NZ TELEHEALTH
FORUM & RESOURCE CENTRE

New Zealand Telehealth Survey 2019 District Health Boards

November 2019

Report Summary

This survey does not include the National Telehealth Service (NTS). The NTS provides an integrated platform of health information for people to access advice and support from trained health professionals via an 0800 telephone number. The NZTLG definition for telehealth is for the use of a broader range of information and communication technologies when patients and care providers are not in the same physical location. This includes video conferencing, telemonitoring, smart phones, chat bots and therapeutic applications.

Message from the Chair

The New Zealand Telehealth Leadership group (NZTLG) is proud to publish its second Telehealth survey since its formation as the Telehealth Forum in 2011. The Telehealth Forum, renamed as NZTLG, was initially formed as a "call to arms" and brought together a varied group of Clinicians, Project Managers, Coordinators, Executives and Administrators from around the country and across the public and private sector. The focus of the NZTLG is a shared desire to move health care closer to home, making healthcare provision more convenient and available.

The last survey was published four years ago and much has changed in that time. There has been a marked increase in providers and services using telehealth and a wider range of suppliers. There is an ongoing debate on terminology with the recent evolution of the term "virtual healthcare", which is often used interchangeably with the term "telehealth".

This report is very promising in that it shows widespread development and recognition of the value of telehealth. Many organisations are turning to telehealth as they strive to improve the services they deliver.

The rest of the world is also increasingly turning to telehealth. The National Health Service in the UK (NHS) has funded a primary care telehealth service and in Victoria, Australia an Acute Care Telehealth service has received public funding. While not all attempts are successful, the overriding trend is for continued growth in uptake.

In this environment the report evidences that New Zealand has a growing number of clinicians and services recognising the value of delivering healthcare by telehealth.

However, uptake of telehealth often relies on local champions and although many barriers have improved (namely interconnectivity and cost) barriers such as lack of clear leadership and governance, difficulty circumnavigating funding models and access to devices and high-speed internet connections remain.

The report also indicates that data capture and knowledge of telehealth services is in silos and this greatly disadvantages New Zealand patients and health care providers and prohibits transparent learning and growth of services. This may be one of the reasons for failures of successful pilots to translate into business as usual services.

There is no doubt that telehealth improves the lives of patients by providing high value health care closer to home. This has been well proven in international experience and is strongly apparent in New Zealand as well.

We hope that you value this report and use it to further develop telehealth services within your organisation. The final words belong to one of our patients:

I love it, it's the same as talking to the doctor here…we can talk to them straight away if we need to… if we need him we'll be able to get on (to the video) and talk to him.

- JOE HOKIANGA, RENAL PATIENT, WHAKATANE

Dr Ruth Large
Chair NZ Telehealth Leadership Group, Emergency Physician, Rural Hospitalist and Clinical Director Information Services and Virtual Health Care, Waikato DHB

Above: Dr Ruth Large in a telehealth consultation with a specialist who is supporting the local Thames Hospital team during an emergency.

Above: A telehealth consultation between Waikato Hospital and Thames Hospital.

Report Summary

This report presents the results of a survey of telehealth activity in New Zealand's twenty District Health Boards (DHBs) that was carried out between October 2018 and March 2019 by the New Zealand Telehealth Leadership Group (NZTLG)[1] The NZTLG definition for telehealth is the use of information and communication technologies to deliver health services when patients and care providers are not in the same physical location.

The survey format was based on a previous national survey in 2014, and a brief survey carried out in 2011 when the New Zealand Telehealth Forum was established. In 2014, all twenty DHBs responded. In 2019 all twenty DHBs responded to the organisational survey, and eighteen DHBs responded to the separate survey about clinical services.

The 2019 survey shows that telehealth uptake has increased considerably across all the DHBs. Many more clinical services are engaged in the use of mainly video-based telehealth technologies. Usage for patient consultations has grown from sixteen DHBs in 2014 to nineteen in 2019. The growth is significant, not only in the number of DHBs, but also in the number of clinical services represented, the frequency of usage and the types of telehealth interactions.

> *It is advantageous, convenient, care delivered closer to home for patients. Allows more new and complex patients to be seen. Decreases waiting lists.*
>
> **- COMMENT FROM CLINICIAN ON TELEHEALTH BENEFITS**

There are many good stories about the benefits to both patients and clinicians. A significant increase in telehealth services is forecast by DHB clinical services. Yet while management accepts and understands the benefits of telehealth, DHB readiness appears to fall short in the support needed. Half of the DHBs report that capacity is insufficient to meet current, let alone future demands.

Several DHBs have implemented lower-cost software-based video conference solutions and this has dramatically increased their ability to meet growing demand. Software solutions allow DHBs to prioritise their hardware-based solutions for more complex uses such as MDM, frontline clinical applications and larger meetings.

One clinician commented that telehealth had "huge untapped potential".

The survey shows strong clinical support for telehealth and pockets of excellence continue to develop. One clinician commented that telehealth had "huge untapped potential".

Telehealth however for the most part still appears to be champion-led. There is still much to be done for telehealth to become a sustainable and business-as-usual enabler that is embedded in health care delivery. There is room for improvement in business plans, investment in infrastructure, human resources, the implementation of business-as-usual practices and formal evaluations to support robust business cases.

The 2019 survey reflects a point in time and is based on self-reported telehealth activity. The findings, particularly those based on the data gathered on clinical services, are indicative rather than definitive. However, the data is reliable enough to illustrate trends and the scale of telehealth-related activity. In the interim between the survey and this report activity has continued, new initiatives have been started, some pilots have finished and become business as usual services, and other changes will have occurred.

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[1] *While data was gathered in late 2018 and 2019, the report uses '2019' when citing the results.*

This survey is specific to DHBs. Primary Care and Non–Government Organisations were not included and are expected to be covered in a separate survey. We are aware that interest and activity in delivering health services using telehealth is growing in Primary Care. A Ministry of Health report in September 2019 found that thirty practices have now introduced video-based telehealth technology. The NZTLG has established a workstream to support uptake in primary care.

▶ Key Findings

Following are the key findings from the survey.

Benefits

There were over 300 responses about telehealth benefits from DHB staff either currently involved in or planning telehealth services. They endorsed the internationally recognised benefits of telehealth and said the benefits that they anticipated were realised including:

- reduction in travel time and costs for patients and clinicians (the most frequently cited benefit).
- improved access for patients (equity and convenience)
- ability to provide quality treatments, e.g. use of video instead of just telephone
- ability to see patients faster, reduce waiting lists, avoid hospital admissions and reduce did not attends (DNA's)
- increased opportunities for clinician collaboration with patients and other clinicians
- efficiency in the allocation of clinical resources
- improving staff safety by reducing risks associated with clinicians travelling, e.g. when seeing patients in prisons
- upskilling of staff.

Respondents also reported unexpected benefits such as:

- reduction in cross infection risks that exist when patients are seen in the same physical locations
- more timely follow up on patient results and referrals for further treatment
- patients engaged with a service are willing to have more regular appointments via telehealth
- ability to use clinical time saved in travelling for education
- respect and understanding of interdisciplinary team roles.

O V E R
300
responses about telehealth benefits from DHB staff

Hugely valuable … has potential to maximize effective use of time for clinicians and service users by reducing travelling … could empower and enable access for remote service users and whanau…has major advantages in assisting with equity of access.

- COMMENTS BY CLINICIANS ON TELEHEALTH VALUE

A small number of respondents reported not achieving the benefits, mainly due to clinician resistance and under utilisation. A few reported unintended consequences such as an administrative burden on the process, especially in the early stages, and the need to have appropriately trained staff in the remote locations supporting patients.

Although most clinical services said they weren't tracking key performance indicators or hadn't started yet, some tracking is taking place, mainly during pilots and via patient satisfaction surveys. Examples include tracking did not attends (DNAs), clinician satisfaction, and plans for tracking patients with long term chronic conditions being kept out of hospital, well and at home,

Seven DHBs said they had carried out formal evaluations, an increase from four in 2014.

Clinical telehealth services

There has been a significant increase in the range of clinical services that are using primarily video-based telehealth technologies for business-as-usual services, for conducting pilots and for planning new services. The number of DHBs using video for patient consultations has increased from sixteen in 2014 to nineteen in 2019. The number of services has also increased considerably as has the frequency of use.

DHBs using video for patient consultations

2014 - **16**
2019 - **19**

The findings on clinical services were provided by eighteen of the DHBs in five major categories: Adult and Womens Health, Allied Health, Ambulatory and Clinical, Mental Health, and Paediatrics. Respondents identified 1324 telehealth initiatives where telehealth is either active, in pilot or planned. A few also reported on initiatives that have ended, in some cases due to a lack of ongoing funding.

In 2014 sixteen DHBs were using or planning to use telehealth in approximately fifty-five services for patient interactions and clinician-only interactions. In 2019, all twenty of the DHBs are actively using, piloting or planning to use telehealth technologies in more than seventy-five services.

There has also been an increase in the types of patient and clinician-only telehealth interactions. In 2014 the most common telehealth activity was in clinical imaging (primarily teleradiology and teledermatology), videoconferencing for multidisciplinary meetings and patient follow up appointments. In 2019 many more services report using video for first patient and acute assessments, patient-only and group sessions in Allied Health, nurse-led clinics, and clinician-to-clinician sessions.

Te Hono (from the Maori: to link or to bridge) is a one hour multidisciplinary meeting where patient cases and questions are presented by participants from primary care clinical teams to specialists present. Emphasis is on respectful, open, collegial discussion rather than didactic teaching…A range of positive outcomes were evident in our meetings last year, particularly around better management of complex cases.

- DR WALAA SAWEIRS, NORTHLAND DHB

Multi-disciplinary meetings

All DHBs are continuing to use videoconferencing for multi-disciplinary meetings (MDMs) and multi-disciplinary team meetings (MDTs). While Oncology was the early leader there has been significant growth in the use by other specialties and more recently in Primary Care and Allied Health. Some clinical teams require purpose-built rooms and equipment, for example for Oncology and Radiology. Other clinical teams find the use of standard equipment or mobile options suitable.

The number of DHBs reporting that they have protocols and guidelines for MDMs has increased from nine in 2014 to thirteen in 2019 while those reporting that they have MDM coordinators has decreased from sixteen to fourteen.

Other technologies

The most significant change in other technologies is in the growth of the use of email, text messaging and social media for communications with patients. There has been some growth in the use of mobile and smartphone applications, initially for health / wellness, and more recently for accessing and updating clinical information. Newer technologies such as chat bots and therapeutic applications are starting to emerge.

The uptake of telemonitoring applications remains low, only increasing from three to four active DHBs. Four DHBs are planning to introduce monitoring applications, some using smartphones and video functions.

Telehealth infrastructure and capacity

There were a number of positive improvements in DHBs video conferencing infrastructure and capacity between 2014 and 2019. Eight DHBs reported that their telehealth infrastructure and investment is adequate, up five from 2014, and those with centralised booking systems increased from twelve to fifteen DHBs.

DHBs capacity to meet current demand

2014 - **4 DHBs**

2019 - **10 DHBs**

Yet capacity clearly presents a significant challenge. Ten DHBs report they have capacity to meet current demand (up from four in 2014), however the survey shows a forecast for significant growth in planned services that many DHBs may not be able to meet.

In 2014 there were early signs of a trend toward software solutions for videoconferencing (VC) and a move away from fixed endpoint hardware solutions. The 2019 survey shows that although there is still a requirement for hardware solutions, there has now been widespread adoption of lower cost software solutions. These are being deployed in large volumes to the full spectrum of mobile, tablet, desktop and room-based solutions. This has dramatically increased the ability of the DHBs to deploy VC to users to meet growing demand.
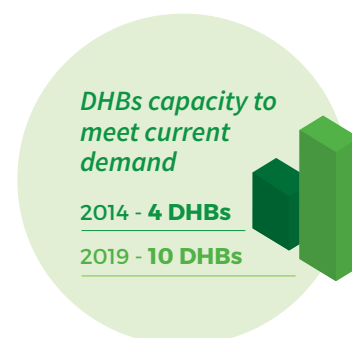
Governance

Several factors are covered in the governance category that are internationally recognised as important to achieving effective business as usual telehealth services. These include strong clinical leadership supported by dedicated resources including telehealth programme managers / facilitators, management engagement and oversight guided by strategies and policies, and tools to support delivery.

The 2019 report shows that the level of clinical leadership has increased since 2014. While the number of telehealth clinical leaders appointed in the DHBs has remained at ten, more DHBs have clinicians serving in the roles informally, often within their own service areas.

regional strategies adopted in
3 out of 4
regions

The number of telehealth programme managers / facilitators has increased from seven to twelve. It is clear that where these roles are filled support for telehealth initiatives is much better. Fourteen DHBs are providing training for clinicians in the use of telehealth tools (primarily VC).

Yet there has been a decrease in DHB governance groups either dedicated to, or that include oversight, of telehealth strategy, policy, investment and service delivery. In 2014 thirteen DHBs had the function, whereas in 2019, only eleven have the function.

In 2014 eight DHBs had specific telehealth strategies. In 2019 three regions have now developed regional strategies and many DHBs are using them.

In 2014 thirteen DHBs had protocols and guidelines for delivering telehealth services. In 2019 only seven DHBs reported having these tools.

Barriers to uptake

The survey shows improvements in several barriers since 2014, along with new barriers being cited.

A notable improvement is the decrease in DHBs citing VC interconnectivity as a barrier from eighteen DHBs in 2014 to thirteen in 2019.   This has occurred while the need for interconnectivity has grown significantly, due primarily to the increase in VC providers and solutions used by the DHBs. The improvement can be attributed to the efforts of the VC providers, Ministry of Health, NZTLG, DHB technical groups and others in addressing the issues. However, the number of DHBs that cite interconnectivity as a barrier is still high. The ongoing work on interconnectivity and interoperability, including addressing issues regarding proprietary equipment, should see further improvements for users, as will the full rollout of the National VC Directory.

Investment and technology barriers decreasing for many

Insufficient infrastructure and investment is still a major barrier cited by seventeen DHBs in 2014 and fifteen DHBs in 2019.   Given that the survey forecasts significant growth in telehealth usage, it will be difficult for supply to keep up with the demand.   However, the acceptance and understanding of telehealth by senior management and planning/funding has improved since 2014, with only three DHBs now citing it as a barrier, indicating that there is an opportunity to gain support for further investment.

The lack of clinical support and accountability as a barrier has increased significantly from eight DHBs in 2014 to twelve in 2019. This may reflect the champion led approach to telehealth, since the 2019 survey also shows a significant increase in active, pilot and planned services, with most of the clinical service forecasts having been supplied by clinicians.

Some DHBs report success with engaging clinical teams during pilot projects, while others report it remains difficult to get clinical staff to use telehealth for patient consultations. While all the barriers can constrain uptake, experience has shown that if there is strong clinical leadership it is easier to overcome barriers, particularly those over which the DHBs themselves have more control.

Telehealth is now fully understood at the executive level, but it now requires leadership at service level.

The lack of standards, protocols and guidelines is still a barrier for ten of the DHBs, reduced only slightly from eleven in 2014.

There was a surprising increase in DHBs reporting perceived patient unwillingness to participate in VC as a barrier, from three in 2014 to seven in 2019.   However, the frequency is very low, and is counter to the strong indication of patient acceptance reported in qualitative feedback from other surveys. It does however recognise that there are some patients who will be reluctant to substitute an in-person visit with a face-to-face video telehealth consultation.

As telehealth expands to patients at home and at work, two new questions in 2019 highlighted emerging barriers relating to patients. Patient access to devices was cited by fifteen of the DHBs as a barrier and twelve reported patients not having fast internet as a barrier. The health sector focus on closer-to-home means that these barriers need to be managed to ensure equity of access, especially since some of the patients who would benefit most from telehealth are the least equipped to access it.
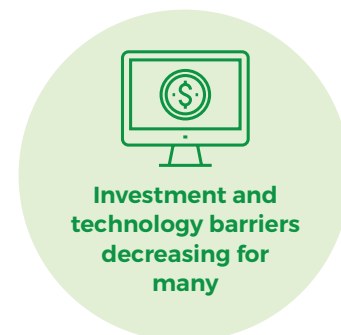
Telehealth Resources

The New Zealand Telehealth Resource Centre (TRC) is hosted by Mobile Health on behalf of the NZTLG. It holds a variety of telehealth resources including case studies, standards and guidelines. The survey showed that most DHBs who have used it have found it a useful source of information. The majority of DHBs indicated they wanted to see additional resources developed in all areas, most notably with guidelines, case studies and industry presentations. Comments from respondents also provided valuable pointers to methods of promotion that can be used to encourage further uptake of telehealth.

▶ Next Steps

The NZ Telehealth Leadership Group's main objectives include ensuring that telehealth is on the agenda for national / regional strategies, building capability by removing barriers and promoting centres of excellence, building awareness and education in DHBs, PHOs, GPs, and NGOs, promoting the value proposition of telehealth / virtual health as an enabler of healthcare delivery, and promoting equity of access.

Based on this report's findings the following will be considered and prioritised in the NZTLG work programme:

- Promote compliance and effective usage of the Method of Delivery code.

- Review feedback on the barriers to prioritise and work with the DHBs on addressing the barriers. Examples include the barriers regarding re-imbursement models for telehealth services and the quality of video.

- Enhance and promote the TRC, including the repository of documents and tools   This includes obtaining useful documents from the DHBs and sharing as appropriate, e.g. evaluations, protocols and guidelines.

- Enhance and promote the interactive telehealth directory of services in the TRC using data gathered for this report and develop a mechanism to maintain its currency.

- Promote pockets of excellence and encourage peer collaboration at the specialty and professional level using the survey data on clinical services and case studies.

- Establish a means for identifying NZ telehealth provider centres of excellence based on the performance already being used for the DHBs and also on international examples.

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