Deliverable One: First progress report with preliminary learnings

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Project abstract at start of project

Telehealth provided health care during the COVID-19 lockdown in New Zealand, but use has declined back to pre-COVID levels. Telehealth provides at least equivalent health outcomes to 'in person' care but lack of guidelines for design and implementation may result in risks to patient safety (Guise et al., 2014) and inequitable access and telehealth has not been widely adopted in New Zealand. Evidence for why telehealth has not become a standard part of health care delivery in New Zealand is lacking, thus this project will explore these reasons using a collaborative approach between academia (Massey University), the health sector (NZ Telehealth Forum) and industry (Vensa and other commercial partners) in three phases using co-design with an underserved population - rural older adults.

Rural older adults have been selected as the target population group for this research for the following reasons. Populations underserved by the more traditional 'in person' models of health care delivery experience inequities in health care and any telehealth system adopted for use must, at the very least, not exacerbate existing health inequities, and ideally needs to reduce health inequities. Rural older adults form an underserved population group, expected to grow considerably in numbers in the near future, with high levels of chronic disease and disability and accounting for 50% of the total cost of providing health care in New Zealand. Rural older adults, as an underserved population, encompasses other underserved populations plus have additional barriers to telehealth than urban populations, hence getting telehealth right for rural older adults means getting it right for the general population, and findings will be generalisable. Finally, the research team has established connections with rural older adult networks.

Phase one (6 months) is an exploratory determination of telehealth requirements of rural older adult underserved populations using published literature and case study analysis. It will develop a draft national public framework for telehealth design and implementation, a draft evaluation framework for telehealth systems plus a feasibility analysis for a proof-of-concept telehealth system to test the framework. Phase two (12-15 months) aims to develop a proof-of-concept telehealth system by expanding an existing commercial product (owned by Vensa) with pragmatic real-world testing with rural older adults and existing health care systems/organisations. Phase three (3-6 months) will evaluate both developed frameworks and the proof-of-concept telehealth system informing future development, implementation and adoption of telehealth in New Zealand. The framework for telehealth systems for the rural older adult underserved population will be extrapolated for a framework for the general population for telehealth.

Focus group status:

Total to date: 7 focus groups + interviews across 3 regions: Manawatu, Northland, Golden Bay.

73 participants to date

Age range	Gender	Ethnicity	Use of TH
55-92 years	37%:63% male: female	33% Māori	44%:56% Not used:Did use

Key findings to date:

The project has reinforced the need for allowing sufficient time for discussion and exploration of the ideas within the focus groups with adults aged 55+ years. The use of local people to assist with promoting the project and focus groups has been critical to the successful recruitment, hence developing and maintaining local connections is a key finding for project success. This takes both time and resources.

Key draft themes so far:

1. Technical
    a. existing comfort level with digital technology which can vary,
    b. age is not a marker for digital capability – familiarity and frequency of use
    c. use in practice not aligned with technical rules (shared emails and devices, 2 factor authentication difficult) and unreliable or lack of connectivity.
    d. Frustration with updates and changes to software
    e. Lack of awareness of current digital options- patient portal needs socialisation
    f. Large reliance on home landlines and considerable anxiety around loss of connectivity – many rely on both landline and cell phone
    g. Some cell towers being installed are not fit for purpose; towers and do little to improve connectivity
    h. different brands of phones provide range of connectivity
    i. varying access to cell phone services
    j. lip reading (close caption, etc)
    k. inability to access 0800 numbers with cell phone blocks due to lack of funds

2. Access to existing health services
    a. telehealth not socialised (people did not understand the term)
    b. bringing services to people rather than having to travel preferred (either by technology or in-person)
    c. confidence in negotiating health system,
    d. current lack of communication between providers,
    e. lack of coordination and availability of services (includes public and private),
    f. acute emergency care excellent (first responders and helicopters) but ongoing care is where problems exist,
    g. importance of relationship building
    h. same provider/continuation of care for long term conditions management
    i. referrals to/communication with and from specialist care
    j. Confusion over generic medication substitutions
    k. Improve access to pharmacy

3. Benefits (from users of telehealth)
    a. those who have had phone consultations commented they were very good and saved time and cost of travel
    b. patient with multiple comorbidities and his partner were very accepting of receiving health care by telehealth from multiple providers

4. Future
    a. trust (in the technical system and in connectivity and in security)
        i. in people
        ii. in process
        iii. in technology
    b. privacy – difference between groups
    c. lack of knowledge of main online sites such as Health Line and Health Navigator
    d. choice of in person or telehealth
    e. Concern over push for electric cars to access health care and insufficient number of charging stations close enough to provide power for these, and strength of power supply will also be compromised.
    f. Having generators and back up batteries in the village is critical
    g. Some people will want in-person consults regardless of tech availability
    h. Must be tailored to community needs

Digital intervention mentioned in focus groups:

1. mobile bus with digital technology for person to help with video consultations with health (primary and specialist), MSD, IRD and other relevant agencies. Bus to travel on planned scheduled route around small rural centres. Similar in concept to the mammogram bus or surgical bus. Helper does not need to be a nurse practitioner or registered nurse but if was a nurse, it could be combined with blood sampling for laboratory tests and examinations including BP, temperature, weight etc.
2. Same as 1. But as a local hub in a community hall or similar venue with digital technology and a helper. Suggestion to time with mum and baby sessions and coffee/tea with social opportunities.
3. Smart extended first aid box (modelled on Royal Flying Doctor Service in Australia but with digital dispensing to prevent drug errors).
4. Smart AED – extended to take other biophysical signs and transmit to first responders with voice response from first responders with advice for immediate care whilst waiting on first responders to arrive. This could also assist with triage and appropriate use of helicopter services.

Publications and Presentations

1. Conference presentation: Group presentation Faustin Roman, Ruth Large, Andrew Pankhurst, Inga Hunter, Charis Frethey and other guests of the NZTLG. 2021-08-06. "Adopting a secure future: moving forward safely with telehealth"
GP21 RNZCGP annual conference, * August 2021.

2. Article in the Golden Bay Weekly: "Seeking rural healthcare solutions", about the workshops held by the project team.