

Whakarongorau Aotearoa: insight into the delivery of New Zealand's national telehealth services

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ABSTRACT

Whakarongorau Aotearoa/New Zealand Telehealth Services, formerly known as Homecare Medical, is New Zealand's largest digital healthcare service. It originated as a house call doctor service about 20 years ago and now delivers free 24/7 telehealth services to the New Zealand public 365 days a year. Whakarongorau Aotearoa changed its name in April 2021 to reflect the growing kaupapa and was gifted this whakataukī: He reo mārohirohi ka taringa rongohia—A brave voice deserves a listening ear. This viewpoint sets out to address a number of public and professional misconceptions about Whakarongorau Aotearoa and provide a more detailed description of the depth, breadth and complexity of the organisation, how it is structured, the range of services available to the public and its clinical governance, leadership and oversight.

Whakarongorau Aotearoa/New Zealand Telehealth Services (Whakarongorau Aotearoa) responded to more than 1.2 million contacts during the 2020 calendar year (an increase of 41% on the previous year) and connected with more than 790,000 individual people across Aotearoa, approximately 1 in 6.5 New Zealanders. Between June and December 2020, COVID-19-specific contacts made up around 154,000 calls (inbound only) of the 2020 total. Excluding COVID-19 contacts, there was an overall increase of 23% on the 2019 calendar year.

Telehealth has been around for decades, but since the onset of the pandemic in early 2020, there has been a rapid global adoption and escalation of telehealth services. During this time, Whakarongorau Aotearoa has been able to build on the fact that the organisation has been growing, learning, adapting and innovating in the telehealth field since 2015. In New Zealand, Whakarongorau Aotearoa is the only organisation that has developed and integrated the triage of physical and mental health presentations to any degree, with the ability to warm-transfer people who call about physical symptoms over to the various mental health services and vice versa. Across New Zealand, telehealth is increasingly

embedded in the health sector. For example, some PHOs run their own telehealth services; GP practices provide virtual services; and the NZ Telehealth Forum and Resource Centre, and the leadership group for Ministry of Health-level governance, promote implementation and support providers.

Whakarongorau Aotearoa origins and structure

There is sometimes confusion about who owns Whakarongorau Aotearoa, where it receives funding from and what type of organisation it is.

Whakarongorau Aotearoa is a social enterprise focusing on commercial methods to provide a wide range of digital telehealth services for the benefit of the public's emotional and physical wellbeing.

Whakarongorau Aotearoa in its current form was established in November 2015 when it was contracted to provide the New Zealand National Telehealth Service (NTS), bringing together a range of pre-existing telehealth services under a 10-year contract. The NTS contract is co-funded by the Ministry of Health, the Accident

Compensation Corporation (ACC), Te Hiringa Hauora/Health Promotion Agency, Ministry of Social Development (MSD) and the Department of Corrections. It is governed by the Service Improvement Board (SIB), who focus on service quality and development of new services. The SIB includes representatives from several government agencies and Whakarongorau Aotearoa representatives.

As a social enterprise, Whakarongorau Aotearoa has its own board of directors (the Board) and a Clinical Governance Committee (CGC) that has been a sub-committee of the Board since inception. The CGC includes specialists and experts in general medicine, emergency medicine, public health, mental health and addiction and senior general practitioners, which also includes the five clinical leads of Whakarongorau Aotearoa. The CGC meet quarterly to review papers and assess the performance of each clinical service. They are asked to give clinical and governance input to key decisions.

Historically, the CGC has signed-off on the setting up of the structure of the clinical leads and teams; the development of policies and procedures to provide effective and safe clinical oversight; and the refinement of effective governance. Specific developments may undergo greater scrutiny, with recent examples being a review of abdominal pain triaging and the adoption, advancement and evaluation of image upload to assist with effective triaging. Manuscripts for peer reviewed publication are currently being prepared for these to further broaden other healthcare professionals' understanding of the system improvements Whakarongorau Aotearoa are aiming to achieve.

There might be a public perception that Whakarongorau Aotearoa is primarily Healthline and, during the pandemic, the COVID-19 Healthline.

Under the National Telehealth Service contract, Whakarongorau Aotearoa delivers a range of free physical and mental health and addiction advice, support, clinical triage and information services for the New Zealand public. They do this across a range of channels (including phone, webchat, image upload, text and email), 24/7 and 365 days a year. The organisation also responds to local and national health emergencies by providing virtual support, with the COVID-19 response being the largest example of this.

Independently of their NTS contract, Whakarongorau Aotearoa also runs telehealth services such as Safe to Talk (the national sexual harm helpline), Puāwaitanga (fully funded individual phone and online counselling sessions provided to people referred by GPs, public health organisations (PHOs), district health boards (DHBs) and universities) and GP After Hours (clinical support for general practices after hours), as well as support for the National Bowel Screening Programme Coordination Centre and the National Cervical Screening Programme Coordination Centre. These are variously funded by PHOs, DHBs and government ministries.

Although Healthline (the primary triage line provider), ambulance secondary triage and GP After Hours make up approximately 50% of all Whakarongorau Aotearoa service user interactions, there are an equal number of interactions spread across the multiple telehealth channels that the public can access, including a wide range of health and mental health and addictions support and advice services.

Whakarongorau Aotearoa services

Whakarongorau Aotearoa delivers a range of health and mental health-related services, including Healthline, Puāwaitanga, Poisons Advice, Alcohol Drug Helpline, ambulance secondary triage, Immunisation Advice, GP After Hours and others, as well as support for bowel and cervical screening services, as detailed in Table 1.

Whakarongorau Aotearoa currently manages COVID-19 Healthline, which provides the public with health advice about testing, isolation and other relevant information. This service also has a welfare team that make outbound calls checking regularly on the wellbeing of people in self-isolation or those in the community who may need testing or need to isolate. Wait times for COVID-19 Healthline support have fluctuated at times, according to unfolding situations in the community and the time it may take to get the additional staff in place when call volumes peak unexpectedly. However, in most circumstances, wait times have been kept manageable. Callers are always advised in initial automated messages to call 111 in the event of an emergency.

Table 1: Service schedule.

Service	Team	Description	Channels
Health services			
Healthline	General nursing	Health triage, advice and information	0800 611 116 www.healthline.govt.nz
GP After Hours	General nursing	Health triage, advice and information for contracted general practices	Phone only
Immunisation Advice	General nursing	Immunisation advice provided to the public in partnership with the Immunisation Advisory Centre (IMAC)	0800 IMMUNE www.immune.org.nz
Live Kidney Donation	General nursing	A “front door” for people enquiring about being a kidney donor	0800 LIVE DONOR
The Diver Emergency Service (DES)	General nursing	Advice on diving related incidents, accidents or injuries, including the emergency management of decompression illness	0800 4 DES 111
Emergency Triage	Emergency nursing team	Clinical telephone assessments by registered nurses for low-acuity 111 calls to St John and Wellington Free Ambulance	111 calls to St John and Wellington Free Ambulance
Poisons Advice	Poisons information officers	Poisons advice delivered through the National Poisons Centre	0800 POISON www.poisons.co.nz
COVID-19 Healthline	Service and support advisers	Non-clinical and clinical advisers support the national COVID-19 information line	0800 358 5453
COVID Welfare	Service and support advisers	Non-clinical team provide outbound compliance and welfare contacts to those in COVID isolation	Outbound only
COVID Vaccination Healthline	Service and support advisers	Non-clinical team provide information and follow-up for those invited to participate in the COVID vaccination programme	0800 282 926

Table 1: Service schedule (continued).

Service	Team	Description	Channels
Mental health and addiction services			
1737 Need to Talk?	Mental health and addiction support specialists	Front door for anyone dealing with stress, anxiety and depression, or just a need to talk to access support from a trained counsellor	Call or text 1737 www.1737.org.nz
Depression Helpline	Mental health and addiction support specialists	Support tools and information for emotional and psychological issues	0800 111 757 Text 4202 www.depression.org.nz
Alcohol Drug Helpline	Mental health and addiction support specialists	Advice, information and support about drinking or other drug use	0800 787 797 Text 8681 www.alcoholdrughelp.org.nz
Gambling Helpline	Mental Health and addiction support specialists	Support for those worried about gambling or the gambling of others	0800 654 655 Text 8006 www.gamblinghelpline.co.nz
1737 Peer Support	Lived experience peer support specialists	Support for anyone dealing with stress, anxiety or depression, or just a need to talk to someone who has had a similar experience	Access through 1737 helpline
The Lowdown	Mental health and addiction support specialists	Support to help young people recognise and understand depression or anxiety	www.thelowdown.co.nz Text 5626
Early Mental Health Response	Mental health and addiction nursing	Support for people in social and psychological distress who call 111 for the police or an ambulance. Includes expert advice line supporting the mental health workforce	111 Calls
Mental Health After Hours	Mental health and addiction nursing	Mental health triage, support and advice for contracted district health boards	Phone only
Puāwaitanga	Mental health and addiction support specialists	Individual phone and virtual counselling for those struggling but who face challenges accessing traditional counselling	Phone, web and app by referral
Whitiki Tauā	Lived experience support advisers	Virtual mentoring for the Ministry of Social Development's Mana in Mahi participants who may need some extra support to reach their work goals	By referral
RecoverRing	Mental health and addiction support specialists	Support for offenders and prisoners (and their whānau who are helping them) regarding alcohol or drug use	0800 678 789

Table 1: Service schedule (continued).

Service	Team	Description	Channels
Social health			
Safe to Talk	Sexual harm professionals	Support and advice for those affected by sexual harm	0800 044 334 or Text 4334 www.safetotalk.nz
Family violence services	Family violence support specialists	Support and advice for those affected by family violence. This includes the Shine Domestic Abuse Helpline and webchat, Family Violence Information Line, Family Services Directory and the Women's Refuge webchat	0508 744 633 and webchat 0800 456 450 0800 211 211
Integrated Safety Response	Family violence support specialists	An outbound calling service operating as a pilot in the Waikato, providing proactive follow-up to people who have interaction with Police and are suspected to be involved in family violence	Police Referral
Elder Abuse Response Service	Mental health support specialists	Advice, information, and support about elder abuse	0800 EA NOT OK
Population health			
Quitline	Service and support advisers	Support for those who want to quit smoking and stay quit	0800 778 778 Text 4006 www.quit.org.nz
National Bowel Screening Programme Coordination Centre	Service and support advisers	Manage the database and distribution of invitations for the programme, providing test kits to participants, and ensuring that general practitioners receive their patient's test results	Outbound
National Cervical Screening Programme Coordination Centre	Service and support advisers	Manage correspondence to women, answering questions from the public as well as liaising with the regional centres, smear takers, laboratories, specialists and district health boards about the people they serve	Outbound
Kupe	Digital services	Online decision support tool to help men and their whānau understand more about prostate cancer and to decide if they should see their doctor to get tested	www.kupe.net.nz

The COVID Vaccination Healthline team provide information and make bookings for members of the public to be vaccinated. The team also make outbound calls to encourage people who have not yet been vaccinated to take that step.

There are robust and continual quality review processes across all health and mental health services. For example, on the COVID-19 Healthline, advisers and clinicians have a live call review with supervisors twice per shift. Clinical development managers, who are also reviewers, have oversight of quality and the whole process is also regularly moderated at various levels.

The workforce

Another common misconception is that the organisation is primarily staffed by nurses at the end of their careers—that is, the “twilight years.”

In practice, the Whakarongorau Aotearoa team includes registered nurses, mental health nurses, psychologists, psychotherapists, psychiatrists, counsellors, doctors, poisons officers, advisers, paramedics, sexual harm professionals, screening coordinators and emergency triage nurses who work from contact centres in Auckland, Wellington and Christchurch and from their homes in almost all regions of New Zealand. Whakarongorau Aotearoa also works with Māori and Pasifika partner call centres.

The team is widely diverse, both in terms of culture and ethnicity. In some services, for example Puāwaitanga, service users can peruse the profiles of the clinical team and choose which professional they want to engage with; their decisions may be based on gender, language, culture, ethnicity, sexuality, impairment or other characteristics. In other services, such as the bowel and cervical cancer screening coordination centres, service users are contacted by a staff member who best matches their ethnicity, language and gender. Given the number and range of telehealth services that people can connect with, and the different skillsets and professional requirements associated with each, there is extensive diversity of professional experience in the team. This is evidenced in an ability to warm-transfer service users to the relevant Whakarongorau Aotearoa services or

recommend contact from a staff member with specialised expertise.

Managing periods of high demand

Some may assume that Whakarongorau Aotearoa takes on more work than it can handle. However, the organisation has the ability to scale rapidly.

For periods of increased need for public health and wellbeing support and advice (eg, the Christchurch mosque attacks and the COVID-19 pandemic), Whakarongorau Aotearoa has developed specialised processes to augment their workforce quickly, enabling the service to meet escalating demand from the public and support for the national health system. For example, there were 350 frontline staff pre-COVID-19, and by July 2021, this number had increased to approximately 800 frontline employees. In the event of a significant surge in demand, the organisation has the structure in place to escalate the number of frontline staff to over 4,000, which includes engaging additional health and mental health professionals to offer clinical support and partnering with other organisations whose staff are trained to provide information to the public. More recently, the COVID-19 vaccination programme has seen up to 1,800 additional COVID-19 frontline staff employed to manage the vaccination information and booking process.

Healthline

Healthline is staffed by an experienced team of nurses. More recently, paramedics have also been employed at Healthline (as well as in the Emergency Triage team) and have performed excellently in this role. In every DHB region across the country, many of the Healthline clinicians work from home while the rest of the team of clinicians work from one of the organisation’s call centres.

Call rates are higher at night-time, over weekends and on public holidays, when other primary care services may be closed. An increase in calls to Whakarongorau Aotearoa is closely mirrored by a decrease in calls to urgent care and general practitioners, particularly in situations where services are not available or have switched to virtual.

Numbers can fluctuate substantially when there is a community health concern, as seen during the COVID-19 national lockdown in early 2020, when calls to Healthline escalated from 37,413 in February 2020 to 73,665 in March. In April 2020 the dedicated COVID-19 Healthline service was established.

There was a total of 610,797 calls to the general Healthline and the dedicated COVID-19 Healthline services in the 2020 calendar year, an average of 1,673 per day and an increase of 70% compared with 2019. Excluding COVID-19-related calls, there was an underlying 9% increase in Healthline call volumes.

Supporting the Healthline and COVID-19 Healthline nurses and paramedics is a team of service and supporting advisers (SASAs) who do not have professional clinical backgrounds but are trained to use the basic package of a decision support tool to provide an initial triage and thereby shorten the waiting times for service users. In addition, a small number of final year medical or paramedic students (SASA-Ts) also provide support with the initial triage process, gaining exposure to telehealth, Healthline and the wider Whakarongorau Aotearoa system before they graduate as professionals. As well as the nurses, paramedics, SASAs and SASA-Ts, each shift has a senior nurse who provides clinical advice, support and supervision to the staff on duty.

There has been some public perception that nurses that work at Healthline answer the calls without support and default to sending the patient to hospital if they are at all worried by their symptoms. In reality, nurses and paramedic staff use training, clinical experience, resources and Odyssey, an internationally accredited decision support tool from the UK, to guide their decisions in the provision of a high standard of clinical care and triage. Whakarongorau Aotearoa clinical leads support the decision-making processes and regularly update the algorithms. Across the service, fewer than 4.5% of callers per day are diverted to ambulance services and roughly 9% are referred to an emergency department.

Emergency Triage (ambulance secondary triage)

When low acuity 111 calls come into St John or Wellington Free Ambulance services, they are put on a queue for secondary triage by a nurse or paramedic from Whakarongorau Aotearoa's Emergency Triage service. On average, Whakarongorau Aotearoa clinician's triage over 4,000 service users per month, of whom an average of 50% do not then require an ambulance.

GP After Hours service

Over 60% of general practices in New Zealand use GP After Hours, the after-hours (or anytime phone diversion) services provided by Whakarongorau Aotearoa, which supports practices from the Far North through to Southland that cover approximately 80% of the New Zealand population.

The clinicians that answer Healthline calls also provide the GP After Hours service. They answer calls in the name of each general practice and apply tele-triage protocols customised to the requirements of each practice while still using the decision support tools. This is followed-up with consult notes sent to the service user's general practitioner unless they opt out of this aspect of the process.

PlunketLine

PlunketLine is contracted by the Ministry of Health to provide Well Child services and partners with Whakarongorau Aotearoa to enable their nurses to provide Healthline services to unwell children. This ensures that service users who call PlunketLine receive a seamless, appropriate and safe service. PlunketLine nurses are fully trained in the use of Whakarongorau Aotearoa systems and processes, and in times of high demand can support Healthline by picking up calls regarding children.

Decision support tools

Whakarongorau Aotearoa uses a number of different decision and assessment support

tools, including Odyssey, the clinical decision support tool used by SASAs, SASA-Ts, paramedics and nurses. Most callers to Healthline, Emergency Triage (secondary triage), GP After Hours and PlunketLine will have an Odyssey triage performed on them. Other decision and assessment support tools used in Whakarongorau Aotearoa are Atlantis, the UK Mental Health Triage Scale and the Duke Health Profile Assessment tool.

The Whakarongorau Aotearoa Board and executive team

The Board meets 11 times per year and is made up of seven directors. There is always at least one clinician and one chartered accountant included on the Board. The other directors are appointed based on industry and sector experience and governance leadership. The Board is responsible for overseeing financial performance, risk, health and safety, strategy and the appointment of a chief executive officer (CEO). The CEO leads a team of senior managers who, as a group, hold a wealth of clinical, health sector, commercial and project management experience.

Future directions

Whakarongorau Aotearoa delivers a wide range of telehealth services to the public with the aim of supporting the people of Aotearoa New Zealand to stay well and connecting them seamlessly with care and support when they need it.

Over the past five years, the organisation has gathered a wealth of data, insight and understanding around the health and mental health challenges for which the

public seeks advice and support. This has resulted in ever-evolving developments in the provision of national telehealth services. In particular, the past year of COVID-19-related challenges has brought opportunities for growth and previously unseen preparedness in the delivery of telehealth services.

Moving forward, Whakarongorau Aotearoa continues to focus on integrating with the New Zealand health system (including primary care and hospitals) and striving to provide levels of increasingly seamless national population health support. Improving healthcare professionals' awareness and understanding of the wide range of Whakarongorau Aotearoa telehealth services, including training and resources, will support that integration and contribute to the delivery of "best practice" in the national health service. In addition, the intern or observership opportunities that Whakarongorau Aotearoa offers to those in their clinical training years, and those already in practice who are interested in a more practical understanding of Telehealth, opens the door for professionals to learn about telehealth first-hand. Whakarongorau Aotearoa is also exploring avenues to further share its skills and resources and contribute to a qualification in telehealth for the national improvement of care.

Whakarongorau Aotearoa is a health organisation that is part of the tapestry of the New Zealand healthcare system. Although not widely known, it is already reaching more citizens than most others. It plans to continue to improve on its service delivery and reach and ensure that everyone is aware they have access to information and support when they need it.

Competing interests:

Nil.

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