

Evaluating the *Staying Strong* Telehealth Project

Cartwright C, Shaw K, Arunachalam I

(Presenter) Professor Colleen Cartwright
Principal Director, Cartwright Consulting Aust. P/L
Emeritus Professor, Southern Cross University

cartwrightconsultingaust@gmail.com

Staying Strong Project

- One of the Australian Government-funded projects which aimed to improve the health of older Australians, using NBN (+ other fit-for-purpose broadband devices).
- Implemented by integrated living with older Aboriginal and Torres Strait Islander people in 2 sites in NSW (Coffs Harbour & Armidale) and 2 in Qld (Brisbane & Toowoomba)
- **Objective:** To improve the health and wellbeing of participants by:
 - supporting older Aboriginal and Torres Strait Islanders to access **telehealth monitoring** in their home or at a hub
 - developing and implementing **cultural activities** that connect older Aboriginal and Torres Strait Islander Australians with younger people to raise cultural awareness and respect for Indigenous history and heritage

Telehealth Service Model

- Participants supplied with a tablet (iPad equivalent), a range of peripheral devices and an individualised monitoring plan (GP or RN developed) to determine peripherals, parameters, acceptable margins and frequency of monitoring.
- Vital health signs monitored (as appropriate) included temperature, blood pressure, weight, pulse, oxygen levels, blood glucose levels and/or peak flow rate
- Measured at home or at telehealth services hub and transmitted to Data Monitoring Centre; triage management by RN of out-of-margin readings
- Vital sign readings were provided to participants for their health information/education and to GPs to support diagnoses

Potential Benefits of Telehealth

- Increase access to regular health monitoring for people in rural and remote areas, or those who are house-bound
- Reduce emergency hospitalisations
- More accurate and timely diagnoses
- Increase awareness of own health conditions
- Increase independence and self-management
- Reduce need for GP home visits
- Peace of mind for older person and family

Project Evaluation

- Methodology:
 - Advisory Committee established (Prof Susan Nancarrow; Prof Tony Broe; A/Prof Kelly Shaw; Ms Sharon Wall; Ms Jennifer Darr)
 - Ethics approval (RACGP)
 - Meetings with relevant stakeholders, incl. CEO/senior staff of Aboriginal Medical Services to provide information, address concerns
 - Development of Base-line & Follow-up evaluation instruments: Personal Wellbeing Index/Attitude to Technology/Social Connectedness/ (demographic data at Baseline) for implementation by RNS
 - Yarning Circles held with participants at end of evaluation period to obtain qualitative data of their attitudes to, and experiences with, the telehealth equipment (recorded with consent).
 - One-on-one interviews with stakeholders, participants, RNs & senior integrated living staff (recorded with consent).

Project Evaluation Questions

- Did *Staying Strong* improve provision of health services?
- Did it empower people to better manage own health?
- What were the supporting and inhibiting factors in the uptake of telehealth among Aboriginal and Torres Strait Islanders?
- Did it reduce number of hospitalisation/length of time in hospital?
- Did the cultural activities improve the older person's social connectedness?
- Did it enhance cultural awareness and respect for indigenous history and heritage?
- Did the project improve people's quality of life (Wellbeing index)?

Project/Evaluation Challenges

- Project timeframes: long delays to announcement of funded projects but required completion dates unchanged; that increased the challenge of building relationships with ATSI people (requires time) and gave less time for evaluation/ reporting
- National Broadband rollout – significant delays, up to 5 months in some locations
- Shortage of suitable telehealth RNs at some sites → late participant recruitment → fewer participants in evaluation

Evaluation Outcomes - 1

- 70 participants completed Baseline Packs & 54 completed Follow-Up Packs
- Demographics:
 - mean age 62 – range 49-79;
 - 52 females/ 18 males;
 - 22 married, 9 widowed, 8 divorced, 19 single;
 - 21 lived alone, 10 with spouse only, 38 with family, 1 co-tenant
 - 50 lived in a house, 20 in a unit or flat;
- Major Health Conditions
 - 47 high BP; 33 Type-2 diabetes; 30 high cholesterol
 - Majority ha 5 or more health conditions
 - 30% had hospital admission in past 12 months, most 1+

Evaluation Outcomes - 2

- Telehealth Equipment Readings:
 - of 27,752 valid readings, 570 were outside parameters set by GP or RN; 240 “low” alerts, 330 “high” (red) alerts;
 - RN computer dashboard displayed red alerts at top of screen each morning, RN used local knowledge & triage skills to follow-up;
 - compliance & usage assessed for 2 sites with most participants
 - significant differences between sites; higher usage & compliance at Site 2 where GP had set parameters of RN; GP may have given project more “legitimacy” in eyes of participants or made them more “wary” of missing readings; Site 2 participants also had higher SES than Site 1, incl. professional employment in some cases

Evaluation Outcomes – Personal Wellbeing

Domain	Baseline Mean (SD)	Follow-up Mean (SD)	p for signif	Aust
Overall	74.4 (17.9)	75.7 (16.6)	0.21	73.4-76.4
Living Standard	78 (23)	79 (22)	0.52	
Health*	57 (26)	63 (21)	0.07*	
Achieving in Life	71 (28)	76 (22)	0.18	
Relationships	84 (22)	79 (21)	0.32	
Safety	77 (25)	79 (25)	0.10	
C/ty Connection	81 (23)	82 (21)	0.95	
Future Security*	68 (26)	72 (23)	0.07*	
Spirituality/Religion	80 (22)	77 (25)	0.75	
* Approached Significance				

Evaluation Outcomes – Attitude to Technology

- 9 statements, 5-point scale: % (n) Strongly Agree/Agree

The Telehealth Equipment	Baseline N=67	Follow-up N=53
Improve(d) access to regular testing	91 (61)	92 (49)
Make/made it easier to do regular testing	92 (62)	92 (49)
Save(d) time in having regular testing	88 (59)	88 (47)
Will be/was useful in my regular testing	89 (60)	92 (49)
Learning to use it would be/was easy for me	71 (47)	77 (41)
My interaction with it would be/was clear & understandable	73 (48)	81 (43)
Would be/was easy for me to become skilful at using it	77 (51)	77 (41)
Would be/was easy to use	76 (50)	83 (43)
Comfortable about using it at home	89 (60)	90 (48)

Evaluation Outcomes (Cont.)

- Hospital Admissions – reduction over period of evaluation from 12 months pre-Baseline but follow-up time period varied between participants so reduction could not be accurately assessed
- Participant Satisfaction
 - 98% (n=53) enjoyed being in the project
 - 96% (n=52) wanted to continue using the equipment
 - 90% (n=48) understood better what effects their health because of using the equipment
 - 85% (n=46) felt better at Follow-up than at Baseline
 - 98% (n=53) said that “the project nurse was always happy to assist me and answer my questions”

Evaluation Outcomes – Qualitative Data

- Factors associated with engagement and up-take of telehealth:
 - being told about the project in a “safe” environment, e.g., during regular Elders’ Health Check or at AMS clinic;
 - encouragement from GP;
 - being told about it by family/friends already participating: *“everybody I know does it and they’re happy with it”* (P1)
- Barriers and enablers for acceptance and use:
 - Main barrier was time (paid work, volunteering, caring for family members): *“Some of the older women, while they have poor health, their priority is the health and wellbeing of others. Some are carers of husbands/partners, grandchildren and others”* (Staff member).

Evaluation Outcomes - Qualitative Data

- Other factors identified during Yarning Circles/interviews;
 - Male participant with diabetes had not seen Dr for over a year
 - Some participants had not had BGL checked for many years before joining the project, now do it every day. Some keep daily diary of BGL & BP – one man who had lost his heavy-vehicle driver's licence now knows how to control BGL/BP, diabetes is under control & he is hopeful of regaining his licence.
- Quality of RNs → RN now “accepted by community”; reassurance/security – as well as seeing their results, they know that “*someone else is watching and will take action if needed*”. Nurse phones if readings are not right “*you feel like someone is caring about you*”.
- Participants reported “*feeling special*”; they asked each other about their readings and taught each other to use the equipment.

Evaluation Outcomes - Qualitative Data

- Willingness of participants to learn how to manage their health; setting up routines for readings; support from wider, non-indigenous community (e.g., president of local RSL Club ensured that the Club stocked Zero Lemonade to support participant who gave up alcohol and was monitoring his BGL).
- Increased Awareness/Health Education:
 - *“I know when I have a couple of beers on Friday or Saturday, it (BP) goes up. I’ve cut back on a lot of drinking because of that. I’m a bit worried about the Monday morning (BP) test”*
 - *“You get more confident, like, if there’s a death in the family, I don’t stress over the readings because I know where it comes from”*
 - *“If I feel tired I (check BP & BGL) and say ‘It’s time to sit down’. It’s really wonderful that I’ve got this equipment”*
 - *“It’s about access and choice. I don’t have to go to the Elders’ Health Check now but I can if I feel like a yarn-up.”*

Intergenerational Component

- Collaboration between integrated living, Armidale Aboriginal Cultural Centre Keeping Place, UNE Arts/IT/Marketing students; NE Conservatorium of Music and local primary school children;
- Elders from *Staying Strong* are having their stories recorded and teaching their songs to the young people (not all indigenous):
[one of the Elders remembered a song her father wrote when the first train pulled into Armidale. He didn't know what a train was & the song is about his impressions and emotions when he saw it]
- A traditional Aboriginal dancer is developing dances to go with the songs, to present (and record) in a local hall.
- 3 components – Sharing Songs, Sharing Stories, Sharing Dance – a UNE (indigenous) Theatre Studies student will audio/video it all, edit to a 2-minute presentation; UNE IT students will upload to app; UNE Marketing students will market it.

Technology Issues

- **Slow NBN roll-out** meant
 - Project not implemented at all sites in original project plan & impacted on other sites, e.g., it took 5 months to connect NBN to Armidale Cultural Centre for intergenerational project
 - Technical issues with NBN meant time-burden on RNs;
 - In some sites, never possible to use NBN – had to use other fit-for-purpose broadband devices, e.g., 4G;
 - Once connected NBN worked well; more reliable than 4G and better for teleconferencing.
- **Telehealth Equipment:**
 - Good acceptance – most participants had mobile phones and computers & only needed 2-3 training sessions from RN;
 - Equipment provider (Tunstall) provided good support;
 - Some peripherals were complex, e.g. glucometer, or not well designed, e.g. BP monitor

Lessons Learned

- Community engagement with Aboriginal and Torres Strait Islanders takes time: (Funding bodies please note!!)
- Older Aboriginal and Torres Strait Islanders in the project showed high level of engagement with the equipment and technology
- Remote telehealth monitoring for Indigenous communities needs to be complemented with face-to-face contact (Note: role of RNs)
- GP involvement & regular review of monitoring plans is important
- Some equipment needs bigger type face & less complexity
- Some staff need support to move from hands-on clinical approach to remote monitoring/triaging
- Strong internet connection is needed for maximum effect