Straight Talk and Mom Jokes". The New York Times. <https://www.nytimes.com/2020/05/23/world/asia/jacinda-ardern-coronavirus-new-zealand.html>. Accessed 21 Aug 2020.

[8] Flahive, Brad. 01 Sept 2019. "Measles outbreak: Prime Minister Jacinda Ardern urges people to get immunised". Stuff. <https://www.stuff.co.nz/national/health/115448710/measles-outbreak-prime-minister-jacinda-ardern-urges-people-to-get-immunised>. Accessed 21 Aug 2020.

## 3.6 ACCESS TO COMMUNICATIONS INFRASTRUCTURE

### 3.6.1 Internet users

#### 3.6.1a

Percentage of households with Internet

Input number

**Current Year Score: 90.81**

2019

International Telecommunication Union (ITU)

### 3.6.2 Mobile subscribers

#### 3.6.2a

Mobile-cellular telephone subscriptions per 100 inhabitants

Input number

**Current Year Score: 134.93**

2019

International Telecommunication Union (ITU)

### 3.6.3 Female access to a mobile phone

#### 3.6.3a

Percentage point gap between males and females whose home has access to a mobile phone

Input number

Current Year Score: 2.0

2019

Gallup; Economist Impact calculation

### 3.6.4 Female access to the Internet

#### 3.6.4a

Percentage point gap between males and females whose home has access to the Internet

Input number

Current Year Score: 2.0

2019

Gallup; Economist Impact calculation

## 3.7 TRADE AND TRAVEL RESTRICTIONS

### 3.7.1 Trade restrictions

#### 3.7.1a

In the past year, has the country issued a restriction, without international/bilateral support, on the export/import of medical goods (e.g. medicines, oxygen, medical supplies, PPE) due to an infectious disease outbreak?

Yes = 0, No = 1

Current Year Score: 1

There is no evidence that New Zealand has issued a restriction, without international/bilateral support, on the export/import of medical goods (e.g. medicines, oxygen, medical supplies, PPE) due to an infectious disease outbreak in the past year. There is no evidence of such a restriction on the Ministry of Health website, national media sources or the WHO Disease Outbreak News website [1, 2, 3]. During the measles outbreak of Sept 2019, the Prime Minister was actively urging New Zealanders to get immunization shots as the Associate Health Minister Julie Anne Genter activated a National Health Coordination Center. [4]] However, there were no restrictions on export/imports of medical goods. During the ongoing COVID-19 pandemic, New Zealand further strengthened trade initiatives such as the Declaration to remove tariffs on 120 essential products that includes medicines, medical and surgical equipment. The Declaration also urges the participants to not issue restrictions on food and beverage products. [5] New Zealand also joined 20 members of the Asia-Pacific Economic Cooperation and Group

of Twenty (G20) in ensuring continued flow of essential goods such as food, medical supplies and personal protection equipment. [6,7] According to the Market Access Map database, New Zealand has issued zero temporary export measures and has reduced/removal of tariffs on medical and hygiene imports for COVID-19. [8]

[1] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 21 Aug 2020.

[2] New Zealand Herald. <https://www.nzherald.co.nz/>. Accessed 21 Aug 2020.

[3] World Health Organisation (WHO). "Disease Outbreak News. New Zealand". <https://www.who.int/csr/don/archive/country/nzl/en/>. Accessed 21 Aug 2020.

[4] Official Website of the New Zealand Government. 15 April 2020. "Covid-19 response: New Zealand and Singapore launch initiative to ensure free flow of essential goods". <https://www.beehive.govt.nz/release/covid-19-response-new-zealand-and-singapore-launch-initiative-ensure-free-flow-essential>. Accessed 21 Aug 2020.

[6] New Zealand Ministry of Foreign Affairs and Trade. "COVID-19 and trade." Accessed 21 Aug 2020. <https://www.mfat.govt.nz/en/trade/covid-19-and-trade/>.

[7] New Zealand Ministry of Foreign Affairs and Trade. "Joint Ministerial Statement on action plans to facilitate the flow of goods and services as well as the essential movement of people". 12 June 2020. <https://www.mfat.govt.nz/en/trade/covid-19-and-trade/joint-ministerial-statement-on-actions-plans-to-facilitate-the-flow-of-goods-and-services-as-well-as-the-essential-movement-of-people/>. Accessed 21 Aug 2020.

[8] Market Access Map. <https://www.macmap.org/covid19>. Accessed 21 Aug 2020

### 3.7.1b

**In the past year, has the country issued a restriction, without international/bilateral support, on the export/import of non-medical goods (e.g. food, textiles, etc) due to an infectious disease outbreak?**

Yes = 0, No = 1

**Current Year Score: 1**

There is no evidence that New Zealand has issued a restriction, without international/bilateral support, on the export/import of non-medical goods (e.g. food, textiles, etc) due to an infectious disease outbreak. There is no evidence of such a restriction on the Ministry of Health website, national media sources or the WHO Disease Outbreak News website [1, 2, 3]. During the measles outbreak of Sept 2019, the Prime Minister was actively urging New Zealanders to get immunization shots as the Associate Health Minister Julie Anne Genter activated a National Health Coordination Center. [4] However, there were no restrictions on export/imports of non-medical goods. During the ongoing COVID-19 pandemic, New Zealand further strengthened trade initiatives such as the Declaration that urges the participants to not issue restrictions on food and beverage products. [5] New Zealand also joined 20 members of the Asia-Pacific Economic Cooperation and Group of Twenty (G20) in ensuring continued flow of essential goods such as food. [6,7] According to the Market Access Map database, New Zealand has issued zero temporary export measures for COVID-19. [8]

[1] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 21 Aug 2020.

[2] New Zealand Herald. <https://www.nzherald.co.nz/>. Accessed 21 Aug 2020.

[3] World Health Organisation (WHO). "Disease Outbreak News. New Zealand". <https://www.who.int/csr/don/archive/country/nzl/en/>. Accessed 21 Aug 2020.

[4] Official Website of the New Zealand Government. 15 April 2020. "Covid-19 response: New Zealand and Singapore launch initiative to ensure free flow of essential goods". <https://www.beehive.govt.nz/release/covid-19-response-new-zealand-and-singapore-launch-initiative-ensure-free-flow-essential>. Accessed 21 Aug 2020.

[6] New Zealand Ministry of Foreign Affairs and Trade. "COVID-19 and trade." Accessed 21 Aug 2020. <https://www.mfat.govt.nz/en/trade/covid-19-and-trade/>.

[7] New Zealand Ministry of Foreign Affairs and Trade. "Joint Ministerial Statement on action plans to facilitate the flow of

goods and services as well as the essential movement of people". 12 June 2020. <https://www.mfat.govt.nz/en/trade/covid-19-and-trade/joint-ministerial-statement-on-actions-plans-to-facilitate-the-flow-of-goods-and-services-as-well-as-the-essential-movement-of-people/>. Accessed 21 Aug 2020.

[8] Market Access Map. <https://www.macmap.org/covid19>. Accessed 21 Aug 2020.

## 3.7.2 Travel restrictions

### 3.7.2a

**In the past year, has the country implemented a ban, without international/bilateral support, on travelers arriving from a specific country or countries due to an infectious disease outbreak?**

Yes = 0 , No = 1

**Current Year Score: 0**

New Zealand has implemented a ban, without international/bilateral support, on travelers arriving from a specific country or countries due to an infectious disease outbreak. In early February of 2020, New Zealand banned arrivals from Mainland China to limit exposure to coronavirus. The restriction received outcry from Chinese officials such as China's ambassador to New Zealand. [1,2, 3] New Zealand later closed all borders to almost all travellers on 19 March except for New Zealand residents and citizens, diplomats who holds a post in the country as part of their COVID-19 response. [4, 5, 6]

[1] The Guardian. 03 Feb 2020. "Coronavirus outbreak: New Zealand bans foreign travellers from China." <https://www.theguardian.com/world/2020/feb/03/coronavirus-outbreak-new-zealand-bans-foreign-travellers-from-china>. Accessed 21 Aug 2020.

[2] Heather, Ben. 18 Feb 2020. "Chinese ambassador hits out at New Zealand travel ban in response to novel coronavirus outbreak". Stuff. <https://www.stuff.co.nz/travel/news/119575877/chinese-ambassador-hits-out-at-new-zealand-travel-ban-in-response-to-novel-coronavirus-outbreak>. Accessed 21 Aug 2020.

[3] Reuters. 24 Feb 2020. "New Zealand extends ban on China arrivals; no curbs yet for other nations". <https://www.reuters.com/article/us-china-health-newzealand/new-zealand-extends-ban-on-china-arrivals-no-curbs-yet-for-other-nations-idUSKCN20I046>. Accessed 21 Aug 2020.

[4] BBC News. 28 April 2020. "Coronavirus: How New Zealand got its coffees and fries back". <https://www.bbc.com/news/world-asia-52450978>. Accessed 21 Aug 2020.

[5] The Guardian. 19 March 2020. "New Zealand and Australia close borders to foreigners amid coronavirus crisis". <https://www.theguardian.com/world/2020/mar/19/new-zealand-closes-borders-to-foreigners-amid-coronavirus-crisis>. Accessed 21 Aug 2020.

[6] New Zealand Immigration. "Border closures and exceptions." <https://www.immigration.govt.nz/about-us/covid-19/border-closures-and-exceptions>. Accessed 21 Aug 2020.

## Category 4: Sufficient and robust health sector to treat the sick and protect health workers

### 4.1 HEALTH CAPACITY IN CLINICS, HOSPITALS, AND COMMUNITY CARE CENTERS

#### 4.1.1 Available human resources for the broader healthcare system

##### 4.1.1a

Doctors per 100,000 people

Input number

Current Year Score: 358.98

2018

WHO; national sources

##### 4.1.1b

Nurses and midwives per 100,000 people

Input number

Current Year Score: 1244.82

2018

WHO; national sources

##### 4.1.1c

Does the country have a health workforce strategy in place (which has been updated in the past five years) to identify fields where there is an insufficient workforce and strategies to address these shortcomings?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient publicly available evidence that New Zealand currently has a public workforce strategy in place that has been updated in the past five years. The Ministry of Health published a "Te Uru Kahikatea: Public Health Workforce Development Plan" in July 2007[1]. According to the Ministry of Health, Health Workforce New Zealand (HWNZ), the team within the Ministry responsible for national co-ordination and leadership on workforce issues, has made "a commitment to develop an updated national health workforce strategic plan which we expect to publish in 2018. The workforce strategic plan will be a 'living' document that will inform future decision making and investment and include agreed priorities that are reviewed and updated annually" [2, 3] This resulted in an updated plan. The electronic version of "Te Uru Kahikatea 2017 - 2026" is currently being developed. However, it is not available online on the Ministry of Health website. It does, however, states that work is being done regarding the initiative led by "Public Health Workforce Development Plan Sector Reference Group, a 'ori Working Group, a Pacific providers' and community consultation and regional areas' focus

group" [4]. The Ministry of Health, Ministry of Business, Innovation and Employment and Worksafe New Zealand do not have further evidence on an updated public workforce strategy. [5,6,7]

[1] New Zealand Government. Ministry of Health. July 2007. "Te Uru Kahikatea: Public Health Workforce Development Plan". <https://www.health.govt.nz/publication/te-uru-kahikatea-public-health-workforce-development-plan>. Accessed 9 Sept 2020.

[2] New Zealand Government. Ministry of Health. Updated January 2018. "Health Workforce Strategic Plan". <https://www.health.govt.nz/our-work/health-workforce/health-workforce-strategic-plan>. Accessed 9 Sept 2020.

[3] New Zealand Government. Ministry of Health. Updated January 2018. "About Health Workforce". <https://www.health.govt.nz/our-work/health-workforce/about-health-workforce>. 9 Sept 2020.

[4] Ministry of Health. "Te Uru Kahikatea". <https://www.health.govt.nz/our-work/public-health-workforce-development/te-uru-kahikatea>. Accessed 9 Sept 2020.

[5] Ministry of Health. <https://www.health.govt.nz/>. Accessed 9 Sept 2020.

[6] Ministry of Business, Innovation and Employment. <https://www.mbie.govt.nz/>. Accessed 9 Sept 2020.

[7] Worksafe New Zealand. <https://worksafe.govt.nz/>. Accessed 9 Sept 2020

## 4.1.2 Facilities capacity

### 4.1.2a

#### Hospital beds per 100,000 people

Input number

**Current Year Score: 257**

2019

WHO/World Bank; national sources

### 4.1.2b

#### Does the country have the capacity to isolate patients with highly communicable diseases in a biocontainment patient care unit and/or patient isolation room/unit located within the country?

Yes = 1 , No = 0

**Current Year Score: 1**

New Zealand has the capacity to isolate patients with highly communicable diseases in a biocontainment patient care unit and/or patient isolation facility located within the country. Radio NZ reported that one of New Zealand's largest public hospitals, Middlemore Hospital in South Auckland, opened a bio-containment unit in October 2014 [2, 3]. According to the article, "the wing has been fully stocked and fitted with medical equipment, computers and personal protection gear including gowns, visors, protective suits and boots. The unit is divided into three zones - green, orange and red and will be monitored by the infection control team and nursing staff." The green zone is for changing into protective gear, as well as being a clinical and observation room, with a large window allowing clinicians to observe the patient without having to go into their room. The orange zone acts as a "decontamination" area and the red zone is the unit's main patient quarters" [1]. An article from NZ Herald from January 2018 states that "more than 41,000 New Zealanders were isolated in hospitals to stop the spread of disease" [1]. The article outlines that "at least 41,600 people were put in isolation in hospitals around the country between 2015 and October 31, 2017. Norovirus, multi-drug resistant organisms, clostridium difficile, herpes, shingles, chickenpox, tuberculosis, measles, respiratory viruses, diarrhoea, rashes, scabies, whooping cough, mumps and meningococcal disease were all reasons for isolating patients according to hospitals." The article describes the different types

of isolation used in country, stating that "droplet isolation required that people wear a surgical mask when within a metre of the patient while airborne isolation required the door to be closed, a negative pressure room and the wearing of a particulate respirator when entering a room." [2] In the coronavirus 2019 outbreak, the Ministry of Business, Innovation and Employment team employed a team of 4100 people across managed isolation and quarantine facilities located across the country. There is a website where the returnees to New Zealand can see what they can expect from these facilities and their time in quarantine. According to the "Entering Isolation" guide, New Zealanders are tested for coronavirus on day 3 and 12 of their stay in the facilities and are only allowed to leave if they test negative. Healthline checks up may happen. There are health practitioners on site should you develop symptoms. [4, 5, 6]

[1] Radio NZ. October 2014. "Preparing for Ebola in Auckland". <https://www.radionz.co.nz/national/programmes/nz-society/audio/20153485/preparing-for-ebola-in-auckland>. Accessed 10 Aug 2020.

[2] NZ Herald. January 2018. "More than 41,000 New Zealanders isolated in hospitals to stop the spread of disease". [https://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=11958879](https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11958879). Accessed 10 Aug 2020.

[3] Health Point. "Counties Manukau Health Infectious Diseases". <https://www.healthpoint.co.nz/public/infectious-diseases/counties-manukau-health-infectious-diseases/>. Accessed 10 Aug 2020.

[4] Managed Isolation and Quarantine. "Isolation Facilities." <https://www.miq.govt.nz/being-in-managed-isolation/isolation-facilities/>. Accessed 15 Aug 2020.

[5] Manch, Thomas. 14 Aug 2020. "Coronavirus: Testing of isolation facilities a 'gap' in NZ's Covid-19 defence". Stuff. <https://www.stuff.co.nz/national/health/coronavirus/122446345/coronavirus-testing-of-isolation-facilities-a-gap-in-nzs-covid19-defence>. Accessed 15 Aug 2020.

[6] Managed Isolation and Quarantine. "Isolation Facilities." <https://www.miq.govt.nz/being-in-managed-isolation/entering-isolation/>. Accessed 15 Aug 2020.

#### 4.1.2c

Does the country meet one of the following criteria?

- Is there evidence that the country has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak in the past two years?

- Is there evidence that the country has developed, updated or tested a plan to expand isolation capacity in response to an infectious disease outbreak in the past two years?

Yes = 1, No = 0

**Current Year Score: 1**

New Zealand has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak, but there is insufficient evidence that it has developed and tested a plan to expand isolation capacity in response to an infectious disease outbreak in the past two years. The New Zealand Influenza Pandemic Plan (2017) has details regarding isolation and quarantine for pandemic management with the District Health Boards being responsible for isolation facilities during an emergency response. The coordinated incident management system (CIMS) also handles logistics which includes "acquisition and management of facilities, services and materials to support response activities". [1] But a plan for expanding isolation facilities is not elaborated upon in this document. In response to the coronavirus pandemic of 2020, the Managed Isolation and Quarantine (MIQ) Department announced that they have opened new managed isolation facilities in June. [2] Currently, MIQ publishes the occupancy (projected and current) and other related information on its website for the 30 MIQ facilities. [3] The government has adopted a policy in which the MIQ system relies on "high specification hotels", with COVID-19 Response Minister Chris Hipkins stating, "Hotels are already staffed and in locations that make it practical for staff to provide the services they do." [4]

[1] Ministry of Health. 2017. "New Zealand Influenza Pandemic Plan."

<https://www.health.govt.nz/system/files/documents/publications/influenza-pandemic-plan-framework-action-2nd-edn-aug17.pdf>. Accessed 17 Feb 2020.

[2] Managed Isolation and Quarantine. 21 June 2020. "Managed Isolation facilities strengthened and expanded".

<https://www.miq.govt.nz/about/news/managed-isolation-facilities-strengthened-and-expanded/>. Accessed 17 Feb 2020.

[3] Managed Isolation and Quarantine. "Managed isolation and quarantine data". <https://www.mbie.govt.nz/business-and-employment/economic-development/covid-19-data-resources/managed-isolation-and-quarantine-data/>. Accessed 17 Feb 2020.

[4] Hannah Martin. 23 Jan 2021. "Covid-19: Why the Government isn't using purpose-built quarantine facilities."

<https://www.stuff.co.nz/national/health/coronavirus/300209388/covid19-why-the-government-isnt-using-purposebuilt-quarantine-facilities>. Accessed 17 Feb 2020.

## 4.2 SUPPLY CHAIN FOR HEALTH SYSTEM AND HEALTHCARE WORKERS

### 4.2.1 Routine health care and laboratory system supply

#### 4.2.1a

**Is there a national procurement protocol in place which can be utilized by the Ministries of Health and Agriculture for the acquisition of laboratory supplies (e.g. equipment, reagents and media) and medical supplies (e.g. equipment, PPE) for routine needs?**

Yes for both laboratory and medical supply needs = 2, Yes, but only for one = 1, No = 0

**Current Year Score: 2**

There is a national procurement protocol in place which can be utilised by the Ministry of Health and the Ministry for Primary Industries for the acquisition of laboratory needs (such as equipment, reagents and media) and medical supplies (e.g. equipment, PPE) for routine needs in New Zealand. New Zealand has a centralised online procurement portal called the Government Electronic Tenders Service (GETS) which both the Ministry of Health and the Ministry for Primary Industries and District Health Boards (DHBs) can utilise to procure laboratory equipment [1]. All government agencies must publish Annual Procurement Plans on the GETS website and these are to be updated no less than once every six months [1]. They are collated and published on the New Zealand Government Procurement website [2]. DHBs and Ministries can request a range of laboratory equipment, ranging from microscopes and chemical fridges to mass spectrometers and medical supplies from surgical masks to isolation gowns[2].

[1] New Zealand Government. Government Electronic Tenders Service (GETS). <https://www.gets.govt.nz/>. Accessed 17 Aug 2020.

[2] New Zealand Government Procurement. "Future Contract Opportunities".

<https://www.procurement.govt.nz/suppliers/future-contract-opportunities/>. Accessed 17 Aug 2020.

### 4.2.2 Stockpiling for emergencies

#### 4.2.2a

**Does the country have a stockpile of medical supplies (e.g. MCMs, medicines, vaccines, medical equipment, PPE) for national use during a public health emergency?**

Yes = 2, Yes, but there is limited evidence about what the stockpile contains = 1, No = 0

**Current Year Score: 2**

New Zealand has a stockpile of medical supplies (e.g. MCMs, medicines, vaccines, medical equipment, PPE) for national use during a public health emergency and publishes the composition of national reserves as well. National reserve supplies were developed between 2006 and 2009. The national reserve supplies stockpile was originally established for a possible influenza pandemic [1, 2]. The composition of the stockpile is publicly available online on the Ministry of Health's website. [2] The stockpile "comprises a specific range of consumables and drugs which modelling, and experience during events such as SARS, has shown may very quickly become unavailable from global supply chains." The Ministry's national stockpile is stored in various locations across New Zealand - split over multiple sites to reduce risk and increase efficiency in distribution. As of Feb 16, 2021 the Ministry has 11 million particulate respirator (P2) masks and 7 million general purpose masks. It also has 300,000 doses of H5N1 pre-pandemic influenza vaccine and antiviral medication for Tamiflu (more than 1 million courses) [1, 2]. The "National Health Emergency Plan: National Reserve Supplies Management and Usage Policies (3rd edition)" outlines how supplies are released in a health emergency. [3]. The Ministry manages a National Reserve supply of medical supplies where bulk of these items such as gowns, gloves, IV fluids are held in District Health Boards' warehouses. [3, 4] The stockpile is managed through a suite of contracts with a number of suppliers for purchase, storage and maintenance. As outlined in the New Zealand Influenza Pandemic Plan published in 2017, "New Zealand has maintained an advanced purchase agreement with vaccine manufacturers for the supply of pandemic vaccine. However, there will always be some months' delay between the declaration of a pandemic and the arrival of pandemic vaccine supplies in New Zealand. This is because a vaccine that will protect against the pandemic strain cannot be made until that strain has developed and is identified". There are also stockpiles of antivirals and antibiotics. [5] There is also a minimum national stock level for medical countermeasures "across all product lines" to maintain reserves. [4]

[1] New Zealand Government. Ministry of Health. Updated June 2017. "National Reserve Supplies".

<https://www.health.govt.nz/our-work/emergency-management/national-reserve-supplies>. Accessed 16 Feb 2020.

[2] New Zealand Government. Ministry of Health. "Composition of the national reserve supply".

<https://www.health.govt.nz/our-work/emergency-management/national-reserve-supplies/composition-national-reserve-supply>. Accessed 16 Feb 2020.

[3] New Zealand Government. Ministry of Health. 2013. "National Health Emergency Plan: National Reserve Supplies Management and Usage Policies (3rd edition)". <https://www.health.govt.nz/system/files/documents/publications/nhep-reserve-supplies-usage-dec-2013-v2.pdf>. Accessed 16 Feb 2020.

[4] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand."

<https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 16 Feb 2020.

[5] New Zealand Government. Ministry of Health. 2017. "New Zealand Influenza Pandemic Plan: A framework for action (2nd edn)". <https://www.health.govt.nz/system/files/documents/publications/influenza-pandemic-plan-framework-action-2nd-edn-aug17.pdf>. Accessed 16 Feb 2020

#### 4.2.2b

**Does the country have a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency?**

Yes = 2, Yes, but there is limited evidence about what the stockpile contains = 1, No = 0

**Current Year Score: 0**

There is no publicly available evidence that New Zealand has a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency. National reserve supplies were developed between 2006 and 2009. The 2013 "National Health Emergency Plan: National Reserve Supplies Management and Usage Policies (3rd edition)" outlines how

supplies are released in a health emergency. It does not have any mention of reagents and/or laboratory equipment stockpiles. [1] The Joint External Evaluation (JEE) for New Zealand published in 2019, the 2017 New Zealand Influenza Pandemic Plan: A framework for action (NZIPAP) or the The 2015 National Health Emergency Plan (NHEP) do not mention a stockpile of laboratory supplies. [2, 3,4] There is no further evidence on the Ministry of Health website, the Institute of Environmental Science and Research, the Ministry for Primary Industries, the New Zealand Microbiology Network (NZMN), the New Zealand Medicines and Medical Devices Safety Authority (Medsafe) and Pharmaceutical Management Agency (PHARMAC) or the Ministry of Defence [ 5, 6, 7, 8, 9, 10, 11]

[1] Ministry of Health. 05 Dec 2013. "National Health Emergency Plan: National Reserve Supplies Management and Usage Policies, 3rd edition". <https://www.health.govt.nz/publication/national-health-emergency-plan-national-reserve-supplies-management-and-usage-policies-3rd-edition>. Accessed 17 Aug 2020.

[2] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

[3] New Zealand Government. Ministry of Health. August 2017. "New Zealand Influenza Pandemic Plan: A framework for action". <https://www.health.govt.nz/publication/new-zealand-influenza-pandemic-plan-framework-action> Accessed 10 Aug 2020.

[4] Ministry of Health. 15 Oct 2015. "National Health Emergency Plan." <https://www.health.govt.nz/publication/national-health-emergency-plan-framework-health-and-disability-sector>. Accessed 17 Aug 2020.

[5] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 10 Aug 2020.

[6] Institute of Environmental Science and Research (ESR). <https://www.esr.cri.nz/>. Accessed 10 Aug 2020.

[7] New Zealand Government. Ministry of Primary Industries. <https://www.mpi.govt.nz/>. Accessed 10 Aug 2020

[8] New Zealand Microbiology Network (NZMN). <http://www.nzmn.org.nz/>. Accessed 10 Aug 2020

[9] Pharmaceutical Management Agency (PHARMAC). <https://www.pharmac.govt.nz/>. Accessed 10 Aug 2020

[10] New Zealand Medicines and Medical Devices Safety Authority (Medsafe). <https://www.medsafe.govt.nz/>. Accessed 20 Aug 2020.

[11] New Zealand Government. Ministry of Defence. <https://www.defence.govt.nz/>. Accessed 10 Aug 2020.

#### 4.2.2c

**Is there evidence that the country conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency?**

Yes = 1, No = 0

**Current Year Score: 0**

There is limited evidence to claim that New Zealand conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency. The Ministry of Health public website claims that the “composition of the national reserve supplies stockpile is continually reviewed as part of an ongoing programme of work”. However, it also claims that the last comprehensive review was carried out in 2011. [1] The Joint External Evaluation report published in 2019 for New Zealand mentions that there is a minimum national stock level for medical countermeasures with the responsibility to maintain the medical reserve shared between District Health Boards and Ministry of Health. The JEE also pointed out that the supply “requires continuous review” for strengthening the system. [2] There is no further evidence on the Ministry of Health, Ministry of Business, Innovation and Employment nor the Ministry of Primary Industries regarding review for stockpiles. [3,4,5]

[1] Ministry of Health. “National reserve supplies”. <https://www.health.govt.nz/our-work/emergency-management/national-reserve-supplies>. Accessed 16 Feb 2020.

[2] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 16 Feb 2020.

[3] Ministry of Health. <https://www.health.govt.nz/>. Accessed 17 Feb 2020.

[4] Ministry of Business, Innovation and Employment. <https://www.mbie.govt.nz/>. Accessed 17 Feb 2020.

[5] Ministry of Primary Industries. <https://www.mpi.govt.nz/>. Accessed 17 Feb 2020.

## 4.2.3 Manufacturing and procurement for emergencies

### 4.2.3a

Does the country meet one of the following criteria?

- Is there evidence of a plan/agreement to leverage domestic manufacturing capacity to produce medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency?

- Is there evidence of a plan/mechanism to procure medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 1**

There is no evidence of a plan/agreement to leverage domestic manufacturing capacity to produce medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency. However, there is evidence of a plan/mechanism to procure medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency. There is the Government Electronic Tender Service where government services can advertise tenders for PPE as well as vaccines such as the H5N1 Pre-Pandemic Vaccine. [1] The Pharmaceutical Management Agency (PHARMAC) is responsible for negotiating national contracts with the private industry for medical devices. PHARMAC manages the funds from District Health Boards (DHBs) for pharmaceutical spending, vaccines and limited hospital medical devices. [2, 3] According to the Joint External Evaluation (JEE) published in 2019 for New Zealand, PHARMAC is "responsible for the procurement, supply and distribution...works closely with vaccine manufactureres". PHARMAC is also responsible for managing supply of vaccines for both local and national disease outbreaks. Additionally, PHARMAC, along with New Zealand Medicines and Medical Devices Safety Authority (Medsafe) manage processes and procedures to "mitigate and manage shortages" during a public health emergency. [4] As outlined in the New Zealand Influenza Pandemic Plan published in 2017, "New Zealand has maintained an advanced purchase agreement with vaccine manufacturers for the supply of pandemic vaccine. However, there will always be some months' delay between the declaration of a pandemic and the arrival of pandemic vaccine supplies in New Zealand." [5] On the other hand, there is insufficient publicly available evidence of a plan/agreement to leverage domestic manufacturing capacity to produce medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency. In response to the COVID-19 pandemic, New Zealand has pledged \$37 million towards a vaccine strategy with \$5 million set aside for manufacturing capabilities. [6] However, according to the National Standards for Vaccine Storage and Transportation for Immunisation Providers 2017, "all vaccines in New Zealand are manufactured overseas." [7] During the COVID-19 pandemic, there are plans for New Zealand manufacturers to produce ventilators. [8] There is a published list of New Zealand manufacturers that can produce PPE by an independent thinktank. [9] It is unclear whether or not the government has utilized this. There is no further evidence regarding production of medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) on the Ministry of Health, Pharmaceutical Management Agency, Ministry of Defense or the National Emergency Management Agency public website. [10, 11, 12, 13]

[1] Government Electronic Tender Service. <https://www.gets.govt.nz/ExternalTenderSearching.htm?SearchingText=reagents>. Accessed 17 Feb 2020.

- [2] Ministry of Health. 16 Aug 2020. "Ministry of Health and NZ Health Partnerships simplify DHB procurement." <https://www.health.govt.nz/news-media/news-items/ministry-health-and-nz-health-partnerships-simplify-dhb-procurement>. Accessed 17 Feb 2020.
- [3] Pharmaceutical Management Agency. "Purchasing Medicines." <https://www.pharmac.govt.nz/assets/purchasing-medicines-information-sheet.pdf>. Accessed 17 Feb 2020.
- [4] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 17 Feb 2020.
- [5] New Zealand Government. Ministry of Health. August 2017. "New Zealand Influenza Pandemic Plan: A framework for action". <https://www.health.govt.nz/publication/new-zealand-influenza-pandemic-plan-framework-action>. Accessed 17 Feb 2020.
- [6] Radio New Zealand National. 26 May 2020. "Covid-19 vaccine two years away, and could be NZ-made - research leader". <https://www.rnz.co.nz/national/programmes/checkpoint/audio/2018748067/covid-19-vaccine-two-years-away-and-could-be-nz-made-research-leader>. Accessed 17 Feb 2020.
- [7] Ministry of Health. 2017 (page updated 2019). "National Standards for Vaccine Storage and Transportation for Immunisation Providers 2017". <https://www.health.govt.nz/publication/national-standards-vaccine-storage-and-transportation-immunisation-providers-2017>. Accessed 17 Feb 2020.
- [8] Stock, Rob. 09 April 2020. "Coronavirus: How Tindall, Morgan and Fyfe worked to ready country for Covid-19 fight". <https://www.stuff.co.nz/business/120912415/coronavirus-how-tindall-morgan-and-fyfe-worked-to-ready-country-for-covid19-fight>. Accessed 17 Feb 2020.
- [9] Manufacturing NZ. "COVID-19 PPE: NZ Manufacturers." <https://www.manufacturingnz.org.nz/resources-and-tools/covid-19-ppe>. Accessed 17 Feb 2020.
- [10] Ministry of Health. <https://www.health.govt.nz/>. Accessed 17 Feb 2020.
- [11] Pharmaceutical Management Agency. <https://www.pharmac.govt.nz/>. Accessed 17 Feb 2020.
- [12] Ministry of Defense. <https://www.defence.govt.nz/>. Accessed 17 Feb 2020.
- [13] National Emergency Management Agency. <https://www.civildefence.govt.nz/>. Accessed 17 Feb 2020.

#### 4.2.3b

**Does the country meet one of the following criteria?**

- Is there evidence of a plan/agreement to leverage domestic manufacturing capacity to produce laboratory supplies (e.g. reagents, media) for national use during a public health emergency?

- Is there evidence of a plan/mechanism to procure laboratory supplies (e.g. reagents, media) for national use during a public health emergency?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 0**

There is limited evidence of a plan/mechanism to procure laboratory supplies (e.g. reagents, media) for national use during a public health emergency. There is no evidence of a plan/agreement to leverage domestic manufacturing capacity to produce laboratory supplies (e.g. reagents, media) for national use during a public health emergency. There is the Government Electronic Tender Service where government services can advertise tenders for reagents and other laboratory supplies. [1] The Pharmaceutical Management Agency (PHARMAC) manages the funds from District Health Boards (DHBs) for pharmaceutical spending, vaccines and limited hospital medical devices. It does not include reagents, media or other laboratory supplies. [2] PHARMAC occasionally sends out request for proposals for supply of laboratory equipment and consumables to DHB hospitals. [3] According to a report by Radio New Zealand, a clinical microbiologist in the Ministry of Health's diagnostic working group claims that New Zealand has not typically produced generic reagents and consumables. [10] There is no further evidence on the PHARMAC, Ministry of Health, Ministry of Primary Industries or New Zealand Medicines and Medical Devices Safety Authority (Medsafe) website regarding procurement and/or domestic production of

laboratory supplies. [4,5,6,7] Major news agencies as well as the National Influenza Pandemic Plan published in 2017 and Joint External Evaluation (JEE) published in 2019 for New Zealand does not have evidence of a procurement system and/or domestic production of laboratory supplies. [8,9]

[1] Government Electronic Tender Service. <https://www.gets.govt.nz/ExternalTenderSearching.htm?SearchingText=reagents>. Accessed 20 Aug 2020.

[2] PHARMAC. 22 July 2020 (updated). "General Rules (Section A)." <https://www.pharmac.govt.nz/tools-resources/pharmaceutical-schedule/section-a/>. Accessed 20 Aug 2020.

[3] PHARMAC. 25 Oct 2018. "RFP - supply of laboratory equipment and consumables - DEADLINE EXTENDED TO FRIDAY 29 MARCH 2019". <https://www.pharmac.govt.nz/news/rfp-2018-09-17-lab-equip/>. Accessed 20 Aug 2020.

[4] PHARMAC. [https://www.pharmac.govt.nz/search?search\\_q=laboratory+](https://www.pharmac.govt.nz/search?search_q=laboratory+). Accessed 20 Aug 2020.

[5] Ministry of Health. <https://www.health.govt.nz/search/results/laboratory%20procurement>. Accessed 20 Aug 2020.

[6] Ministry for Primary Industries. <https://www.mpi.govt.nz/>. Accessed 20 Aug 2020.

[7] New Zealand Medicines and Medical Devices Safety Authority (Medsafe). <https://www.medsafe.govt.nz/searchResults.asp?q=reagents>. Accessed 20 Aug 2020.

[8] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

[9] New Zealand Government. Ministry of Health. August 2017. "New Zealand Influenza Pandemic Plan: A framework for action". <https://www.health.govt.nz/publication/new-zealand-influenza-pandemic-plan-framework-action> Accessed 10 Aug 2020.

[10] Charlotte Cook. 7 April 2020. "Covid-19: Limited testing kits has scientists searching for generic alternative". Radio New Zealand. <https://www.rnz.co.nz/news/national/413614/covid-19-limited-testing-kits-has-scientists-searching-for-generic-alternative>. Accessed 08 Sept 2020.

## 4.3 MEDICAL COUNTERMEASURES AND PERSONNEL DEPLOYMENT

### 4.3.1 System for dispensing medical countermeasures (MCM) during a public health emergency

#### 4.3.1a

**Does the country have a plan, program, or guidelines in place for dispensing medical countermeasures (MCM) for national use during a public health emergency (i.e., antibiotics, vaccines, therapeutics and diagnostics)?**

Yes = 1, No = 0

**Current Year Score: 1**

There is evidence that New Zealand has guidelines in place for dispensing medical countermeasures for national use during a public health emergency. The Ministry of Health has a "National Health Emergency Plan", published in 2015, which includes provisions for dispensing medical countermeasures during emergencies [1]. The plan "specifies the roles and responsibilities required to be provided for and carried out by health and disability agencies and providers in emergency planning, risk reduction, readiness, response and recovery" [1]. The plan includes a section on "mass prophylaxis" and outlines that the emergency planning of District Health Boards (DHBs) and Public Health Units (PHUs) "should consider coordination of potential point-of-dispensing sites of methods" [1]. The plan also outlines the role of community-based assessment centres (CBACs) during public health emergencies [1]. One of its primary functions includes: "during a pandemic, providing a secure centre for dispensing antivirals and antibiotics" [1].

[1] New Zealand Government. Ministry of Health. October 2015. "National Health Emergency Plan".  
<https://www.health.govt.nz/publication/national-health-emergency-plan-framework-health-and-disability-sector>. Accessed 17 Aug 2020

## 4.3.2 System for receiving foreign health personnel during a public health emergency

### 4.3.2a

**Is there a public plan in place to receive health personnel from other countries to respond to a public health emergency?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is not enough evidence to demonstrate that New Zealand has a public plan in place to receive health personnel from other countries to respond to a public health emergency. New Zealand has "well-established programmes, mechanisms, partnerships and protocols in place for providing support internationally for public health events/emergencies" according to the Joint External Evaluation (JEE) published in 2019 for New Zealand. The JEE report, however, does not mention how New Zealand will receive support in case of public health emergencies. [1] The Ministry of Foreign Affairs and Trade also have partnerships with over 30 other Government agencies across the Pacific. There is currently an ongoing support for Samoa Measles Outbreak with more than 70+ health care workers deployed/working on one-week rotations. [2,3] The Ministry of Health has a medical assistance team (NZMAT) that works together with MFAT that can be deployed to support local health services in the event of a major emergency within New Zealand or the south-west Pacific [1, 4]. There is no evidence of such a plan which accounts for how the country plans to facilitate the arrival and movement of foreign personnel during an emergency in the National Health Emergency Plan, the Ministry of Health website, the Ministry of Civil Defence and Emergency Management website or the Ministry of Defence website [5, 6, 7, 8].

[1] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand."  
<https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

[2] Ministry of Foreign Affairs and Trade. "Our aid partnerships in the Pacific". <https://www.mfat.govt.nz/en/aid-and-development/our-work-in-the-pacific/>. Accessed 13 Aug 2020.

[3] Ministry of Foreign Affairs and Trade. "How New Zealand is Helping." Accessed 13 Aug 2020.  
<https://www.mfat.govt.nz/en/aid-and-development/disaster-and-humanitarian-aid/samoa-measles/>. Accessed 13 Aug 2020.

[4] New Zealand Government. Ministry of Health. "New Zealand Medical Assistance Team". <https://www.health.govt.nz/our-work/emergency-management/new-zealand-medical-assistance-team>. Accessed 13 Aug 2020.

[5] New Zealand Government. Ministry of Health. October 2015. "National Health Emergency Plan".  
<https://www.health.govt.nz/system/files/documents/publications/national-health-emergency-plan-oct15-v2.pdf>. Accessed 13 Aug 2020.

[6] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 13 Aug 2020.

[7] New Zealand Government. Ministry of Civil Defence & Emergency Management. <https://www.civildefence.govt.nz/>. Accessed 4 February 2019.

[8] New Zealand Government. Ministry of Defence. <https://www.defence.govt.nz/>. Accessed 13 Aug 2020.

## 4.4 HEALTHCARE ACCESS

### 4.4.1 Access to healthcare

#### 4.4.1a

**Does the constitution explicitly guarantee citizens' right to medical care?**

Guaranteed free = 4, Guaranteed right = 3, Aspirational or subject to progressive realization = 2, Guaranteed for some groups, not universally = 1, No specific provision = 0

**Current Year Score: 0**

2020

World Policy Analysis Center

#### 4.4.1b

**Access to skilled birth attendants (% of population)**

Input number

**Current Year Score: 96.3**

2015

WHO/World Bank/United Nations Children's Fund (UNICEF)

#### 4.4.1c

**Out-of-pocket health expenditures per capita, purchasing power parity (PPP; current international \$)**

Input number

**Current Year Score: 511.52**

2017

WHO Global Health Expenditure database

### 4.4.2 Paid medical leave

#### 4.4.2a

**Are workers guaranteed paid sick leave?**

Paid sick leave = 2, Unpaid sick leave = 1, No sick leave = 0

**Current Year Score: 2**

2020

World Policy Analysis Center

### 4.4.3 Healthcare worker access to healthcare

#### 4.4.3a

**Has the government issued legislation, a policy, or a public statement committing to provide prioritized healthcare services to healthcare workers who become sick as a result of responding to a public health emergency?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no evidence that New Zealand has issued legislation, a policy or public statement committing to provide prioritised health care services to healthcare workers who become sick as a result of responding to a public health emergency. There is no evidence of such a policy or statement on the Ministry of Health website, the Ministry of Civil Defence & Emergency Management website, within the Health (Infectious and Notifiable Diseases) Regulations 1996, within the National Health Emergency Plan nor the National Health Emergency Plan: Infectious Diseases [1, 2, 3, 4, 5]. However, provisions are made within the National Health Emergency Plan H5N1 Pre-Pandemic Vaccine Usage Policy (Revised 2013), published by the Ministry of Health in December 2013, to prioritise the vaccination of healthcare workers [6]. The policy outlines that "the NZ Government holds 150,000 vaccination courses of H5N1 pre-pandemic vaccine made from a currently circulating avian influenza virus. The vaccine may only be released for use by the Director General of Health after considering all relevant available information and the advice of the Director of Public Health" [6]. It outlines that "offers of vaccine will be prioritised between and within agencies and services in the national interest. The vaccine will be offered to people in specifically identified agencies and/or occupational groups who provide essential pandemic response services and who, by the nature of their duties, may be closely and continually exposed to people who have, or may have, human H5N1 influenza, and who cannot reasonably modify their work practices to further reduce the risks of exposure. Current target groups are approximately 150,000 front-line workers in: Health, Defence, Police, Border management agencies, Social support agencies, Corrections, Fire Services, New Zealand-based international aircrew" [6]. The Joint External Evaluation (JEE) published in 2019 for New Zealand does not mention prioritization for prioritized health care services to health workers. [7]

[1] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 17 Aug 2020.

[2] New Zealand Government. Ministry of Civil Defence & Emergency Management. <https://www.civildefence.govt.nz/>. Accessed 17 Aug 2020.

[3] Parliamentary Counsel Office. New Zealand Legislation. February 2017 (June 1996). <http://www.legislation.govt.nz/regulation/public/1966/0087/latest/whole.html#DLM24207>. Accessed 17 Aug 2020.

[4] New Zealand Government. Ministry of Health. October 2015. "National Health Emergency Plan". <https://www.health.govt.nz/publication/national-health-emergency-plan-framework-health-and-disability-sector>. Accessed 17 Aug 2020.

[5] New Zealand Government. Ministry of Health. July 2014. "National Health Emergency Plan: Infectious Diseases". <https://www.health.govt.nz/system/files/documents/publications/nationalhealthemergencyplan.pdf>. Accessed 17 Aug 2020.

[6] New Zealand Government. Ministry of Health. December 2013. "National Health Emergency Plan: H5N1 Pre-Pandemic Vaccine Usage Policy". <https://www.health.govt.nz/publication/national-health-emergency-plan-h5n1-pre-pandemic-vaccine-usage-policy>. Accessed 17 Aug 2020.

[7] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

## 4.5 COMMUNICATIONS WITH HEALTHCARE WORKERS DURING A PUBLIC HEALTH EMERGENCY

### 4.5.1 Communication with healthcare workers

#### 4.5.1a

**Is there a system in place for public health officials and healthcare workers to communicate during a public health emergency?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence of a system for public health officials and healthcare workers to communicate during a public health emergency. According to the National Health Emergency Plan, the Ministry of Health and each District Health Board (DHB) and public health unit maintain a single point of contact (SPOC) system that is available on a 24-hour, 7-days-a-week basis [1]. "The purpose of the system is to enable effective and rapid communications between senior Ministry of Health officials, DHBs and public health units at any time, via a dedicated SPOC phone number or through a dedicated SPOC email, to notify each other of a potential or actual emergency with health appreciable implications [1]. The SPOC system does not reach out beyond DHBs and public health units. Although the primary intention for the SPOC system is to initiate coordination in readiness for and during emergency responses, it remains in place at all times. It supplements but does not replace normal day-to-day communication channels and processes" [1]. The Communicable Disease Control Manual, published in December 2018, which describes standard practice for public health services to follow for the prevention and control of notifiable diseases, outlines that "designated officers and public health units play a vital role and in particular they should maintain close communication with the Ministry of Health" [2]. However, it does not outline a specific mechanism or system for communication [2].

[1] New Zealand Government. Ministry of Health. October 2015. "National Health Emergency Plan". <https://www.health.govt.nz/publication/national-health-emergency-plan-framework-health-and-disability-sector>. Accessed 17 Aug 2020.

[2] New Zealand Government. Ministry of Health. December 2018. "Communicable Disease Control Manual". <https://www.health.govt.nz/publication/communicable-disease-control-manual>. Accessed 17 Aug 2020.

#### 4.5.1b

**Does the system for public health officials and healthcare workers to communicate during an emergency encompass healthcare workers in both the public and private sector?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no evidence that the system for public health officials and healthcare workers to communicate during an emergency encompass healthcare workers in both the public and private sector . According to the National Health Emergency Plan, published in October 2015, the Ministry of Health and each District Health Board (DHB) and public health unit maintain a single point of contact (SPOC) system that is available on a 24-hour, 7-days-a-week basis [1]. "The purpose of the system is to enable effective and rapid communications between senior Ministry of Health officials, DHBs and public health units at any time, via a dedicated SPOC phone number or through a dedicated SPOC email, to notify each other of a potential or actual emergency with health appreciable implications" [1]. The National Health Emergency Plan outlines that "the SPOC system does not reach out beyond DHBs and public health units" [1]. There is no further evidence on the Ministry of Health website,

the Ministry of Civil Defence & Emergency Management or the Joint External Evaluation (JEE) published in 2019 for New Zealand. [2, 3, 4]

[1] New Zealand Government. Ministry of Health. October 2015. "National Health Emergency Plan". <https://www.health.govt.nz/publication/national-health-emergency-plan-framework-health-and-disability-sector>. Accessed 10 Aug 2020.

[2] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 10 Aug 2020..

[3] New Zealand Government. Ministry of Civil Defence & Emergency Management. <https://www.civildefence.govt.nz/>. Accessed 10 Aug 2020.

[4] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

## 4.6 INFECTION CONTROL PRACTICES AND AVAILABILITY OF EQUIPMENT

### 4.6.1 Healthcare associated infection (HCAI) prevention and control programs

#### 4.6.1a

**Is there evidence that the national public health system is monitoring for and tracking the number of healthcare associated infections (HCAI) that take place in healthcare facilities?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient public evidence to confirm that the national public health system is monitoring for and tracking the number of health care associated infections that take place in healthcare facilities. The current system for infection, prevention and control is passive rather than active. There is evidence of a Healthcare Associated Infections Governance Group (HAIGG) [1]. The objective of the Group is "to provide national leadership and set direction for the Ministry of Health on the clinical, scientific, and strategic aspects of surveillance, infection prevention and control, antimicrobial resistance, and new and emerging threats to the health of New Zealanders, with the aim of reducing harm and cost to society from infections associated with health care exposure" [1]. It outlines that the group will "provide national oversight of HAI" and "regularly review New Zealand laboratory and clinical surveillance data". [1] The group seems to be more of a supporting role regarding policy instead of a monitoring agency. According to the Joint External Evaluation (JEE) published in 2019 for New Zealand, hospitals in the country are required to have an infection, prevention and control (IPC) committees under the New Zealand Infection Prevention and Control Standard 8134.3.2008. Surgical site infection data for cardiac and orthopedic and *S. aureus* bacteremia data (measure for hand hygiene) are reported quarterly. There are certification checks carried out under the Health and Disability Services (Safety) Act 2001 to ensure compliance with the national IPC. The JEE reports criticized New Zealand for its lack of a National IPC as there is an individual IPC for each District Health Board. [2] A PhD dissertation dated 2013, also notes the lack of New Zealand's cohesive approach as "DHB hospitals vary according to infections monitored, protocols used, analysis performed and dissemination of data". [3] There is no further evidence regarding monitoring for and tracking the number of healthcare associated infections (HCAI) regarding COVID nor other HCAI such as MRSA on the Ministry of Health, Ministry for Primary Industries or the Institute of Environmental Science and Research. [4,5, 6]

[1] New Zealand Government. Ministry of Health. Updated May 2014. "Healthcare Associated Infections Governance Group (HAIGG)". <https://www.health.govt.nz/about-ministry/leadership-ministry/expert-groups/healthcare-associated-infections->

governance-group/terms-reference-healthcare-associated-infections-governance-group. Accessed 10 Aug 2020.

[2] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 18 Feb 2020.

[3] M. Patel. October 2013. "A thesis submitted in fulfilment for the degree of Master of Public Health at the University of Otago, Dunedin, New Zealand". <https://pdfs.semanticscholar.org/70c0/bc0051fb00775fdf8ff16beea09d8e48b489.pdf> [2]. Accessed 18 Feb 2020.

[4] Ministry of Health. <https://www.health.govt.nz/search/results/HAI>. Accessed 18 Feb 2020.

[5] Ministry for Primary Industries. <https://www.mpi.govt.nz/>. Accessed 18 Feb 2020.

[6] Institute of Environmental Science and Research. <https://www.esr.cri.nz/>. Accessed 18 Feb 2020.

## 4.7 CAPACITY TO TEST AND APPROVE NEW MEDICAL COUNTERMEASURES

### 4.7.1 Regulatory process for conducting clinical trials of unregistered interventions

#### 4.7.1a

**Is there a national requirement for ethical review (e.g., from an ethics committee or via Institutional Review Board approval) before beginning a clinical trial?**

Yes = 1, No = 0

**Current Year Score: 1**

In New Zealand, there is a national requirement for ethical review before beginning a clinical trial. Health and disability research involving human participants, human tissue or the use of health information requires ethical review. The Health Research Council (HRC) Ethics Committee (EC) is an HRC statutory committee established under section 24 of the Health Research Council (HRC) Act 1990 [1]. The HRC Research Ethics Guidelines outline that "the HRC EC requires that, prior to commencing research; all HRC funded research has received ethics approval. Avenues for ethical comment on HRC funded research have been established by the HRC EC through the delegated authority given to approved health and disability or institutional ethics committees" [2].

[1] Parliamentary Counsel Office. New Zealand Legislation. December 2014 (August 1990). "Health Research Council Act 1990". <http://www.legislation.govt.nz/act/public/1990/0068/latest/DLM213017.html>. Accessed 9 Aug 2020.

[2] Health Research Council of New Zealand. August 2018. "HRC Research Ethics Guidelines". <http://www.hrc.govt.nz/sites/default/files/HRC%20Research%20Ethics%20Guidelines%20-%20updated%20August%202018.pdf>. Accessed 9 Aug 2020

#### 4.7.1b

**Is there an expedited process for approving clinical trials for unregistered medical countermeasures (MCM) to treat ongoing epidemics?**

Yes = 1, No = 0

**Current Year Score: 0**

There is no evidence that New Zealand has an expedited process for approving clinical trials for unregistered medical countermeasures to treat ongoing pandemics. The Health Research Council (HRC) Ethics Committee (EC) is an HRC statutory

committee established under section 24 of the Health Research Council (HRC) Act 1990 [1]. The HRC Research Ethics Guidelines outline that "the HRC EC requires that, prior to commencing research; all HRC funded research has received ethics approval. Avenues for ethical comment on HRC funded research have been established by the HRC EC through the delegated authority given to approved health and disability or institutional ethics committees" [2]. According to the Joint External Evaluation (JEE) published in 2019 for New Zealand, there is currently legislation being drafted for regulation of medical drugs and devices that will provide greater flexibility in procurement in emergencies. However, there were no mentions of expedited process of approving clinical trials in the report. [9] An "Expedited Review Pathway" is outlined in the Standard Operating Procedures for Health and Disability Ethics Committees, published in August 2014, but it does not address an expedited process for approving clinical trials for unregistered medical countermeasures to treat ongoing pandemics [3]. There was no evidence of such a process on the Ministry of Health website, the Institute for Environmental Science and Research (ESR), the Health Research Council of New Zealand, within the Communicable Disease Control Manual nor the Influenza Pandemic Plan of 2017 [4, 5, 6, 7, 8].

[1] Parliamentary Counsel Office. New Zealand Legislation. December 2014 (August 1990). "Health Research Council Act 1990". <http://www.legislation.govt.nz/act/public/1990/0068/latest/DLM213017.html>. 13 Aug 2020.

[2] Health Research Council of New Zealand. August 2018. "HRC Research Ethics Guidelines". <http://www.hrc.govt.nz/sites/default/files/HRC%20Research%20Ethics%20Guidelines%20-%20updated%20August%202018.pdf>. 13 Aug 2020.

[3] Health and Disability Ethics Committees. August 2014. "Standard Operating Procedures for Health and Disability Ethics Committees". <https://ethics.health.govt.nz/operating-procedures>. 13 Aug 2020.

[4] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 4 February 2019.

[5] New Zealand Government. The Institute of Environmental Science and Research. <https://www.esr.cri.nz/>. 13 Aug 2020.

[6] Health Research Council of New Zealand. <http://www.hrc.govt.nz/>. 13 Aug 2020.

[7] New Zealand Government. Ministry of Health. December 2018 (May 2012). "Communicable Disease Control Manual". <https://www.health.govt.nz/publication/communicable-disease-control-manual>. Accessed 6 February 2019. Accessed 13 Aug 2020.

[8] New Zealand Government. Ministry of Health. August 2017. "New Zealand Influenza Pandemic Plan: A framework for action". <https://www.health.govt.nz/publication/new-zealand-influenza-pandemic-plan-framework-action>. Accessed 13 Aug 2020.

## 4.7.2 Regulatory process for approving medical countermeasures

### 4.7.2a

**Is there a government agency responsible for approving new medical countermeasures (MCM) for humans?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is a government agency responsible for approving new medical countermeasures for humans in New Zealand. The New Zealand Medicines and Medical Devices Safety Authority, Medsafe, run by the New Zealand Ministry of Health, is responsible for the regulation of medicines and medical devices and ensures that medicines and medical devices are acceptably safe [1]. It is responsible for administering the Medicines Act 1981 and Medicines Regulations 1984 [1, 2, 3]. Medsafe evaluates the following information before approving a new medical countermeasure: "the source, manufacture, quantity and quality of the active ingredient (drug substance), the quantity and quality of the other non-active ingredients (excipients or fillers), the formulation of the medicine e.g. tablet, suspension, capsule, injection, how the medicine is made and proof that the process consistently produces a high quality medicine, agreed specifications (quality tests) that the medicine must meet before it is released to be sold or dispensed, proof that the pharmaceutical company can test the quality of the medicine accurately, the

quality of the medicine's packaging and the content of the medicine label, proof that the medicine does not degrade quickly, results of clinical studies in people that provide information on whether the medicine works (efficacy) and the medicine's safety profile" [4].

[1] New Zealand Medicines and Medical Devices Safety Authority (Medsafe). <https://medsafe.govt.nz/index.asp>. Accessed 10 Aug 2020.

[2] Parliamentary Counsel Office. New Zealand Legislation. November 2018 (October 1981). "Medicines Act 1981". [http://www.legislation.govt.nz/act/public/1981/0118/latest/DLM53790.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_medicines+act+1981\\_resele\\_25\\_a&p=1](http://www.legislation.govt.nz/act/public/1981/0118/latest/DLM53790.html?search=ts_act%40bill%40regulation%40deemedreg_medicines+act+1981_resele_25_a&p=1). Accessed 10 Aug 2020.

[3] Parliamentary Counsel Office. New Zealand Legislation. "Medicines Regulations 1984" October 2018 (June 1984). [http://www.legislation.govt.nz/regulation/public/1984/0143/latest/DLM95668.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_medicines+regulations+1984\\_resele\\_25\\_a&p=1](http://www.legislation.govt.nz/regulation/public/1984/0143/latest/DLM95668.html?search=ts_act%40bill%40regulation%40deemedreg_medicines+regulations+1984_resele_25_a&p=1). Accessed 10 Aug 2020.

[4] New Zealand Medicines and Medical Devices Safety Authority (Medsafe). "Medsafe's Evaluation and Approval Process". <https://medsafe.govt.nz/consumers/Safety-of-Medicines/Medsafe-Evaluation-Process.asp>. Accessed 10 Aug 2020.

#### 4.7.2b

**Is there an expedited process for approving medical countermeasures (MCM) for human use during public health emergencies?**

Yes = 1 , No = 0

**Current Year Score: 1**

New Zealand has legislation in place that provides for an expedited process for approving medical countermeasures for human use during public health emergencies. The Medicines Act 1981, amended in 2003, outlines the "approval of medicines required for use in a special emergency" [1]. According to the Act, "medicines" means any substance that "(i) is manufactured, imported, sold, or supplied wholly or principally for administering to 1 or more human beings for a therapeutic purpose; and (ii) achieves, or is likely to achieve, its principal intended action in or on the human body by pharmacological, immunological, or metabolic means". The Act outlines that an "an application may be made to the Minister for approval to distribute, sell, or advertise in a special emergency a medicine that is or contains a hazardous substance or new organism", as outlined by the Hazardous Substances and New Organisms Act 1996 [1, 2]. "The Minister may approve an application with or without conditions as long as the Minister is satisfied that the special emergency has been declared and has not come to an end; and the medicine is required for the special emergency" [1]. In terms of an expedited process, "an approval of an application takes effect on the day specified in the approval, and expires on the earlier of the date of expiry of the special emergency specified by the responsible Minister, a later declaration declaring that the special emergency has ceased; or the date of expiry (if any) specified by the responsible Minister in the approval, which must not be later than the date of expiry of the special emergency" [1]. New Zealand Medicines and Medical Devices Safety Authority (Medsafe) is responsible for administering the Medicines Act 1981 [3]. The Medicines Act, however, doesn't cover medical devices. [1, 4]

[1] Parliamentary Counsel Office. New Zealand Legislation. November 2018 (October 1981). "Medicines Act 1981". [http://www.legislation.govt.nz/act/public/1981/0118/latest/DLM53790.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_medicines+act+1981\\_resele\\_25\\_a&p=1](http://www.legislation.govt.nz/act/public/1981/0118/latest/DLM53790.html?search=ts_act%40bill%40regulation%40deemedreg_medicines+act+1981_resele_25_a&p=1). Accessed 10 Aug 2020.

[2] Parliamentary Counsel Office. New Zealand Legislation. December 2018 (June 1996). "Hazardous Substances and New Organisms Act 1996".

[[http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts\\_act%40bill%40regulation%40deemedreg\\_Hazardous+Substances+and+New+Organisms+Act+1996\\_resele\\_25\\_a&p=1#DLM383190](http://www.legislation.govt.nz/act/public/1996/0030/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_Hazardous+Substances+and+New+Organisms+Act+1996_resele_25_a&p=1#DLM383190) Accessed 10 Aug 2020.

[3] New Zealand Medicines and Medical Devices Safety Authority (Medsafe). <https://medsafe.govt.nz/index.asp>. Accessed 10 Aug 2020.

[4] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

## Category 5: Commitments to improving national capacity, financing plans to address gaps, and adhering to global norms

### 5.1 INTERNATIONAL HEALTH REGULATIONS (IHR) REPORTING COMPLIANCE AND DISASTER RISK REDUCTION

#### 5.1.1 Official IHR reporting

##### 5.1.1a

Has the country submitted IHR reports to the WHO for the previous calendar year?

Yes = 1 , No = 0

Current Year Score: 1

2020

World Health Organization

#### 5.1.2 Integration of health into disaster risk reduction

##### 5.1.2a

Are epidemics and pandemics integrated into the national risk reduction strategy or is there a standalone national disaster risk reduction strategy for epidemics and pandemics?

Yes = 1 , No = 0

Current Year Score: 1

There is evidence that New Zealand has a national disaster risk reduction (DRR) strategy for pandemics. The Ministry of Civil Defence and Emergency Management website outlines that New Zealand has developed a National DRR called a "National Disaster Resilience Strategy". The strategy, published 2019, is influenced by the Sendai Framework where the "principles and priorities of the Sendai Framework have been incorporated into it [the strategy]." [1] The Sendai Framework for disaster risk reduction 2015-2030 includes managing disaster risk which includes epidemics and pandemics." [2] In the NDR Strategy for New Zealand, the risks are classified into five categories which includes biological hazard risks. The strategy mentions pandemics as a "current risk" stating that "the potential for an infectious disease pandemic has been highlighted in recent years through the SARS, bird flu and swine flu crises" and specifically mentions the Mycoplasma bovis diseases outbreak of 2017 as the kind of disruptive events that is a risk to the wellbeing of New Zealanders. The plan also includes "pathogen caused by a food safety issues or biological agent." The strategy outlines measures such as building capacity and addressing gaps in risk reduction policy. Such methods include strengthening the emergency management workforce, improving

information and intelligence systems, transparency of risk information, addressing gaps in risk reduction policy and creating flexible plans and regulations that can be adapted as "risks become better understood." [1].

[1] New Zealand Government. April 2019. Ministry of Civil Defence & Emergency Management. "National Disaster Resilience Strategy". <https://www.civildefence.govt.nz/assets/Uploads/publications/National-Disaster-Resilience-Strategy/National-Disaster-Resilience-Strategy-10-April-2019.pdf>. Accessed 9 Sept 2020

## 5.2 CROSS-BORDER AGREEMENTS ON PUBLIC HEALTH AND ANIMAL HEALTH EMERGENCY RESPONSE

### 5.2.1 Cross-border agreements

#### 5.2.1a

**Does the country have cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to public health emergencies?**

Yes = 2, Yes, but there is evidence of gaps in implementation = 1, No = 0

**Current Year Score: 2**

There is publicly available evidence that New Zealand has cross-border arrangements with Australia with regards to public health emergencies with no gaps in implementation. The Australian Health Protection Committee (AHPC), the peak national health emergency forum, includes representatives from New Zealand. The core membership of the AHPC is "responsible for high level cross jurisdictional collaboration in public health protection, planning, preparedness, response and recovery in relation to public health emergencies arising from man made emergencies (including pandemics) or natural disasters"[1]. New Zealand's Ministry of Health has a medical assistance team (NZMAT) that can be deployed to support local health services in the event of a major emergency within New Zealand or the south-west Pacific islands [2]. According to the Joint External Evaluation (JEE) published in 2019 for New Zealand, NZMAT has been deployed four times overseas. [3] An example includes supporting the Government of Samoa for their measles outbreak in late 2019. [4]

[1] Australian Government. Department of Health. November 2011. 'National Health Emergency Response Arrangements: November 2011'. <https://www1.health.gov.au/internet/main/publishing.nsf/Content/ohp-response-arrangement-nov11-l>. Accessed 22 Aug 2020.

[2] New Zealand Government. Ministry of Health. "New Zealand Medical Assistance Team". <https://www.health.govt.nz/our-work/emergency-management/new-zealand-medical-assistance-team/about-new-zealand-medical-assistance-team/nzmat-background> Accessed 22 Aug 2020.

[3] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

[4] Ministry of Foreign Affairs and Trade. "Samoa Measles Outbreak - New Zealand Response." <https://www.mfat.govt.nz/en/aid-and-development/disaster-and-humanitarian-aid/samoa-measles/>. Accessed 10 Aug 2020.

#### 5.2.1b

**Does the country have cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to animal health emergencies?**

Yes = 2, Yes, but there is evidence of gaps in implementation = 1, No = 0

**Current Year Score: 2**

New Zealand has a cross-border agreements with international groups with regards to animal health emergencies with no gaps in implementation. Australia, Canada, Ireland, New Zealand, the UK and the USA are signatories of the International Animal Health Emergency Reserve (IAHER). The IAHER, formed in 2004, is a "formal arrangement provides participating countries access to additional human resources in the event of an emergency animal disease outbreak." According to the Department of Agriculture, Water and the Environment in Australia, New Zealand is also a signatory of 1) Requesting additional foot-and-mouth disease vaccines (signed by Australia, Canada, Mexico, New Zealand, United States of America) and 2) Recognizing zoning for foreign animal disease outbreaks. The first covers access to food and mouth disease vaccines in the event of an outbreak while the latter is to "manage biosecurity risks while minimising trade disruptions in the event of a foreign animal disease outbreak in a participating country." [1]. In December 2016, veterinary authorities from Australia, Canada, Ireland, New Zealand, the UK and the USA joined forces to simulate large scale animal disease outbreak exercise. Dubbed Exercise Athena, the exercise simulated a classical swine fever scenario. [2,3] The Ministry of Primary Industries, in a media release, also explicitly states that the IAHER may be activated according to the "multilateral agreement between Australia, Canada, Ireland, the UK and NZ to provide mutual support and assistance during exotic disease outbreaks." [ 4]

[1] Australian Government. Department of Agriculture, Water and the Environment. Updated 4 Nov 2019. " International arrangements for emergency animal disease outbreaks". <https://www.agriculture.gov.au/pests-diseases-weeds/animal/international-arrangements-emergency-animal-disease-outbreaks>. Accessed 22 Aug 2020.

[2] New Zealand Government. Ministry of Primary Industries. June 2013. "MPI called into UK disease outbreak simulation". <https://www.mpi.govt.nz/news-and-resources/media-releases/mpi-called-into-uk-disease-outbreak-simulation/>. Accessed 22 Aug 2020

[3] Animal Health Australia. December 2016. "Exercise Athena". <https://www.animalhealthaustralia.com.au/news/international-response-put-test-exercise-athena/> Accessed 22 Aug 2020

[4] Ministry for Primary Industries. June 2015. "Surveillance." <https://www.mpi.govt.nz/news-and-resources/media-releases/mpi-called-into-uk-disease-outbreak-simulation/>. Volume 42

[2]. Accessed 22 Aug 2020.

## 5.3 INTERNATIONAL COMMITMENTS

### 5.3.1 Participation in international agreements

#### 5.3.1a

**Does the county have signatory and ratification (or same legal effect) status to the Biological Weapons Convention?**

Signed and ratified (or action having the same legal effect) = 2, Signed = 1, Non-compliant or not a member = 0

**Current Year Score: 2**

2021

Biological Weapons Convention

#### 5.3.1b

**Has the country submitted confidence building measures for the Biological Weapons Convention in the past three years?**

Yes = 1 , No = 0

**Current Year Score: 1**

2021

Biological Weapons Convention

### **5.3.1c**

**Has the state provided the required United Nations Security Council Resolution (UNSCR) 1540 report to the Security Council Committee established pursuant to resolution 1540 (1540 Committee)?**

Yes = 1 , No = 0

**Current Year Score: 1**

2021

Biological Weapons Convention

### **5.3.1d**

**Extent of United Nations Security Council Resolution (UNSCR) 1540 implementation related to legal frameworks and enforcement for countering biological weapons:**

Very good (60+ points) = 4, Good (45–59 points) = 3, Moderate (30–44 points) = 2, Weak (15–29 points) = 1, Very weak (0–14 points) or no matrix exists/country is not party to the BWC = 0

**Current Year Score: 4**

2021

Biological Weapons Convention

## **5.3.2 Voluntary memberships**

### **5.3.2a**

**Does the country meet at least 2 of the following criteria?**

- Membership in Global Health Security Agenda (GHSA)
- Membership in the Alliance for Country Assessments for Global Health Security and IHR Implementation (JEE Alliance)
- Membership in the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (GP)
- Membership in the Australia Group (AG)
- Membership in the Proliferation Security Initiative (PSI)

Needs to meet at least two of the criteria to be scored a 1 on this measure. , Yes for five = 1 , Yes for four = 1 , Yes for three = 1 , Yes for two = 1 , Yes for one = 0 , No for all = 0

**Current Year Score: 1**

2021

Global Health Security Agenda; JE Alliance; Global Partnership; Australia Group; PSI

## 5.4 JOINT EXTERNAL EVALUATION (JEE) AND PERFORMANCE OF VETERINARY SERVICES PATHWAY (PVS)

### 5.4.1 Completion and publication of a Joint External Evaluation (JEE) assessment and gap analysis

#### 5.4.1a

Has the country completed a Joint External Evaluation (JEE) or precursor external evaluation (e.g., GHSA pilot external assessment) and published a full public report in the last five years?

Yes = 1, No = 0

Current Year Score: 1

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

#### 5.4.1b

Has the country completed and published, within the last five years, either a National Action Plan for Health Security (NAPHS) to address gaps identified through the Joint External Evaluation (JEE) assessment or a national GHSA roadmap that sets milestones for achieving each of the GHSA targets?

Yes = 1, No = 0

Current Year Score: 0

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

### 5.4.2 Completion and publication of a Performance of Veterinary Services (PVS) assessment and gap analysis

#### 5.4.2a

Has the country completed and published a Performance of Veterinary Services (PVS) assessment in the last five years?

Yes = 1, No = 0

Current Year Score: 0

2021

OIE PVS assessments

#### 5.4.2b

Has the country completed and published a Performance of Veterinary Services (PVS) gap analysis in the last five years?

Yes = 1, No = 0

Current Year Score: 0

2021

OIE PVS assessments

## 5.5 FINANCING

### 5.5.1 National financing for epidemic preparedness

#### 5.5.1a

Is there evidence that the country has allocated national funds to improve capacity to address epidemic threats within the past three years?

Yes = 1 , No = 0

Current Year Score: 1

There is publicly available evidence that New Zealand has allocated national funds to improve capacity to address epidemic threats within the past three years. There is indirect funding to improve capacity to address epidemic threats through funding allocated to District Health Boards, there is no explicit mention of funding for epidemic threats in the New Zealand budget. The National Influenza Pandemic Plan published in 2017 states that the framework, which is the "foundation for responses to future pandemics", is executed through "Crown funding agreements between the Minister of Health and each District Health Board." [1] Although the New Zealand budget does not have explicit mentions of "epidemic threats," supporting the DHBs will strengthen the health services that the DHBs are responsible for providing. For instance, during the measles outbreak of 2019, the National Health Coordination Center (NHCC) worked together with regional DHBs for the response. [2] DHBs also took the lead and testing for COVID-19 in the ongoing pandemic. During the most recent outbreak in August, they were able to quickly mobilize and implement pop-up and mobile testing centres, that surged the health sector's capacity threefold, across the city and parts of the breakout. [3, 4,5] The 2020 Budget allocated \$3.9 billion to DHBs with specific sections for the response to measles outbreak and immunization campaigns as well as additional support and capital investment to DHB for the boards to carry out their services. [6] There were also budgets for "enhancing the Ministry of Health's capability to support government priorities" which includes building capacity in DHB as well as the improving MOH's responsiveness to "future needs of the health sector" in the 2019 budget. [7] The 2018 budget includes additional funding for DHBs as well for DHBs to "meet additional costs they face in delivering health services". [8] The documents do not have specific language that mentions pandemic threats for 2018 and 2019. [7,8] There is no further evidence on the Ministry of Health, Ministry for Primary Industries or the Department of Prime Minister and Cabinet public websites. [9,10, 11]

[1] New Zealand Government. Ministry of Health. August 2017. "New Zealand Influenza Pandemic Plan: A framework for action". <https://www.health.govt.nz/publication/new-zealand-influenza-pandemic-plan-framework-action> Accessed 10 Aug 2020.

[2] Flahive, Brad. 01 Sept 2019. "Measles outbreak: Prime Minister Jacinda Ardern urges people to get immunised". Stuff. <https://www.stuff.co.nz/national/health/115448710/measles-outbreak-prime-minister-jacinda-ardern-urges-people-to-get-immunised>. Accessed 21 Aug 2020.

[3] Counties Manukau Health. 12 Aug 2020. "Seven new pop-up COVID-19 Testing Centres open in Auckland". <https://www.countiesmanukau.health.nz/news/seven-new-pop-up-covid-19-testing-centres-open-in-auckland/>. Accessed 20 Aug 2020.

[4] New Zealand Doctor. 29 June 2020. "Metropolitan Auckland district health boards increase COVID-19 testing capacity".

<https://www.nzdoctor.co.nz/article/undoctored/metropolitan-auckland-district-health-boards-increase-covid-19-testing-capacity>. Accessed 20 Aug 2020.

[5] Martin, Robin. 18 Aug 2020. "Covid-19 testing ramps up to fill data gap at Port Taranaki". Stuff.

<https://www.stuff.co.nz/national/health/coronavirus/122482785/covid19-testing-ramps-up-to-fill-data-gap-at-port-taranaki>. Accessed 21 Aug 2020.

[6] New Zealand Government. 14 May 2020. "Wellbeing Budget 2020: Rebuilding together."

<https://treasury.govt.nz/sites/default/files/2020-05/b20-wellbeing-budget.pdf>. Accessed 21 Aug 2020.

[7] New Zealand Government. 20 May 2019. "Summary of Initiatives in Budget 2019."

[https://treasury.govt.nz/sites/default/files/2019-06/b19-sum-initiatives\\_1.pdf](https://treasury.govt.nz/sites/default/files/2019-06/b19-sum-initiatives_1.pdf). Accessed 21 Aug 2020.

[8] New Zealand Government. 17 May 2018. "Summary of Initiatives in Budget 2018."

<https://treasury.govt.nz/sites/default/files/2018-05/b18-sum-initiatives.pdf>. Accessed 21 Aug 2020.

[9] Ministry of Health. <https://www.health.govt.nz/>. Accessed 8 Sept 2020.

[10] Ministry for Primary Industries. <https://www.mpi.govt.nz/>. Accessed 8 Sept 2020.

[11] Department of the Prime Minister and Cabinet (DPMC). <https://dPMC.govt.nz/>. Accessed 06 September 2020.

## 5.5.2 Financing under Joint External Evaluation (JEE) and Performance of Veterinary Services (PVS) reports and gap analyses

### 5.5.2a

Does the Joint External Evaluation (JEE) report, National Action Plan for Health Security (NAPHS), and/or national GHSA roadmap allocate or describe specific funding from the national budget (covering a time-period either in the future or within the past five years) to address the identified gaps?

Yes = 1 , No/country has not conducted a JEE = 0

Current Year Score: 0

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

### 5.5.2b

Does the Performance of Veterinary Services (PVS) gap analysis and/or PVS assessment allocate or describe specific funding from the national budget (covering a time-period either in the future or within the past five years) to address the identified gaps?

Yes = 1 , No/country has not conducted a PVS = 0

Current Year Score: 0

2021

OIE PVS assessments

## 5.5.3 Financing for emergency response

### 5.5.3a

Is there a publicly identified special emergency public financing mechanism and funds which the country can access in the face of a public health emergency (such as through a dedicated national reserve fund, an established agreement with the

**World Bank pandemic financing facility/other multilateral emergency funding mechanism, or other pathway identified through a public health or state of emergency act)?**

Yes = 1, No = 0

**Current Year Score: 1**

New Zealand has a publicly identified emergency financing mechanism. The Ministry of Health's National Health Emergency Plan, published in October 2015, outlines that "the Ministry will be closely involved in Crown decisions on whether to provide District Health Boards (DHBs) with additional funding to cover the cost of additional services required during a health emergency response [1]. In almost all cases, such services will be funded through existing pathways" and "all existing contracts contain provisions for variation of funding arrangements or additional funding, should this become necessary in exceptional circumstances, such as a major mass casualty incident or a pandemic" [1]. According to the plan, the funding that the Ministry of Health provides acknowledges each DHB's population mix, tertiary loading and hazard complexity [1]. New Zealand is not an IDA eligible borrowing country [2]. Not only are there adequate finances to distribute funding in a public health emergency, there are also mechanisms for the Ministry of Health to access additional funding for activation of plans to respond to major health emergencies. [3]

[1] New Zealand Government. Ministry of Health. October 2015. "National Health Emergency Plan". <https://www.health.govt.nz/system/files/documents/publications/national-health-emergency-plan-oct15-v2.pdf>. Accessed 10 Aug 2020.

[2] International Development Association (IDA). "Borrowing Countries". <http://ida.worldbank.org/about/borrowing-countries>. Accessed 10 Aug 2020.

[3] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

## 5.5.4 Accountability for commitments made at the international stage for addressing epidemic threats

### 5.5.4a

**Is there evidence that senior leaders (president or ministers), in the past three years, have made a public commitment either to:**

- Support other countries to improve capacity to address epidemic threats by providing financing or support?
- Improve the country's domestic capacity to address epidemic threats by expanding financing or requesting support to improve capacity?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 1**

There is evidence that senior leaders (president or ministers), in the past three years, have made a public commitment to support other countries to improve capacity to address epidemic threats by providing financing or support. There is also evidence from senior leaders in the past three years to improve the New Zealand's domestic capacity to address epidemic threats by expanding financing or requesting support to improve capacity. New Zealand Deputy Prime Minister and Minister of Foreign Affairs Winston Peters recently announced New Zealand's pledge of NZ\$ 7 million to Gavi, a vaccine alliance that supports immunization of children in Papua New Guinea, Timor-Leste, Kiribati and the Solomon Islands. According to Mr. Peters, "This funding has been targeted to support the vaccination of vulnerable children in our Pacific neighbourhood, protecting them from a number of high-risk diseases. The funding will also contribute to the ongoing COVID-19 pandemic response more widely." [1] The Foreign Affairs Minister Winston Peters also confirmed that New Zealand, in collaboration

with the World Health Organization, has sent a team to Cook Islands with additional plans for Tokelau and Niue as part of New Zealand's partnership with countries in the Pacific to help the countries prepare and response to the ongoing COVID-19. [2] During the 2019 measles outbreak, Foreign Affairs Minister Winston Peters announced New Zealand's pledge of NZ\$1 million for the WHO's Pacific Regional Action Plan for Measles. He explicitly stated "Prevention through vaccination is the most effective way of avoiding illness and a costly health emergency. New Zealand has collaborated with United Nations Fund for Children (UNICEF) and WHO to identify regional vulnerabilities and opportunities for early interventions to prevent further outbreaks." [3] In response to the 2019 measles outbreak, Associate Health Minister Julie Anne Genter announced \$23 million on an immunization campaign stating ""We are overdue to address that immunisation gap to protect the health of communities." [4,5 ] Health Minister David Clark announced, regarding COVID-19 pandemic and a record investment of \$3.92 billion investment in the District Health Board services such as hospitals, "One of the key lessons of COVID-19 is the need for a strong and sustainable public health and disability system...After what the country [New Zealand] has gone through in recent months, and from the devastation we have seen to underprepared health systems around the world, it is absolutely critical that as a country we continue to invest in and build up the capacity of our health system." [6]

[1] Gavi. 26 May 2020. "New Zealand announces NZ\$ 7 million pledge to Vaccine Alliance".

<https://www.gavi.org/news/media-room/new-zealand-announces-nz-7-million-pledge-vaccine-alliance>. Accessed 22 Aug 2020.

[2] Asia Pacific Report. 5 march 2020. "NZ pledges \$1m for WHO in coronavirus support to Pacific".

<https://asiapacificreport.nz/2020/03/05/nz-pledges-1m-for-who-in-coronavirus-support-to-pacific/>. Accessed 22 Aug 2020.

[3] New Zealand Government. Winston Peters. 14 Dec 2019. "NZ to help fund fight against measles in the Pacific region".

<https://www.beehive.govt.nz/release/nz-help-fund-fight-against-measles-pacific-region>. Accessed 22 Aug 2020.

[4] Biddle, Donna-Lee. 10 Feb 2020. "Measles outbreak: Government puts \$23m into immunizing young adults." Stuff.

<https://www.stuff.co.nz/national/health/119354997/measles-outbreak-government-puts-23m-into-immunising-young-adults>. Accessed 22 Aug 2020.

[5] New Zealand Government. Hon Julie Anne Garter. 10 Feb 2020. <https://www.beehive.govt.nz/release/strengthening-new-zealand%E2%80%99s-immunisation-system>. Accessed 22 Aug 2020.

[6] New Zealand Doctor. "Budget 2020: Record investment in hospitals and health services". 12 May 2020.

<https://www.nzdoctor.co.nz/article/undoctored/budget-2020-record-investment-hospitals-and-health-services>. Accessed 22 Aug 2020.

#### 5.5.4b

Is there evidence that the country has, in the past three years, either:

- Provided other countries with financing or technical support to improve capacity to address epidemic threats?
- Requested financing or technical support from donors to improve the country's domestic capacity to address epidemic threats?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 1**

There is evidence that New Zealand, in the past three years has invested finances as well as provided technical support to support other countries address epidemic threats in the past three years. There is limited evidence that New Zealand, in the past three years, has requested financing or technical support from donors to improve the country's domestic capacity to address epidemic threats. As demonstrated by the Global Health Security Funding Tracking Dashboard, New Zealand has dispersed USD 174.12 million between 2017 and 2020 with an additional USD 56.62 million committed from 2017 to 2020 to improve capacity to address epidemic threats by providing financing to countries in South east Asia such as Myanmar , Laos, Indonesia as well as Pacific Islands (Solomon Islands, Fiji, Niue). Areas they have supported are Zoonotic Disease, Workforce Development, National Legislation, Policy and Financing, Preparedness and National Laboratory Systems. For example, New

Zealand contributed over US\$690,00 in 2018 for the Meningococcal outbreak response in Fiji. New Zealand also contributed almost 1 million USD to the World Health Organization Contingency Fund for Emergences 2019-2020 for developing countries. There was only one case of US\$ 46k being funded to New Zealand as part of an Acquired immunodeficiency syndrome (AIDS) fund. The dashboard mentioned Germany, Finland and European Union as funders for New Zealand but no amounts were specified nor other details given. [1] There is currently an ongoing support for Samoa Measles Outbreak with more than 70+ New Zealand health care workers deployed/working on one-week rotations as part of New Zealand Medical Assistance Team (NZMAT). [2]

[1] Global Health Security Funding Tracking Dashboard. "New Zealand". <https://tracking.ghscosting.org/details/173/funder>. Accessed 22 Aug 2020.

[2] Ministry of Foreign Affairs and Trade. "How New Zealand is Helping." <https://www.mfat.govt.nz/en/aid-and-development/disaster-and-humanitarian-aid/samoa-measles/>. Accessed 13 Aug 2020.

### 5.5.4c

**Is there evidence that the country has fulfilled its full contribution to the WHO within the past two years?**

Yes = 1 , No = 0

**Current Year Score: 1**

2021

Economist Impact analyst qualitative assessment based on official national sources, which vary by country

## 5.6 COMMITMENT TO SHARING OF GENETIC AND BIOLOGICAL DATA AND SPECIMENS

### 5.6.1 Commitment to sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) in both emergency and nonemergency research

#### 5.6.1a

**Is there a publicly available plan or policy for sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) along with the associated epidemiological data with international organizations and/or other countries that goes beyond influenza?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is not enough publicly available evidence to suggest that New Zealand has a policy or plan to share genetic data, epidemiological data, clinical specimens, and/or isolated specimens (biological materials) with international organisations and/or other countries that goes beyond influenza. There was no evidence of such a statement, agreement or policy document on the Ministry of Health website, the Institute of Environmental Science and Research (ESR) website or the Ministry for Primary Industries website [1, 2, 3]. The networks of laboratories (both animal health and human health) in New Zealand have international partnerships, but there is no statement that indicates that those partnerships involved sharing genetic data, epidemiological data, clinical specimens, and/or isolated specimens (biological materials). The Joint External Evaluation (JEE) published in 2019 for New Zealand does not mention the sharing of epidemiological data with other

countries as well.

[1] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 10 Aug 2020.

[2] New Zealand Government. Ministry of Health. Institute of Environmental Science and Research (ESR). "Specialist Testing". <https://www.esr.cri.nz/home/>. Accessed 10 Aug 2020.

[3] New Zealand Government. Ministry of Primary Industries. "National Animal Health Laboratory". <https://www.mpi.govt.nz/protection-and-response/laboratories/national-animal-health-laboratory/our-work/>. Accessed 10 Aug 2020..

[3] World Health Organization. 2019. "Joint External Evaluation (JEE) of IHR Core Capacities of New Zealand." <https://apps.who.int/iris/bitstream/handle/10665/326844/WHO-WHE-CPI-2019.63-eng.pdf?sequence=1>. Accessed 10 Aug 2020.

### 5.6.1b

**Is there public evidence that the country has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) framework in the past two years?**

Yes = 0, No = 1

**Current Year Score: 1**

There is no public evidence that New Zealand has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) framework in the past two years. There is no evidence on the World Health Organisation website or New Zealand's major media outlets [1, 2, 3, 4, 5]. New Zealand is not part of the PIP framework. and is not listed under the supported regions. [6]

[1] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 15 Aug 2020.

[2] World Health Organisation. <https://www.who.int/>. Accessed 15 Aug 2020..

[3] New Zealand Government. Ministry of Primary Industries. <https://www.mpi.govt.nz/>. Accessed 15 Aug 2020.

[4] Radio NZ. <https://www.radionz.co.nz>. Accessed 15 Aug 2020.

[5] NZ Herald. <https://www.nzherald.co.nz>. Accessed 15 Aug 2020.

[6] World Health Organization. <https://open.who.int/2020-21/regions/WPR/about/about>. Accessed 15 Aug 2020.

### 5.6.1c

**Is there public evidence that the country has not shared pandemic pathogen samples during an outbreak in the past two years?**

Yes = 0, No = 1

**Current Year Score: 1**

There is no evidence that New Zealand has not shared pandemic pathogen samples during an outbreak in the past two years. New Zealand have their own genetic sequencing of positive samples for COVID-19. [6] However, there has been no explicit mention that the country has not shared samples other than influenza. There is no evidence on the World Health Organisation, Ministry for Primary Industries, Ministry of Health websites or New Zealand's major media outlets reports[1, 2, 3, 4, 5, 7].

[1] New Zealand Government. Ministry of Health. <https://www.health.govt.nz/>. Accessed 10 Aug 2020.

[2] World Health Organisation. <https://www.who.int/>. Accessed 10 Aug 2020.

[3] New Zealand Government. Ministry for Primary Industries. <https://www.mpi.govt.nz/>. Accessed 10 Aug 2020.

[4] Radio NZ. <https://www.radionz.co.nz>. Accessed 10 Aug 2020.

[5] NZ Herald. <https://www.nzherald.co.nz>. Accessed 10 Aug 2020.

[6] The Conversation. "Why New Zealand needs to focus on genome sequencing to trace the source of its new COVID-19 outbreak". <https://theconversation.com/why-new-zealand-needs-to-focus-on-genome-sequencing-to-trace-the-source-of-its-new-covid-19-outbreak-144402>. Accessed 10 Aug 2020.

[7] Ministry of Health. <https://www.health.govt.nz/>. Accessed 5 Sept 2020.

## Category 6: Overall risk environment and vulnerability to biological threats

### 6.1 POLITICAL AND SECURITY RISK

#### 6.1.1 Government effectiveness

##### 6.1.1a

Policy formation (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

##### 6.1.1b

Quality of bureaucracy (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

##### 6.1.1c

Excessive bureaucracy/red tape (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 4

2020

Economist Intelligence

**6.1.1d**

Vested interests/cronyism (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

**6.1.1e**

Country score on Corruption Perception Index (0-100, where 100=best)

Input number

Current Year Score: 88

2020

Transparency International

**6.1.1f**

Accountability of public officials (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 4

2020

Economist Intelligence

**6.1.1g**

Human rights risk (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 4

2020

Economist Intelligence

**6.1.2 Orderly transfers of power**

**6.1.2a**

How clear, established, and accepted are constitutional mechanisms for the orderly transfer of power from one government to another?

Very clear, established and accepted = 4, Clear, established and accepted = 3, One of the three criteria (clear, established, accepted) is missing = 2, Two of the three criteria (clear, established, accepted) are missing = 1, Not clear, not established, not accepted = 0

**Current Year Score: 4**

2021

Economist Intelligence

### 6.1.3 Risk of social unrest

#### 6.1.3a

**What is the risk of disruptive social unrest?**

Very low: Social unrest is very unlikely = 4, Low: There is some prospect of social unrest, but disruption would be very limited = 3, Moderate: There is a considerable chance of social unrest, but disruption would be limited = 2, High: Major social unrest is likely, and would cause considerable disruption = 1, Very high: Large-scale social unrest on such a level as to seriously challenge government control of the country is very likely = 0

**Current Year Score: 4**

2021

Economist Intelligence

### 6.1.4 Illicit activities by non-state actors

#### 6.1.4a

**How likely is it that domestic or foreign terrorists will attack with a frequency or severity that causes substantial disruption?**

No threat = 4, Low threat = 3, Moderate threat = 2, High threat = 1, Very high threat = 0

**Current Year Score: 3**

2021

Economist Intelligence

#### 6.1.4b

**What is the level of illicit arms flows within the country?**

4 = Very high, 3 = High, 2 = Moderate, 1 = Low, 0 = Very low

**Current Year Score: 4**

2020

UN Office of Drugs and Crime (UNODC)

### 6.1.4c

How high is the risk of organized criminal activity to the government or businesses in the country?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 4

2021

Economist Intelligence

## 6.1.5 Armed conflict

### 6.1.5a

Is this country presently subject to an armed conflict, or is there at least a moderate risk of such conflict in the future?

No armed conflict exists = 4, Yes; sporadic conflict = 3, Yes; incursional conflict = 2, Yes, low-level insurgency = 1, Yes; territorial conflict = 0

Current Year Score: 4

2021

Economist Intelligence

## 6.1.6 Government territorial control

### 6.1.6a

Does the government's authority extend over the full territory of the country?

Yes = 1, No = 0

Current Year Score: 1

2021

Economist Intelligence

## 6.1.7 International tensions

### 6.1.7a

Is there a threat that international disputes/tensions could have a negative effect?

No threat = 4, Low threat = 3, Moderate threat = 2, High threat = 1, Very high threat = 0

Current Year Score: 3

2021

Economist Intelligence

## 6.2 SOCIO-ECONOMIC RESILIENCE

### 6.2.1 Literacy

#### 6.2.1a

Adult literacy rate, population 15+ years, both sexes (%)

Input number

Current Year Score: 99.9

2008-2018

United Nations Development Programme (UNDP); United Nations Educational, Scientific and Cultural Organization (UNESCO);  
The Economist Intelligence Unit

### 6.2.2 Gender equality

#### 6.2.2a

United Nations Development Programme (UNDP) Gender Inequality Index score

Input number

Current Year Score: 0.87

2018

United Nations Development Programme (UNDP); The Economist Intelligence Unit

### 6.2.3 Social inclusion

#### 6.2.3a

Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)

Input number

Current Year Score: 0.23

2008-2018

World Bank; Economist Impact

#### 6.2.3b

Share of employment in the informal sector

Greater than 50% = 2, Between 25-50% = 1, Less than 25% = 0

Current Year Score: 0

According to a paper published by the International Monetary Fund in 2015, New Zealand's percentage of the informal sector is 8.97%. The average from 2004-2015 is 11.70 %. [1]

[1] Medina, Leandro and Friedrich Schneider. 24 Jan 2018. "Shadow Economies Around the World: What Did We Learn Over the Last 20 Years?". [<https://www.imf.org/en/Publications/WP/Issues/2018/01/25/Shadow-Economies-Around-the-World-What-Did-We-Learn-Over-the-Last-20-Years-45583>]. International Monetary Fund. Accessed 9 Aug 2020.

### 6.2.3c

#### Coverage of social insurance programs (% of population)

Scored in quartiles (0-3, where 3=best)

**Current Year Score: 3**

2016, or latest available

World Bank; Economist Impact calculations

## 6.2.4 Public confidence in government

### 6.2.4a

#### Level of confidence in public institutions

Input number

**Current Year Score: 2**

2021

Economist Intelligence Democracy Index

## 6.2.5 Local media and reporting

### 6.2.5a

Is media coverage robust? Is there open and free discussion of public issues, with a reasonable diversity of opinions?

Input number

**Current Year Score: 2**

2021

Economist Intelligence Democracy Index

## 6.2.6 Inequality

### 6.2.6a

#### Gini coefficient

Scored 0-1, where 0=best

**Current Year Score: 0.36**

Latest available.

World Bank; Economist Impact calculations

## 6.3 INFRASTRUCTURE ADEQUACY

### 6.3.1 Adequacy of road network

#### 6.3.1a

What is the risk that the road network will prove inadequate to meet needs?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 3

2021

Economist Intelligence

### 6.3.2 Adequacy of airports

#### 6.3.2a

What is the risk that air transport will prove inadequate to meet needs?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 4

2021

Economist Intelligence

### 6.3.3 Adequacy of power network

#### 6.3.3a

What is the risk that power shortages could be disruptive?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 3

2021

Economist Intelligence

## 6.4 ENVIRONMENTAL RISKS

### 6.4.1 Urbanization

#### 6.4.1a

Urban population (% of total population)

Input number

Current Year Score: 86.61

2019

World Bank

## 6.4.2 Land use

### 6.4.2a

Percentage point change in forest area between 2006–2016

Input number

Current Year Score: 0.02

2008-2018

World Bank; Economist Impact

## 6.4.3 Natural disaster risk

### 6.4.3a

What is the risk that the economy will suffer a major disruption owing to a natural disaster?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 1

2021

Economist Intelligence

## 6.5 PUBLIC HEALTH VULNERABILITIES

### 6.5.1 Access to quality healthcare

#### 6.5.1a

Total life expectancy (years)

Input number

Current Year Score: 81.86

2018

United Nations; World Bank, UNICEF; Institute for Health Metrics and Evaluation (IHME); Central Intelligence Agency (CIA)  
World Factbook

#### 6.5.1b

Age-standardized NCD mortality rate (per 100 000 population)

Input number

Current Year Score: 308.9

2019

WHO

### **6.5.1c**

**Population ages 65 and above (% of total population)**

Input number

Current Year Score: 15.99

2019

World Bank

### **6.5.1d**

**Prevalence of current tobacco use (% of adults)**

Input number

Current Year Score: 14.8

2018

World Bank

### **6.5.1e**

**Prevalence of obesity among adults**

Input number

Current Year Score: 30.8

2016

WHO

## **6.5.2 Access to potable water and sanitation**

### **6.5.2a**

**Percentage of homes with access to at least basic water infrastructure**

Input number

Current Year Score: 99

2017

UNICEF; Economist Impact

### 6.5.2b

**Percentage of homes with access to at least basic sanitation facilities**

Input number

**Current Year Score: 99**

2017

UNICEF; Economist Impact

## 6.5.3 Public healthcare spending levels per capita

### 6.5.3a

**Domestic general government health expenditure per capita, PPP (current international \$)**

Input number

**Current Year Score: 3011.49**

2018

WHO Global Health Expenditure database

## 6.5.4 Trust in medical and health advice

### 6.5.4a

**Trust medical and health advice from the government**

Share of population that trust medical and health advice from the government , More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

**Current Year Score: 2**

2018

Wellcome Trust Global Monitor 2018

### 6.5.4b

**Trust medical and health advice from medical workers**

Share of population that trust medical and health advice from health professionals , More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

**Current Year Score: 2**

2018

Wellcome Trust Global Monitor 2018