



Te Marae Ora

**Critical Preparedness, Readiness and
Response (CPR) Plan to Coronavirus
Disease 2019 (COVID-19)**

TMO CPR COVID-19

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Version 1.1

Government of the Cook Islands

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Introduction

Coronavirus Disease 2019 (COVID-19) is a new respiratory illness caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) which was first reported in December 2019, in China. The World Health Organisation declared COVID-19 a Public Health Emergency of International Concern on 30 January 2020, and a Pandemic on 12 March 2020. As of 14 May 2020, COVID-19 has been reported in over four million people in 188 countries and over 300,000 people have died.

There have been no cases reported in the Cook Islands and on 16 April 2020, the Cook Islands was declared a COVID-19 free zone. This was the result of the rapid emergency response measures undertaken by Te Marae Ora Cook Islands Minsky of Health (Te Marae Ora) and the National Health Emergency Taskforce since 22 January 2020, The National Emergency Response Plan to COVID-19 was published on 10 March 2020, and this has helped guide the response of the National Incident Management Team, the 10 Rarotonga Puna and the Pa Enuu.

While the public health emergency response to COVID-19 has been successful, the public health threat of COVID-19 remains. Border restriction measures in place since 25 March 2020, have only recently been lifted for three groups of people following their successful completion of 14 days supervised quarantine and medical clearance (SQMC) in Auckland.

Information about SARS-CoV-2 and its behaviour is concerning with complications of a fatal Kawasaki-like inflammatory syndrome among children, as well as suggestions of transmission possibly occurring during the pre-symptomatic and asymptomatic phase. Presentations and positive tests at 28 days from exposure suggest a need to extend the quarantine period to 28 days.

Purpose

The aim of this Plan is to outline Te Marae Ora's health systems strengthening measures, in order to be in a position of readiness to respond effectively and to mitigate the threat and impact of COVID-19 (prevent outbreaks, delay spread, slow and stop transmission) until such a time when a vaccine or proven treatment is available.

Vision

All people living in the Cook Islands living healthier lives and achieving their aspirations.

Legislative Framework

In February 2020, COVID-19 was made a notifiable and dangerous condition (Public Health Act 2004). The COVID-19 Act 2020, and Ministry of Health (COVID-19: Supervised Quarantine on Arrival in Rarotonga) Regulations 2020 provide legal powers to support public health action.

The Ministry of Health (International Health Regulations Compliance) Regulations 2014 is legislated through the Ministry of Health Act 2013. It authorises TMO to control disease spread at borders, trace people who are infected or suspected to have a notifiable disease, and ensure they undergo medical examination or treatment. The International Health Regulations (IHR) 2005 is designed to prevent, protect against, control and provide a public health response to the international spread of disease. Under the IHR, the Cook Islands is obligated to notify the World

Health Organisation (WHO) of public health events of international concern, and measures implemented which interfere with international trade or travel.

Leadership and Governance

The organisation structure of Te Marae Ora has changed to reflect the reorientation of the health system and service delivery model which now includes a focus on primary care and preventive community based health services.

The National Health Emergency Taskforce (NHET) will continue to meet weekly and provide advice to the Minister of Health and Cabinet as required. Te Marae Ora Executive and the Health Incident Management Team (IMT) will direct and coordinate the health response in collaboration with the Rarotonga health centres/Punas as well as the Pa Enea (Annex 1).

Communication and Consultation

Te Marae Ora will lead communications targeting all levels of society to ensure a timely, effective and coordinated response. Nationwide consultation will enable the mobilisation of community action that seeks to protect vulnerable members, such as aged persons, those with non-communicable diseases (NCDs) or disabilities, and others.

Public Health Response

SARS-CoV-2, is transmitted through the following modes: (1) Large droplet spread; (2) Transmission through aerosolised spread (for example coughing, sneezing); (3) Contact – direct or indirect – with respiratory secretions (for example contaminated surfaces). The incubation period (time between infection and onset of symptoms) is estimated to be 14 days, however, new data suggest this might extend to 28 days. While some cases are asymptomatic, virus transmission is thought to occur during the pre-symptomatic and asymptomatic period.

This Plan seeks to flatten the epidemic curve and delay, slow and stop the spread of infection, optimise care for all patients especially those who are seriously ill, and therefore alleviate the burden on the nation's health system, economy and society. This will require targeted interventions, such as good hand, face and cough hygiene practices, and physical distancing measures all the time. Well individuals will undertake quarantine while infected individuals isolate in their homes.

WHO Criteria for countries to consider to 'enter a state of low level or no transmission'

1. That transmission is controlled;
2. Health systems capacity in place to test, isolate, & treat every case, and trace every contact;
3. Outbreak risks minimised in settings such as health facilities and nursing homes;
4. Preventative measures in place for work, schools, places where people travel or visit;
5. That importation risks can be managed; (Border controls) and
6. Communities are fully educated and engaged and empowered to adjust to the 'new norm'.

The Cook Islands Emergency Response Plan to COVID-19

The Plan has three stages, four codes and four phases as outlined below.

STAGES	CODE	PHASE
Initial Action Stage	Blue	Preparation and Readiness (Delay entry of disease)
Targeted Action Stage	Yellow	Alert (Delay widespread disease transmission)
	Red	Activation (Mitigate impact of the disease)
Stand-down stage	Green	Post-event (Recovery)

Within each of the action stages are targeted interventions under the following functions: governance and legislation; surveillance and intelligence; border measures; resources and logistics; communication and consultation; health critical care and public health management; and social welfare and support (Annex 2)

Stages, Codes and Phases of an Emergency Response

There are four phases identified in the emergency response to COVID-19, across three stages:

STAGES	CODE	PHASE	THRESHOLDS/TRIGGERS
Initial Action Stage	Blue	Preparation and Readiness (Delay entry of disease)	Disease is severe and spreads easily from person to person but is occurring outside the Cook Islands. Measures focus on delaying entry of the disease through hand washing, cough etiquette and social distancing. Minimal disruption to society such as travel advisories and restrictions. Reducing business as usual.
Targeted Action Stage	Yellow	Alert (Delay widespread disease transmission)	Disease is severe AND spreads easily from person to person, but the disease is not spreading widely in the Cook Islands and is being contained. Moderate disruption to society such as quarantine and isolation.
	Red	Activation (Mitigate impact of the disease)	Disease is severe AND is spreading widely. The health system is unable to cope with the situation. Major disruption to society such as school closures, work from home notices and disruption of law and order in the community.
Stand-down stage	Green	Post-event (Recovery)	When the disease is declining, and can be managed under normal business arrangements. Transition from emergency response to business as usual.

Critical preparedness readiness and response actions for each transmission scenario for COVID-19

Te Marae Ora identifies the following actions based on the infection transmission scenarios: (adapted from WHO)

	NO CASES	SPORADIC CASES	CLUSTERS OF CASES	COMMUNITY TRANSMISSION
Transmission Scenario	No reported cases	One or more cases, imported or locally applied	Most cases of local transmission linked to chains of transmission	Outbreaks with the inability to relate confirmed cases through chains of transmission for a large number of cases, or by increasing positive tests through sentinel samples
Aim	Stop transmission and prevent spread	Stop transmission and prevent spread	Stop transmission and prevent spread	Slow transmission, reduce cases numbers, end community outbreaks
Priority Areas Of Work				
Emergency response mechanisms	Activate emergency response mechanisms	Enhance emergency response mechanisms	Scale up emergency response mechanisms	Scale up emergency response mechanisms
Risk communication and public engagement	Educate and actively communicate with the public through risk communication and community engagement	Educate and actively communicate with the public through risk communications and community engagement	Educate and actively communicate with the public through risk communication and community engagement	Educate and actively communicate with the public through risk communication and community engagement
Case finding, contact tracing and management	Conduct active case finding contact tracing and monitoring, quarantine of contacts and isolation of cases	Enhance active case finding contact tracing and monitoring, quarantine of contacts and isolation of cases	Intensify case finding contact tracing and monitoring, quarantine of contacts and isolation of cases	Continue contact tracing where possible, especially in newly infected areas, quarantine of contacts and isolation of cases, apply self-initiated isolation for symptomatic individuals
Surveillance	Consider testing for COVID-19 using existing respiratory disease surveillance systems and hospital based surveillance	Implement COVID-19 surveillance using existing respiratory disease surveillance systems and hospital based surveillance	Expand testing for COVID-19 using existing respiratory disease surveillance systems and hospital based surveillance	Adapt existing surveillance systems monitor disease activity (e.g. through sentinel sites)
Public Health Measures	Hand, face hygiene, respiratory etiquette, practise physical distancing, disinfect surfaces	Hand, face hygiene, respiratory etiquette, practise physical distancing, disinfect surfaces	Hand, face hygiene, respiratory etiquette, practise physical distancing, disinfect surfaces	Hand, face hygiene, respiratory etiquette, practise physical distancing, disinfect surfaces

	NO CASES	SPORADIC CASES	CLUSTERS OF CASES	COMMUNITY TRANSMISSION
Laboratory testing	Test suspect cases as per TMO definition, contacts of confirmed cases, test patients identified through respiratory disease surveillance	Test suspect cases as per TMO definition, contacts of confirmed cases, test patients identified through respiratory disease surveillance	Test suspect cases as per TMO definition, contacts of confirmed cases, test patients identified through respiratory disease surveillance	Test suspect cases as per TMO definition, and symptomatic contacts of probable/confirmed cases, test patients identified through respiratory disease surveillance. If testing capacity is overwhelmed prioritise testing in health care settings and vulnerable groups. In closed settings limit test to first symptomatic suspect case.
Case Management	Prepare to treat patients. Ready hospital for potential surge	Treat patients and ready hospital for surge, develop triage procedures	Prepare to treat patients. Ready hospitals for potential surge	Prioritise care and activate triage procedures. Scale up surge plans for health facilities
	Promote self-initiated isolation of people with mild respiratory symptoms to reduce the burden on health system	Promote self-initiated isolation of people with mild respiratory symptoms to reduce the burden on health system	Activate surge plans for health facilities	Implement self-initiated isolation of people with mild respiratory symptoms to reduce the burden on health system
Infection Prevention and Control	Train staff in IPC and clinical management specifically for COVID-19	Train staff in IPC and clinical management specifically for COVID-19	Train staff in IPC and clinical management specifically for COVID-19	Retrain staff in IPC and clinical management specifically for COVID-19
	Prepare for surge in health care facility needs, including respiratory support and PPE - report stocks supplies weekly	Prepare for surge in health care facility needs, including respiratory support and PPE - report stocks supplies daily	Advocate for home care for mild cases, if health care systems are overwhelmed, and identify referral systems for high risk groups	Implement health facilities surge plans - report stocks supplies twice daily
Societal Response	Develop all-of-society and business continuity plans	Implement all-of-society, repurpose government and ready business continuity plans	Implement all-of-society resilience, repurpose government, business continuity, and community services plans	Implement all-of-society resilience, repurpose government, business continuity, and community services plans

Core minimum requirements to ease public health restrictions

COVID-19 free Cook Islands has resulted in many failing to understand the importance of maintaining and practising public health measures. This is difficult when COVID-19 continues to circulate outside the Cook Islands borders.

WHO provides a framework to determine minimum core requirements to ease public health restrictions in the Cook Islands. Te Marae Ora must remain in a state of preparedness and readiness and poised to respond rapidly to any threat of COVID-19 entering the Cook Islands border. Te Marae Ora's progress towards a state of readiness can be illustrated using traffic lights: green = high, amber = medium, red = low.

Table 1: Core minimum requirements to ease public health restrictions.

	Recommended Status	Criteria	Key considerations	Progress
Country-level coordination, planning & monitoring	Country incident management system (IMS) structure and resourcing reflect epidemiological situation. Contingency planning for rapid escalation or reactivation in place with adequate resources (incl. HR) to respond	Core functions and planning should include decisions around: <ul style="list-style-type: none"> • how COVID-19 will be monitored (including detection & prevention) • how monitoring will occur (e.g. surveillance activities) • which organisational positions are responsible for monitoring (how surveillance will be collected, collated & interpreted) • what steps will be taken in the event of COVID-19 detection (re-escalation plan) • threshold and triggers for reactivation 	<ul style="list-style-type: none"> • How to rapidly reactivate or scale up IMS structures in the event of a cluster of cases or outbreak • Sustained availability of resources (incl. HR) needed to reactive or scale up IMS • Evaluation of IMS team arrangements, resourcing and training during 'watch' periods is essential to support response capabilities 	<p>Jan 2020: National Health Emergency Taskforce established</p> <p>Mar 2020: National Emergency Response Plan endorsed</p> <p>Consultation with Pa Enea re COVID-19 National Prayer Service COVID-19 National IMS structure implemented</p> <p>COVID-19 Budget (\$5M)</p> <p>COVID-19 Act 2020 enacted</p>

	Recommended Status	Criteria	Key considerations	Progress
Surveillance, rapid response teams & case investigation	Active surveillance in place for detection of cases and confirmation of an outbreak. This includes surveillance for COVID-19, ILI, SARS; and event-based surveillance	<ul style="list-style-type: none"> ● surveillance systems are enhanced ● rapid molecular testing such as GeneXpert in country for COVID-19 ● mechanism in place for referral of sample to reference laboratory for RT-PCR testing ● rapid response teams are trained ● staff are trained in contact tracing, including extra staff required for high numbers of close contacts 	Lifting lockdown measures does not equate to a total elimination of risk from COVID-19. Vigilance remains essential. Therefore, the need for active surveillance to ensure timely detection of new cases is critical. It is also important to remain attentive to any community spread of diseases with similar symptoms to COVID-19 that are prevalent in the Pacific incl. influenza and dengue fever	<p>Jan 2020: Surveillance systems established Daily situation reports issued</p> <p>Mar 2020: Contact tracing training</p> <p>May 2020: GeneXpert test in country</p>

	Recommended Status	Criteria	Key considerations	Progress
Risk communication & community engagement	Whole of country sensitised to alert levels, its potential fluctuations, given the epidemiological context, and public health measures associated with these levels, and are mentally and physically prepared for future change and reinstating of restrictive public health measures. Continue prevention and precautionary messaging on physical distancing and suspect case reporting	<ul style="list-style-type: none"> undertake significant community sensitisation through communication campaigns (print/digital) and community outreach achieve community and household preparedness through community outreach efforts 	<ul style="list-style-type: none"> if restrictive measures are eased, there is potential the public will interpret this as govt. placing public safety at risk. However, maintaining restrictive measures whilst there are no cases could likely cause undue stress and frustration. Any easing of public health measures must be communicated clearly and provide rationale for govt. decision-making failure to sensitise the community to existing risk and potential future escalation in cases, could lead to govt. criticism if cases are detected, or an outbreak occurs continue communication on self-care, to address public stress and anxiety experienced over protracted periods of time as part of ongoing preparedness efforts; govt. and other sectors should continue to support household and community preparedness for scenarios of cluster of cases and widespread community transmission. This will help build public confidence in govt. efforts. failure to clearly communicate alert levels and corresponding public health measures may generate misinformation and confusion. Disseminate clear guidance on easing of restrictions, especially if these are staggered across various areas of life e.g. transportation, business and services etc. 	<p>Jan 2020: Periodic NHET meetings</p> <p>Mar 2020: Communications Plan COVID-19 implemented</p> <p>COVID-19 website established</p> <p>Periodic IMS meetings</p> <p>Periodic Rarotonga Puna meetings</p> <p>Apr 2020: Periodic Pa Enea Puna meetings</p>

	Recommended Status	Criteria	Key considerations	Progress
Domestic travel considerations	Enable domestic travel, balanced with the risk of preventing inter-island spread of COVID-19	Mechanisms are in place for appropriate use of PPE by transportation staff, physical distancing measures being implemented, and availability of testing on outer islands; if possible and necessary. These measures should be clearly communicated by govt. to airlines, shipping companies, sea and land transport providers.	<ul style="list-style-type: none"> ● guidance must be provided to airports, airport staff, cabin crew, and public for how these restrictions are communicated and enforced ● guidance must be provided for physical distancing measures on planes (separating passengers and reducing overall passenger numbers) ● require regular and thorough disinfection of planes ● adequate supply of PPE for cabin crew and airport staff is available ● potentially reducing flight schedules may be considered ● there is adequate availability of hand sanitisers and appropriate hand hygiene promotions onboard planes and at airports ● clear communication about the services available on domestic flights so there is no misunderstanding about provision of blankets, water, snacks ● clear communication to the travelling public, about the additional hygiene measures taken by airlines, for their safety 	<p>Mar 2020: Domestic travel regulations established</p> <p>Apr 2020: Domestic travel restrictions lifted</p> <p>Exit screening measures established at airport and seaport</p>

	Recommended Status	Criteria	Key considerations	Progress
Essential health services	<p>That essential health services have been identified with modes of delivery adapted to protect those most vulnerable to severe impacts of COVID-19. This specifically includes those who are elderly, have NCDs or with other chronic illnesses e.g. TB, HIV, and others who are immunocompromised. Services should be adapted to reduce physical contact, improve spacing, and reduce overcrowding in all facilities. Mechanisms are in place to essential health services are delivered.</p>	<ul style="list-style-type: none"> ● systems are in place to provide vulnerable groups with essential health services while reducing their exposure to crowded environments, and where appropriate reducing frequency of face-to-face patient-provider contacts ● essential health services are continued, including for child and maternal health, communicable, and non-communicable disease control ● guidance is provided to the public on safe ways of accessing essential health services, including alternative sites, remote modes for appointments. Instructions that those who may have COVID-19 like symptoms must not use these services but must contact COVID-19 services/numbers 	<ul style="list-style-type: none"> ● continue mechanisms to reduce need for visits to facilities should be maintained to reduce risk of overcrowding and to minimise contacts, while maintaining essential services incl. those related to maternal health ● maintain rigorous attention to infection prevention and control ● facilities for COVID-19 checks to be separated from normal outpatient checkup 	<p>Feb 2020: Coughs and colds clinic established Mar 2020: Primary care and emergency services relocated to Tupapa community clinic Primary care - phone consults and appointments - COVID testing, influenza vaccinations Public health relocated to Rarotonga Puna - includes health checks, blood and COVID testing, influenza vaccinations, Tutaka, Operation Namu and planting Oral health - dental emergencies only</p>

	Recommended Status	Criteria	Key considerations	Progress
Infection control and prevention (clinical and community settings)	<p>Basic IPC guidelines are provided to IPC staff</p> <ul style="list-style-type: none"> ensure IPC staff disseminate information to essential facilities within and outside health sectors e.g. schools, workplaces, churches, prisons etc. healthcare workers involved in COVID-19 care, especially in high-risk environments e.g. ICU, emergency rooms, HDU are trained and rigorously exercise appropriate PPE use methods and processes <p>Basic IPC training will include:</p> <ul style="list-style-type: none"> Standard precaution (hand hygiene, PPE, respiratory hygiene, waste management, environmental cleaning, safe handling, cleaning and disinfection of patient care equipment) Transmission-based precautions (droplet/contact/airborne precautions) WASH focal points ensure essential needs are identified and basic WASH supplies and infrastructure are available in healthcare facilities, essential workplaces, schools, and in the community 	<ul style="list-style-type: none"> national IPC focal point has basic training in IPC national IPC conduct basic IPC training with other relevant IPC officers within and outside the health sectors (e.g. cargo handling) 	<ul style="list-style-type: none"> access to IPC information, training and advisory materials estimates of PPE stock is done locally, and stock is held at adequate level with necessary supply chain management embedded daily IPC measures across all health facilities to ensure ongoing/sustainable IPC programme and infrastructure, both within the healthcare settings and other sectors and community at large 	<p>Mar 2020: IPC training for TMO and border agency staff, and Pa Enua (Aitutaki)</p> <p>May 2020: IPC nurse recruited</p> <p>IPC training for SQ facility</p>

	Recommended Status	Criteria	Key considerations	Progress
Mental health and psychosocial support	Priority intervention area in preparedness, communications and actions to minimise the risk of mental health and wellbeing of the population	<ul style="list-style-type: none"> community members can access support including psychological first aid, gender-based violence support, child protection programmes, and referral mechanisms support is in place to enable and establish increased identification of the most vulnerable people requiring support and provide an environment that increases help-seeking behaviour processes and systems are in place to support self-care for health workers, social workers and other frontline workers 	<ul style="list-style-type: none"> consider impact of restrictions and how to mitigate frustration, anxiety, or fear through communication strategies. Also consider that easing restrictions may lead expectations of going back to normal, which could unintentionally increase transmission of the disease ensure communications and community engagement is inclusive of mental health messaging to promote access to services most people have coping mechanisms to deal with situations and many will recover naturally. However, others may experience serious distress and require additional mental health support to support their natural recovery process. It is also important to identify high-risk cases immediately and link to proper services. support should be ongoing post COVID-19 free declaration particularly given socioeconomic impact of the pandemic consider needs of people in vulnerable situations or at risk for stigma e.g. health workers, people with pre-existing mental health needs, people with disabilities, children (girls and boys) - tailor support and information to suit individual needs explore ways teachers can support mental health support, if schools are open 	<p>Mar 2020: 20 volunteers (psychological aides) engaged</p> <p>Corrective services response plan COVID-19 implemented</p> <p>Apr 2020: Community workshops, counselling and training provided</p> <p>May 2020: Counselling and workshops for private sector and Pa Enea</p>

	Recommended Status	Criteria	Key considerations	Progress
Laboratory	Molecular testing is available and accessible for diagnosis and confirmation of COVID-19 cases either in country or referred to a reference laboratory with results available within 1-7 days. Capacity to isolate cases until results are confirmed and contact tracing is completed.	Core set of criteria needed for collection, transportation and testing of clinical specimens: <ul style="list-style-type: none"> ● staff competent in specimen collection ● transport and packaging staff trained - triple packaging/ laboratory reagents/transport available ● tests available, laboratory passed readiness and staff trained in test protocols or shipping to international reference laboratory - quality assurance and control systems in place, laboratory machine fully operational ● results available for return within 1-2 days if in country or 7 days with reference laboratories - results documented and reported 	<ul style="list-style-type: none"> ● some countries do not have local testing available yet and flight restrictions delays shipping of samples and thereby test results. while waiting for test results the patient should be isolated, contact tracing started in order to identify and appropriately manage contacts to minimise potential further spread ● quality assurance and control processes for laboratory testing incl. sample collection, laboratory methods are in place, and there is a mechanism to periodically review ● if few tests are conducted it is essential staff are regularly assessed to ensure they retain competence in testing methods ● follow SOPs and testing algorithms 	<p>Mar 2020: IPC training for laboratory staff</p> <p>May 2020: 70 Test cartridges for GeneXpert machine received, more to follow</p> <p>1351 swabs taken to date (all negative)</p> <p>May 2020: RT-PCR testing capability to be purchased</p> <p>3,000 Antibody serology test kits to arrive</p>

	Recommended Status	Criteria	Key considerations	Progress
Case management & clinical preparedness	There is in-country capacity for case management of COVID-19 cases and adequate level of health system capacity to provide essential health services to non COVID-19 cases	<ul style="list-style-type: none"> ● continued vigilance and screening at entry points of all healthcare facilities ● facility specified for isolation is ready to be used with the option of scalability ● a health service preparedness plan for COVID-19 is in place and health workers are sensitised to their role ● simulations or table top exercises to test plans undertaken, including hospital walk-throughs 	<ul style="list-style-type: none"> ● continuous learning/training opportunities for health workers ● ensuring HR, skill, equipment capacity to provide adequate level of ICU/HDU capacity ● identifying vulnerable groups ● estimate pharmacy and other consumables needed and stockpile ● ensuring there are protocols in place for ambulance and referral, limitation of care and palliative protocols, hospital repurposing, and patient flow ● ensure there are protocols in place for the triage, early recognition, and source control (isolating patients with suspected COVID-19) ● clear implementation of hospital strategy for admission, internal transfer, referral and discharge of SARI patients, in line with relevant criteria and operational protocols 	<p>Jan and Feb 2020: Travel advisories issued</p> <p>Mar 2020: Isolation ward (32 beds) established</p> <p>Cook Islands international and domestic border closed</p> <p>Vulnerable groups identified in community - with support provided</p> <p>Significant PPE/consumables ordered</p> <p>Apr 2020: Supervised quarantine and medical clearance process implemented for 260 stranded Cook Islanders in NZ</p> <p>Oxygen plant to be purchased</p> <p>May 2020: Negative pressure room established</p> <p>CT scan to be purchased</p>

Te Marae Ora – Essential Services in Code Blue, Code Yellow and Code Red

Te Marae Ora will continue to provide essential health services. The range of services will depend on the Code.

Essential service areas	Considerations	Resourcing	Code Blue	Code Yellow	Code Red
			All services - PH restrictions APPLY	Limited services - PH restrictions RECOMMENDED	Limited services - PH restrictions MANDATORY
Prevention and management of communicable diseases					
Vaccination	Routine immunisation schedule adjusted and intensified early to close immunity gaps	Ensure facility used adheres to hygiene and physical distancing measures Ensure availability of vaccines and supplies for routine immunisation (at least 6 months) Appropriate storage levels (cold chain management) Only trained nurses for immunisation are used	✓	✓	✗
TB	Maintain services and IPC to reduce transmission of TB. Diagnostic and home-based care preferred.	Adequate stock of TB medicines (1-2 months) provided to patients to take home.	✓	✓	✗
Surveillance for other disease outbreaks	Routine surveillance should be ongoing including syndromic; event based; vaccine preventable; notifiable disease surveillance. Any alerts, unusual disease patterns should be investigated. Routine reports produced to inform rapid response.	Maintenance of routine surveillance systems and human resourcing.	✓	✓	✓
HIV/STIs	Continue people-centred HIV services including availability of condoms, pre-exposure prophylaxis, treatment, and HIV/STIs testing. Consider options to reduce patient encounters at facilities (remote consultations and provision of multi-month dispensing of medication) Confidentiality for those with HIV must be maintained	Sufficient supplies for multi-month dispensing (3-6 months) Ensure clients know where treatment/support is available	✓	✓	✗

Essential service areas	Considerations	Resourcing	Code Blue	Code Yellow	Code Red
Reproductive health care services					
Family planning	Maintain services while utilising options to reduce need for visits to health facilities. Utilise media to ensure public are informed of services and risk reduction. Services can include remote consultation, one-stop clinic appointment including post-partum family planning and immunisation, multi-month provision of medication, reducing frequency of check-ups	Conduct in dedicated clinic/separate room - adhere to public health measures. Treatment to consider infection risks. Remote consultation and decentralised consultations may also be considered. Adequate stock of medicines and condoms.	✓	✓	✘
Antenatal care services	Home visits consider provision of integrated service e.g. well child checks. Reduce to minimum of four face-to-face contacts in total with virtual follow up appointments in between. Minimise frequency of visits through ensuring scans etc. are provided within a single visit, involving few staff as possible. Support for development of birth preparedness and complication readiness plans. Women with mild COVID-19 symptoms encouraged to remain at home in early (latent phase) labour	Adequate stocks of prophylactic medicines (iron and folate, calcium etc.) Home visits should consider COVID-19 risks Reorganisation of services/patient flow to minimise wait times and contact with other patients Minimum equipment and supplies Standard PPE for healthcare workers	✓	✓	✓
Childbirth	Births must be delivered by skilled attendant Conduct labour and delivery preferably in a dedicated room within health facility	Sufficient supplies of relevant equipment/medicine. Standard PPE for healthcare workers	✓	✓	✓
Postnatal care services	Continue with three contacts (day 1, day 3 and day 7) Prioritise face-to-face visits for women with known psychosocial vulnerabilities; operative birth; premature/low birthweight baby; other medical and neonatal complexities Home visits are preferable - must comply with physical distancing measures however health staff safety must be maintained	Adequate stocks of prophylactic medicines (iron and folate, calcium etc.) Home visits should consider COVID-19 risks Point of care tests for haemoglobin	✓	✓	✓

Essential service areas	Considerations	Resourcing	Code Blue	Code Yellow	Code Red
Postnatal care - healthy newborn	<p>Minimum three contacts (day 1, 3 and 7)</p> <p>Provide guidance to mothers with suspected or confirmed COVID-19 on how to safely care for newborn</p> <p>Consider visits at health clinic and align with visits for mothers</p> <p>Home visits are preferable - must comply with physical distancing measures</p> <p>Remote consultations for breastfeeding support, specialised postnatal advice, early parenting advice and guidance</p>	<p>Comply with IPC protocols if mother/caregiver is displaying respiratory symptoms</p> <p>Healthcare workers trained to identify sick newborns by directing assessing for danger signs during home visits</p>	✓	✓	✗
Postnatal care - sick newborn	<p>Minimise movement of commonly used equipment for neonatal resuscitation and stabilisation</p> <p>Enhance droplet/contact precautions if newborn remains in hospital</p> <p>Avoid nasal or oral suction for babies born spontaneously breathing</p> <p>Follow up visit after discharge to be referred to community clinics</p> <p>Minimum three contacts (day 1, 3 and 7)</p>	<p>Infant resuscitation/assessment to occur where infant is born - avoid transfer</p> <p>Neonates transferred in closed incubator if on respiratory support. Where possible, all procedures and investigations should be carried out in the single room with minimal staff present</p> <p>Comply with IPC protocols if mother/caregiver is displaying respiratory symptoms</p> <p>Train staff at hospital to address complications to minimise contacts</p> <p>All equipment should be cleaned as per IPC measures</p>	✓	✓	✓
Nutrition - Infant and young child feeding	<p>Mothers with suspected or confirmed COVID-19 (isolation) advised to follow respiratory hygiene during feeding</p> <p>Intensify promotion of safe hygiene behaviours for new mothers/families</p> <p>Integrate counselling into home visits for postnatal care and ensure healthcare workers are trained accordingly</p> <p>Donations of breastmilk substitutes should not be accepted</p> <p>Information on healthy feeding options for infants and young children in context of COVID-19 may be needed</p> <p>If severe illness prevents mother from breastfeeding, provide support to express milk and safely feed infant</p>	<p>Train healthcare workers on counselling</p>	✓	✓	✗

Essential service areas	Considerations	Resourcing	Code Blue	Code Yellow	Code Red
Nutrition - micronutrient supplementation, detection and management of acute malnutrition	<p>Reduce frequency of visits - approximately once per month for children with severe malnutrition</p> <p>Maintain frequency of micronutrient supplementation</p> <p>Emphasise strong hygiene measures for those caring for infants (<6 months) and of any feeding equipment</p> <p>Reduce family member visits to primary family/caregiver only</p> <p>Deliver treatment in the community via home or remote means - maintain physical distancing measures</p> <p>Minimal staff and strict IPC protocols</p>	<p>Ensure sufficient supply of medicine (e.g. vitamin A, albendazole, zinc)</p> <p>Train mothers/caregivers</p> <p>Train healthcare workers</p>	✓	✓	x
Management of sick child (with focus on pneumonia and diarrhoea)	<p>In settings with COVID-19 transmission, any child with cough might have COVID-19 and/or acute respiratory infection of another origin. Refer cases for further investigation.</p> <p>Raise awareness to identify danger signs for pneumonia and when to seek medical attention</p> <p>Treat all suspected pneumonia cases (separate well-ventilated room with physical distancing)</p> <p>Consider home visits - identify well-ventilated location outdoors for consultation instead of entering house (maintain physical distancing and wear PPE if available)</p> <p>In the absence of PPE, consider no touch policy that focuses on history of symptoms and clinical observation</p> <p>Follow normal procedures for diarrhoea and educate in identifying signs of dehydration and when to seek medical attention</p>	<p>Remote means should be considered for consultation/training</p> <p>Physical examination for pneumonia requires PPE (gloves and surgical mask)</p> <p>Healthcare workers trained with key messages on COVID-19 to mitigate misinformation and stigmatisation in their communities that may negatively impact care seeking for pneumonia and diarrhoea</p>	✓	✓	✓
RHD	<p>Ensure continuity of secondary prevention - treatment with benzathine penicillin</p> <p>Relocate service delivery from delivery of COVID-19 care with strong triage in place</p>	<p>Ensure benzathine penicillin and associated supplies are adequate</p>	✓	✓	x

Essential service areas	Considerations	Resourcing	Code Blue	Code Yellow	Code Red
Management of chronic diseases					
NCDs and risk factors - diabetes, cancer, cardiovascular disease, chronic respiratory disease, hypertension, mental health conditions	Support for those diagnosed with NCDs (including mental health conditions) with particular focus on provision of medicines and supplies for ongoing management Less frequent clinic appointments while ensuring the service is not compromised Decentralise routine NCD services to areas away from COVID-19 screening Limit number of patients per day by increasing clinic days, spacing of appointments, prescription for refills for several months Reduce face-to-face encounters through: remote consultations, home delivery of medicines, mobilise community healthcare workers for routine services e.g.. blood pressure, blood glucose, foot inspections, wound care	Adequate stocks of medicine needed to ensure multiple months supply Decentralise stock (optional) Decentralise services (remote delivery) - monitoring system needed with appropriate equipment in stock Oversight and training of community healthcare workers (remotely)	✓	✓	✓
Cancer treatment, including palliative	Palliative care will be maintained while considering compromised immune system in most cancer patients Consider alternative sites for treatment away from management of COVID-19 patients/screening	Ensure sufficient supply of cancer medication Ensure staff pay attention to own health and minimise risk to patients	✓	✓	✓
Renal dialysis	Complicated cases identified early and referred for further care overseas	Ensure careful screening of all patients	✓	✓	✓
Hospital/primary care/oral health services					
Emergency surgery	Postpone all non-essential elective surgery, including invasive and diagnostic procedures Maintain emergency surgery capability and capacity	Rigorous IPC measures needed Ensure sufficient supplies of consumables and PPE for surgery and review future demands	✓	✓	✓

Essential service areas	Considerations	Resourcing	Code Blue	Code Yellow	Code Red
Emergency department	Maintain separation of patients coming for COVID-19 screening from others (rigorous screening) Hospital admissions limited to patients requiring essential or life saving treatment General principle - all patients should be considered infectious and some may be asymptomatic	Screen all patients prior to entry - use appropriate physical distancing Separate patients with respiratory symptoms from those without respiratory symptoms Ensure staff wear appropriate PPE Plan for mobilisation of staff to cover peak periods/provide care	✓	✓	✓
Clinical support services - radiology, laboratory, pharmacy, biomedical, patient referrals. Health specialist visits	Postpone health specialists visits Clinical support services should be scaled down to focus on supporting delivery of essential and life saving services	Where possible, establish separate location/designated staff members for laboratory testing and imaging of COVID-19 cases	✓	✓	x
Dental emergencies	All non-urgent dental treatment should be postponed Dental emergencies include: swelling of face, neck or mouth; dental trauma causing change in position of teeth, soft tissue damage and/or significant pain; significant bleeding; difficulty opening jaw and/or swallowing; referral from specialist; dental pain causing loss of sleep; ulcers persisting for 3+ weeks	Ensure sufficient PPE for healthcare workers	✓	✓	x
Other essential health and social services					
Gender based violence	Maintain key services and integrate with other services: screening/health checks of all women in contact with health services Sexual assault examination	Remote services should be prioritised	✓	✓	✓
Child protection	Maintain key services and support victims of child abuse Children of parents who are quarantined or hospitalised with need to be supported	Services should be available in line with usual processes, with special consideration for quarantined or isolated carers	✓	✓	✓
Support for people living with a disability	Maintain support however consideration should be given to reducing non-critical appointments	Maintain home visits, strict IPC measures needed	✓	✓	✓

Essential service areas	Considerations	Resourcing	Code Blue	Code Yellow	Code Red
Overarching health services					
Infection prevention and control	IPC measures must be rigorously applied across all essential health services/facilities Clear separation of COVID-19 and non COVID-19 treatment is critical Protect staff, clean facilities and ensure appropriate availability of all associated consumables at all locations where treatment services are provided	Ensure sufficient PPE	✓	✓	✓
Procurement and logistics - medicines, laboratory supplies and consumables	Plan ahead for procurement and consider alternative sources	Ensure provision of several months of routine medicines, consumables etc.	✓	✓	✓
Facilities	Maintain efforts to separate COVID-19 care and non COVID-19 care (consider use of community clinics for non COVID-19 care)	Ensure IPC measures and public health measures maintained	✓	✓	✓
Staffing	Health staff encouraged and supported to report in sick if they have any symptoms (no matter how mild) consistent with COVID-19 Staff taking care of or screening for COVID-19 Counselling and support should be provided in consideration of burden and demand they are facing and stress	Protect staff through appropriate use of PPE Efforts to increase HR or collaborate with the community to fill specific demands which do not require clinical skills Support and training required	✓	✓	✓
Remote consultations/tele medicine	Reduce travel needs for patients and reduce use of clinics and hospital Continue service provision through telephone or other communication mediums	Consider cybersecurity, maintenance of patient confidentiality	✓	✓	✓
Resources/ Funding	Maintain services for essential health services	Ensure sufficient resources are allocated to enable the continuation of key essential health services	✓	✓	✓
Health Information and patient information	Ensure patient records are still accessible and routine recording is not compromised	Support and training required	✓	✓	✓

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Annex I: Community Management Structures

Rarotonga Puna		Pa Enuā DRM Committees	
1.	Ngatangia	1.	Mangaia
2.	Matavera	2.	Aitutaki
3.	Tupapa Maraerenga	3.	Atiu
4.	Takuvaine Tutakimoa	4.	Mauke
5.	Titikaveka	5.	Mitiaro
6.	Murienua	6.	Penrhyn
7.	Akooa	7.	Manihiki
8.	Ruaau	8.	Rakahanga
9.	Nikao Panama	9.	Palmerston
10.	Avatiu, Ruatonga, Atupa	10.	Pukapuka
		11.	Nassau

Figure 1. Map showing community districts (Puna) for Rarotonga



Annex II: National Response Framework

	Initial Action Stage	Targeted Action Stage		Stand-down Stage
	Code Blue	Code Yellow	Code Red	Code Green
Governance and Legislation	<ul style="list-style-type: none"> Emergency governance arrangements – NDRMC, NHET, NRE COVID-19 declared transmissible notifiable condition and dangerous condition Activation of Health Emergency Operations Centre and Incident Management System (IMS) Activate IHR reporting requirements 	<ul style="list-style-type: none"> Assess and advise on declaration of State of Emergency Convene NDRMC, NRE and NHET 24/7 coverage of National Emergency Operations Centre Possibility of Parliament convening urgently to pass relevant legislation 	<ul style="list-style-type: none"> Declaration of State of Emergency Emergency response fully activated Circumstances to allow Parliament to extend a public health emergency Police to maintain law and order 	<ul style="list-style-type: none"> No longer State of Emergency Debriefing sessions – NDRMC, NRE, NHET and IMS
Surveillance and Intelligence	<ul style="list-style-type: none"> Activate national capacity for disease surveillance and containment Air/sea/land traffic surveillance Weather reports Monitor official and non-official reports 	<ul style="list-style-type: none"> Monitor and analyse information Monitor flu-like symptoms presenting at clinics Community surveillance Testing lab samples overseas Monitor official and non-official reports 	<ul style="list-style-type: none"> Intensify surveillance Monitor all surveillance systems Community surveillance Testing lab samples overseas Monitor official and non-official reports 	<ul style="list-style-type: none"> Review/evaluate surveillance systems Monitor official and non-official reports Update protocols
Border Measures	<ul style="list-style-type: none"> Monitor incoming passengers for signs/symptoms In-flight, airport and maritime announcements Liaise with airlines/shipping operators Assess entry to the Pa Enea Health declaration and travel history Early travel restrictions (quarantine) to delay entry 	<ul style="list-style-type: none"> Assess travel restrictions and revise Health declaration and travel history Assess entry to the Pa Enea Cargo staging areas to minimise interactions between cargo handlers at ports and workers in country Strict infection control procedures observed and regular decontamination Provide logistical assistance to repatriate foreign nationals 	<ul style="list-style-type: none"> Assess travel restrictions and revise Assess entry to the Pa Enea Maintain cargo staging areas to minimise interactions Strict infection control procedures observed and regular decontamination Provide logistical assistance to repatriate foreign nationals 	<ul style="list-style-type: none"> Review travel restrictions and revise Transition airlines/shipping operators back to normal business arrangements Update in-flight, airport and maritime announcements
Resources and Logistics	<ul style="list-style-type: none"> Stockpile of personal protective equipment (PPE) e.g. face masks, hand gel, full gear Health system capacity e.g. isolation areas, flu clinics, HDU/ICU capability Standby accommodation and infection control providers Secondment of public servants Capacity to maintain essential services 	<ul style="list-style-type: none"> Assess stockpiles of PPE in case of shortages Additional resources and finances mobilised as needed Monitor health system capacity and establish triggers if full capacity is reached Health professionals on standby as needed Maintain essential services (food, water, energy, waste disposal, 	<ul style="list-style-type: none"> Transition to standby accommodation for isolation if full capacity is reached in health facilities Additional resources mobilised Emergency funds mobilised Reassess HDU/ICU capability Maintain essential services 	<ul style="list-style-type: none"> Assess the status of stockpiles e.g. PPE, medicines, consumables, food Replenish stocks as appropriate Update plans and protocols Transition essential services to normal business arrangements/operations Activate business continuity plans

	Initial Action Stage	Targeted Action Stage		Stand-down Stage
	Code Blue	Code Yellow	Code Red	Code Green
	<ul style="list-style-type: none"> Prepare to transition from business as usual to emergency response Review financial mechanisms to support business continuity and response 	mortuary services, financial services, law enforcement, ICT, transport, infrastructure)		
Communication and Consultation	<ul style="list-style-type: none"> Central communications hub and strategy Resilient ICT e.g. email, remote access, internet Liaise with international counterparts Liaise with private sector and community stakeholders Internal communications e.g. situation reports, memos Health line details Advice on cough etiquette, hand-washing, prepare home supplies Advice and information to prevent stigma, discrimination and harassment 	<ul style="list-style-type: none"> Maintain cough etiquette, hand-washing, stock up on non-perishable items as needed Stay up-to-date with health advice Health line details Advise those with the virus to take all measures to prevent infecting others Advise those at risk to take precautions to avoid infection Advise those who suspect they have the virus to call a medical practitioner/hospital/clinic first, or the health line (29667) for advice Advice and information to prevent stigma, discrimination and harassment 	<ul style="list-style-type: none"> Urge communities to maintain social distancing Request voluntary compliance to isolation/quarantine as needed Continue to advise on cough etiquette, hand-washing Urge those with virus to take all measures to prevent infecting others Urge those at risk to take precautions to avoid infection Urge those who suspect they have the virus to call a medical practitioner/hospital/clinic first, or the health line (29667) for advice Advice and information to prevent stigma, discrimination and harassment 	<ul style="list-style-type: none"> Notify public services will resume to normal business arrangements Monitor feedback and refine risks communications Acknowledge the community and other partners for their cooperation Activate destination recovery programme through marketing Advice and information to prevent stigma, discrimination and harassment
Clinical Care and Public Health Management	<ul style="list-style-type: none"> Frontline training on infection control Contact tracing as needed Develop and refine case and contact definition as needed Redirect people with flu-like symptoms to flu clinics 	<ul style="list-style-type: none"> Laboratory testing capability Isolate and manage cases Quarantine and contact trace Prepare cases for transfer overseas if HDU/ICU capacity is overwhelmed Flu clinics treat cases Separate infected patients from at-risk patients e.g. elderly, disabled, chronic illness 	<ul style="list-style-type: none"> Intensify monitoring and reporting of cases Transfer cases where HDU/ICU capacity is overwhelmed Isolate and manage cases Quarantine and contact trace Distribute vaccine if available Separate infected patients from at-risk patients e.g. elderly, disabled, chronic illness Appropriate management of deceased persons 	<ul style="list-style-type: none"> Resume elective procedures Review policies and processes Review/revise plans and protocols Trauma and psychosocial support Appropriate management of deceased persons
Social Welfare and Support	<ul style="list-style-type: none"> Welfare of residents and visitors Coordinate services to at-risk population e.g. elderly, disabled, chronic illness Individuals make necessary arrangements e.g. stockpile essential items, childcare Coordinate assistance for elderly, disabled and chronic illness groups who do not live with any family members 	<ul style="list-style-type: none"> Voluntary self-quarantine/isolation Possible school closures Prohibit mass gatherings e.g. nightclubs, cultural or sports events, churches Limit access and visitation to closed communities, hospital wards, isolation areas, prisons Coordinate provision of supplies e.g. medicines, food to isolated or quarantined people 	<ul style="list-style-type: none"> Strict visitor restrictions and access to closed communities, hospitals, isolation areas, prisons Support for grieving families and communities Mandatory self-quarantine/isolation Coordinate provision of services to at-risk populations e.g. elderly, disabled, chronic illness 	<ul style="list-style-type: none"> Maintain morale and social resilience Support for grieving families and communities Coordinate assistance e.g. financial/welfare to at-risk populations Coordinate assistance e.g. financial/welfare to people and businesses affected Re-open schools

	Initial Action Stage	Targeted Action Stage		Stand-down Stage
	Code Blue	Code Yellow	Code Red	Code Green
	<ul style="list-style-type: none"> Activities to build social resilience e.g. counselling 	<ul style="list-style-type: none"> Individuals make necessary arrangements e.g. stockpile essential items, childcare Health checks in the community 	<ul style="list-style-type: none"> Coordinate provision of resources e.g. medicines, food, financial assistance, special leave Individuals make necessary arrangements e.g. stockpile essential items, childcare Strict health checks in the community 	<ul style="list-style-type: none"> Resume mass gathering events e.g. churches, sports events, concerts Revise visitor restrictions and access to closed communities Support communities to transition back to normal daily life