

AusIndustry Cooperative Research Centres Program



Marianne St Clair David Murtagh DHIS 21/02/22



Dundee Beach, NT





Simbani Research

Telehealth, Digital Access, innovative Remote Strategy Solutions and Service Development





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Theory of collaboration – components include:

- Common goal identified
- Stakeholders the right stakeholders!
- Communication
- Leadership
- Networking
- Nurturing
- Power distribution
- Relationship building
- Resources
- Shared learning
- Time
- Training
- Trust

Collaboration is resource intensive!

Collaboration theory underpins this work.

Overall aim: Reduce the disparity of health service delivery between Urban and Rural, Regional and Remote (RRR) The Great RRR Divide

Rural, Regional and Remote (RRR) context:

- 500k people live in MMM (Modified Monash Model) Regions 6 & 7
- Disproportionate access to services including health services (National Rural Health Alliance)
- Poorer health outcomes



Challenges:

- Remoteness
- Low population density
- Unreliable telecommunications and power (typically local generators)
- Poor roads can be isolated for months
- Dust, high temperatures and humidity.
- Severe weather events.
- Health very limited access to health services.

Many remote people still have issues with access to reliable, adequate and affordable internet and equitable access to health services.

Testing NBN Sky Muster Plus 2019-2020 wet season

Clear to light weather typically

- 29 \downarrow (varied 28-45 \downarrow)
- 9 ↑ (typically 9.8 ↑)

Ping fairly consistent 556 - 570 ms



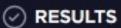








Result ID 8956159592





PING ms

DOWNLOAD Mbps

48.46

UPLOAD Mbps





Connections

Multi



'Yes' Optus

Sydney

Change Server



IPSTAR

122.129.138.90

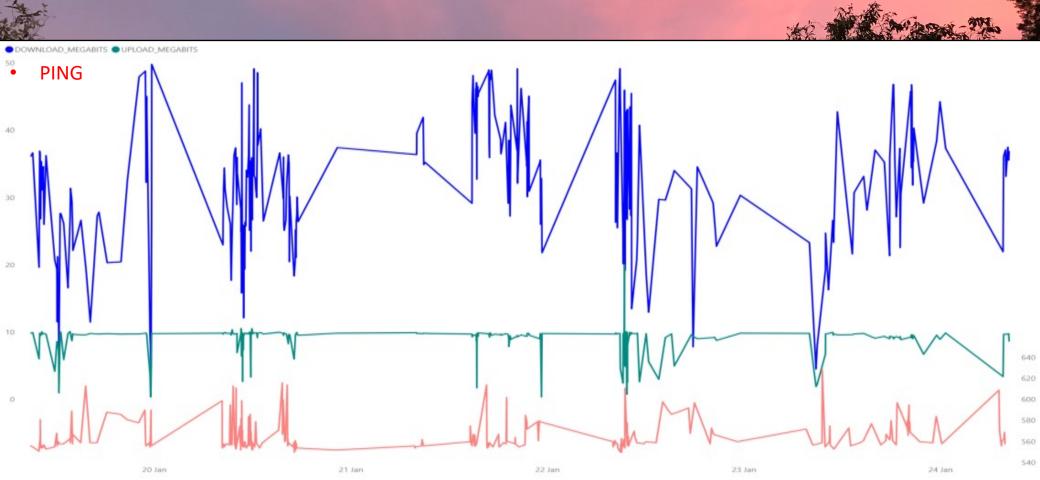
RATE YOUR PROVIDER

IPSTAR



Monitoring during monsoonal conditions Jan 19-24, 2020

- Nearest BOM weather station 425 mm
- Specifically targeted adverse weather
- Outages 2-26 mins (excluding power outages)



CRCNA Telehealth Project: Develop a simple, more robust and affordable telehealth system.

- Sky Muster Plus suitable for videoconferencing & telehealth.
- Zoom works well over Sky Muster Plus, is simple to use and allowed remote end control of camera.
- Clinicians can more accurately assess patients using videoconferencing rather than phone.
- Many Rural, Regional and Remote not getting health services they need.

Evolution of Telehealth for the Bush (TH4B)

- Synapse (Medicare billing company) provided support, Nurse Practitioners and specialists for some of our remote people as a trial. Mar Market of The
- It worked!

Examples:

Orthopaedic surgery with only 2 trips (7 hours to town, one for MRI, one for Op as public patient)

A number of patients accessing a range of mental health services from Rural, Regional and Remote homes.

Telehealth for the Bush (TH4B) Trial – Can access to health services for RRR be increased using this new model of service delivery?

Nurse Practitioners:

- Patient-centred care similar to GP role
- Skilled and qualified to diagnose & treat patients in collaboration with Medical Practitioners
- Can see patients via telehealth without in-person initial requirement
- Can access Medicare rebates
- Can refer patients to specialists, diagnostic tests, allied health professionals
- Can prescribe medications
- Synapse mobile app facilitated billing and referral pathways
- Trial worked with extensive collaboration
- Required administration, oversight & management





Synapse Concierge Service. (Method)

Patient contacts TH4B https://synapsemedical.com.au/telehealth-for-the-bush/



Consult with Nurse Practitioner (NP)



NP referrals - diagnostic tests and/or specialist (using Synapse App)



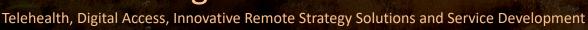
Patient has telehealth consult with Specialist



Further action as required

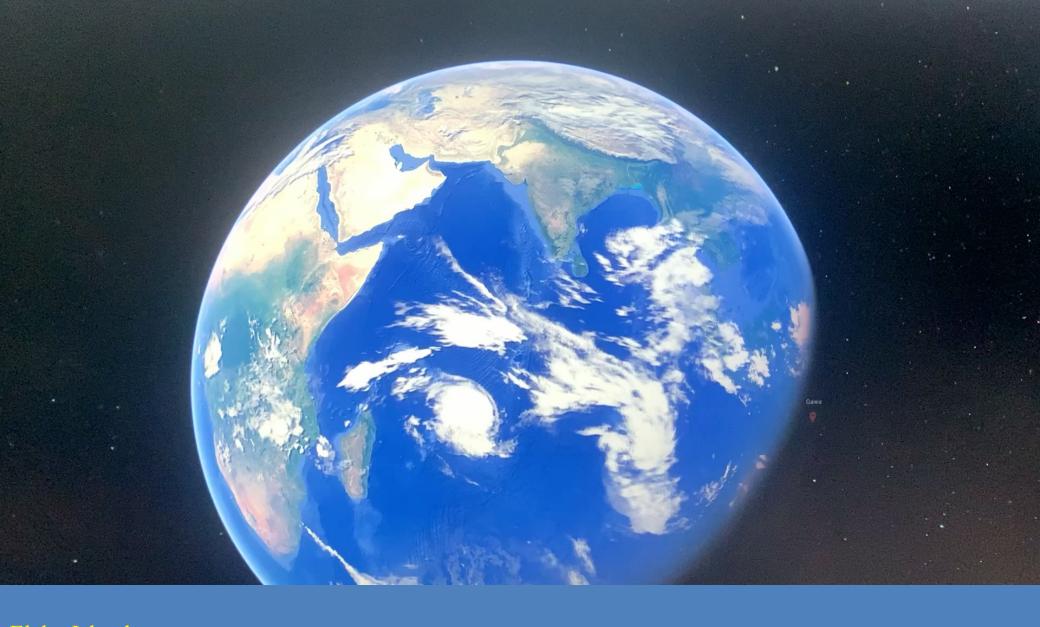


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Elcho Island

Gawa – about 600 kms east of Darwin at the northern tip of the island

Galiwinku is the main community on Elcho Island with a population of approximately 2,200 (2016)

Gawa

- Small island homeland 600 kms east of Darwin (by air)
- Population approximately 20 adults and 46 children
- Gawa Christian School
- Short infrequent nurse visits
 - High turnover nursing staff
 - o Poor continuity of care
 - Community want a more pro-active model of care

Children were climbing water storage tower to get mobile reception

- NBN Co provided Community Wi-Fi Sky Muster Plus- approx. 100 m range
- Managed service, currently 2 8 pm (as requested by community)
- Used to inform local people about Covid immunisations
- Now used for Language preservation projects



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Goals for Gawa.

- Training for locals to access telehealth service via the TH4B Trial using smart phones.
- On-site community clinic staffed by locals
- Trained "Telehealth Technicians" patient-end administration and technical support NB: These jobs may not be full-time or may be combined with other roles (eg community liaison, health educator)

Longer Term Goals

- Accommodation for local and visiting health professionals
- At least two (male and female) locally based health professionals







TH4B Expanded network – Range of 40 health services now available, including:

Allergist, Clinical Immunologist Anaesthetist, Cardiologist, Cardio-thoracic Surgeon, Colorectal Surgeon, Dermatologist, Emergency Physician Endocrinologist, Exercise Physiologist, Gastroenterologist and Heptologist, General Physician, General Practitioner, General Surgeon, Geriatrician, Haematologist, Infectious Diseases Physician, Intensive Care Medicine, Midwife, Nurse Practitioner Neonatal/Perinatal Medicine, Paediatrician, Nephrologist, Renal Physician, Neurologist, Obstetrician and Gynaecologist, Occupational Therapist, Oncologist, Orthopaedic Surgeon, Paediatric Surgeon Paediatrician/Paediatric, Neurologist Pain Medicine, Palliative Medicine, Pathologist, Psychiatrist, Physiotherapist, Radiation Oncologist, Rehabilitation Physician, Respiratory and Sleep Physician, Rheumatologist, Speech Therapist, Urologist, Vascular Surgeon

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BR@ADBAND

....and expanding

Lessons learned:

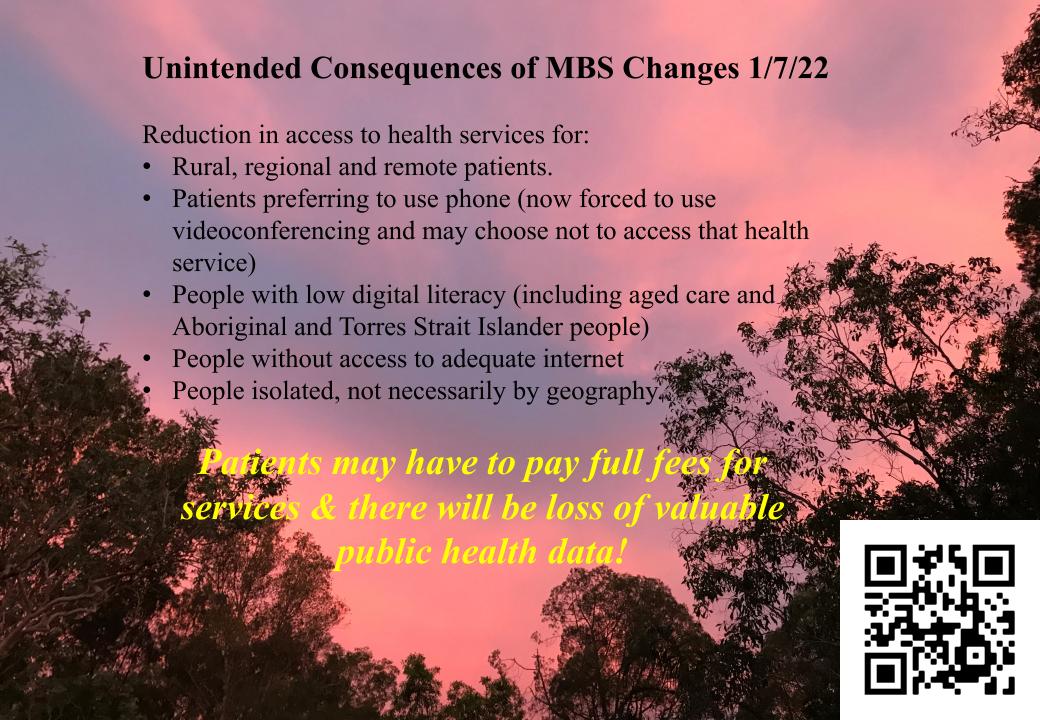
High level of collaboration and administration required

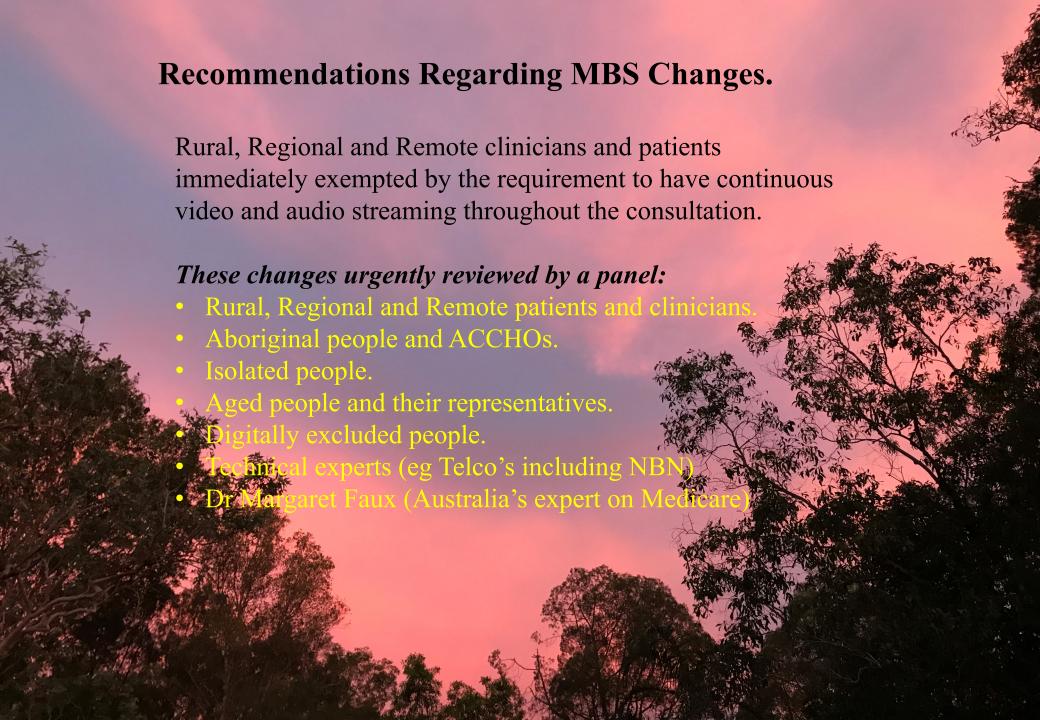
Barriers:

- Lack of access to adequate internet
- Data transfer between diagnostic services, referring clinicians and patients
- Lack of data uploaded to My Health Record (MHR)
- Diagnostic services refusing to upload data to MHR
- Diagnostic services sending results to referring clinician via post (causing extensive delays)
- Clinical services Medicare funded, but not administration to ensure continuity of care with local health care providers
- Requires collaboration and administration plus access to networks









Conclusions - TH4B model of service delivery.

- Can supplement existing services
- Can link into existing services
- Can expand access to a wider range of health services for Rural, Regional and Remote
- Improve health outcomes for Rural, Regional and Remote
- Potentially can address the "Great RRR Divide"
- Potentially assist in "Closing the Gap" in health for remote Aboriginal people

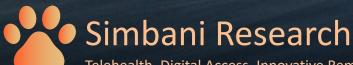
Research Questions:

Will the new MBS requirements cause the termination of TH4B? Can this new model of service reduce the disparity between RRR and urban in health service provision?

How can TH4B be implemented to "Close the Gap" for remote Aboriginal people?

How can we fund TH4B sustainably?

Elizabeth River, NT Photo – Jennie Wilton







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- Laynhapuy Homelands Aboriginal Corporation
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- SkyMesh
- Synapse Medical Services
- VisionFlex
- Asia Pacific College of Business & Law
- Biz365
- NBN Co

With support from:

- The Gawa community
- Isolated Children's & Parents
 Association
- Broadband for the Bush Alliance









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