

Metro North Hospital and Health Service *Putting people first*

Time to Care

Queensland Podiatry Telehealth Service for Foot Disease

Jason Warnock

MNHHS Director Podiatry

07/08/2019

Back in 2001

► Taking telehealth to the bush: lessons from north Queensland

Julie Watson*, Lee Gasser*, Ilse Blignault[†] and Robyn Collins[‡]

*Networking North Queensland, Townsville, Queensland; [†]Centre for Online Health, University of Queensland, Brisbane;

[‡]Information Services, Queensland Health, Mackay, Queensland, Australia

Rollout of video-conferencing equipment to 21 communities in far north Queensland

Identified key requirements were:

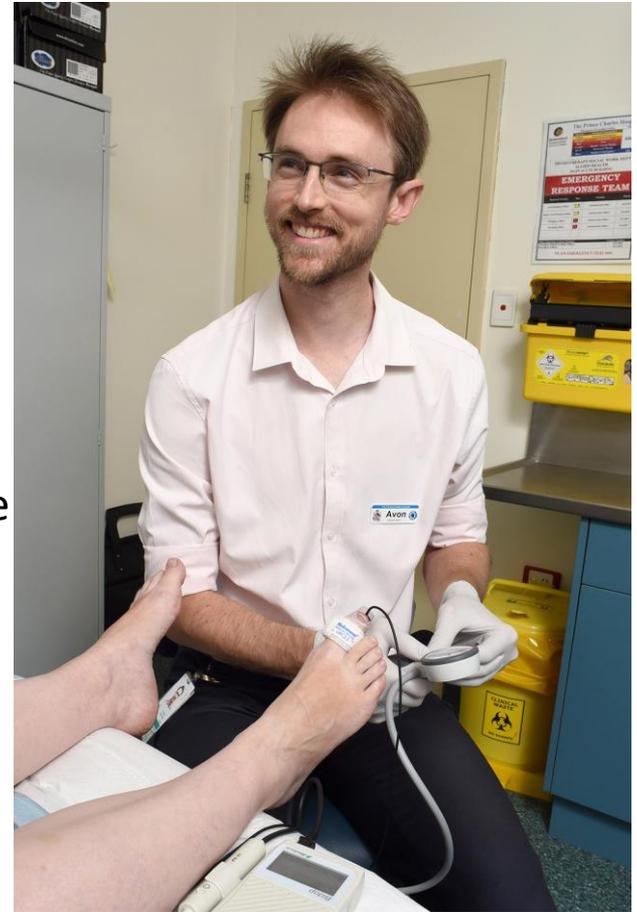
- User friendly technology
- Portable and accessible equipment
- Suitable room environment
- Training and resource manuals
- Local champion & community awareness
- Collaboration with other sectors for sustainability



2018/19 and 2019/20:

Queensland Health injected \$4.7m into High Risk Foot (HRF) services

- Time is Tissue
- Funding for ambulatory HRF services
- Time to Care: two working days to see the person referred with a foot ulcer or acute Charcot foot
- Each HHS offered funding to increase HRF services
- Additional, 2.0 permanent FTE: Metro North HHS & Cairns & Hinterland HHS for statewide telehealth service
- Build the podiatry workforce for these services



... and we saw you within 2 days of receiving your referral

Consultation with stakeholders

- Re-inforced the Networking North Queensland findings, keep it simple and easy (to refer)
- Presented a clear goal and purpose
- Ownership and support (from Qld Health & the HHSs) – the service will be here to stay
- Adaptability – build the model for your local needs (not imposing a model)
- Economical framework (revenue for each end; savings in time and money on travel)
- Efficiency – policy and procedures articulate how to be involved
- Infrastructure – in place
 - telehealth co-ordinators
 - equipment
 - technical assistance

help

Telehealth services in rural and remote Australia: a
systematic review of models of care and factors
influencing success and sustainability

NK Bradford, LJ Caffery, AC Smith

The University of Queensland, Centre for Online Health, Princess Alexandra Hospital, Telehealth
Centre, Woollongabba, Queensland, Australia

2016

Infrastructure in place

The trial identified a number of Models of Care:

- Transfer Home
- Unplanned presentations (non-critical), 'cold call'
- Rural hospital inpatient call
- Rural Aged Care facilities
- GP practice
- Weather events
- Holiday relief

Telehealth Emergency Management Support Unit



Telehealth Site Map by Hospital and Health Service Areas

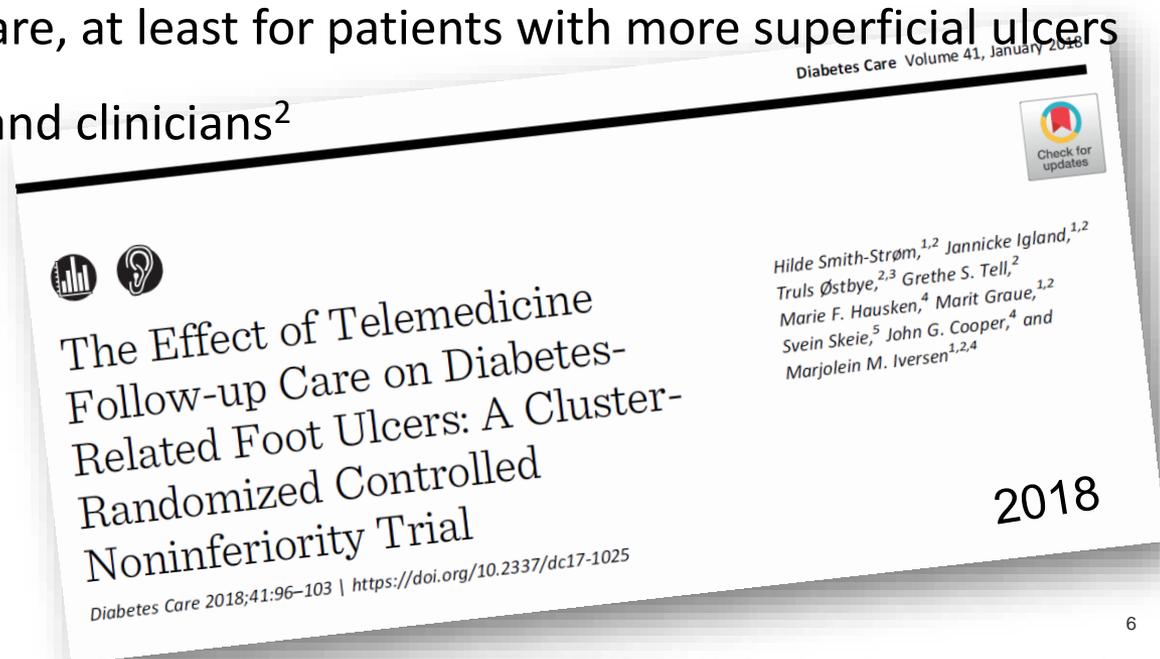


Has this been successfully achieved previously?

- Colleagues in Norway asked “to evaluate whether Telemedicine (TM) follow-up care could deliver the same treatment for patients with Diabetic Foot Ulcers (DFUs) as Standard Outpatient Care (SOC) and contribute to more convenient treatment and integrated care.”

Conclusions:

- The results suggest that the use of Telemedicine can be a relevant alternative and supplement to usual care, at least for patients with more superficial ulcers
- Satisfaction from patients and clinicians²
- Improved integration of services through improvements in communication².



How does the Norway model relate to our proposed model?

Norway

- Seen firstly by Specialist Outpatient Clinic
- Primary care follow up - two fortnightly visits, TM review on each occasion (web-based ulcer record, clinical photos exchanged, phone discussions with SOC clinicians)
- Third review with SOC clinicians, TM review, continue care with primary care for the next two visits
- Continue this shared regimen until healed.

Metro North/Cairns

- Seen as an inpatient, admitted for complications of foot disease, managed by specialist services e.g. vascular or orthopaedics
- 'Transfer Home': handover via telehealth videoconference to patient and the local health professional
- Continuation of the wound management plan
- Review as scheduled, with the specialist team.



Difference in acuity?

What's the added value in our model?

The telehealth podiatrist will:

- meet the patient whilst an inpatient; before the person is transferred home
- be part of the treating team and access to the medical record, engage in discussions regarding care delivered and the management plan
- handover to the receiving healthcare professional 'at home' utilizing telehealth videoconferencing facilities
- offer support and clinical expertise from a senior high risk foot podiatrist; building local skills and expertise
- act a resource person, to link to local providers and pathways to specialist services & communication



Outcome Measures

Norway

- Number of weeks to achieve healing
- Number of consultations (SOC / TM)
- Follow-up for maximum of 12 months
- Minor or major amputations (before healing)
- Death (before healing)
- Severity of Ulcer
- Location of Ulcer

- Distance from home, > 25 km to SOC
- Patient experience
- Health practitioner experience



All of these outcome measures are captured in the Queensland Health MARS database for High Risk Foot form, with the exception of location of ulcer.

- Distance from home to the 'home site'
- Distance from home site to discharging hospital
- Utilization of standardised experience surveys from Qld Telehealth.

The trail identified a variation of *local* skills and knowledge relating to Foot Disease assessment and management

Bulik¹ (2007) states that history-taking and the physical examination remain a major component of a clinician's diagnostic ability ... 50 - 70% of diagnosis depends on quality of data collection and integration.

Minimum clinical information to make the referral and delivery care:

- Medical history and current medicines
- Neuro-vascular assessment
- Wound assessment / description
- Clinical photos
- Probe the wound bed
- Equipment – availability of offloading options
- Access to dressings



¹ Bulik RB, Human factors in primary care telemedicine encounters. *Journal of Telemedicine and Telecare* **14**: 169-172 (2008)

'Transfer Home' to potentially increase referrals?

In the Norway study, Community Nursing and podiatry staff reported:

- increased wound assessment, knowledge and skills (confidence)
- improved quality of documentation
- streamlined communication between primary health care and specialist care



Will increased confidence lead to an increase in 'cold call' referrals?

Time is Tissue – Recognize, Respond & Refer

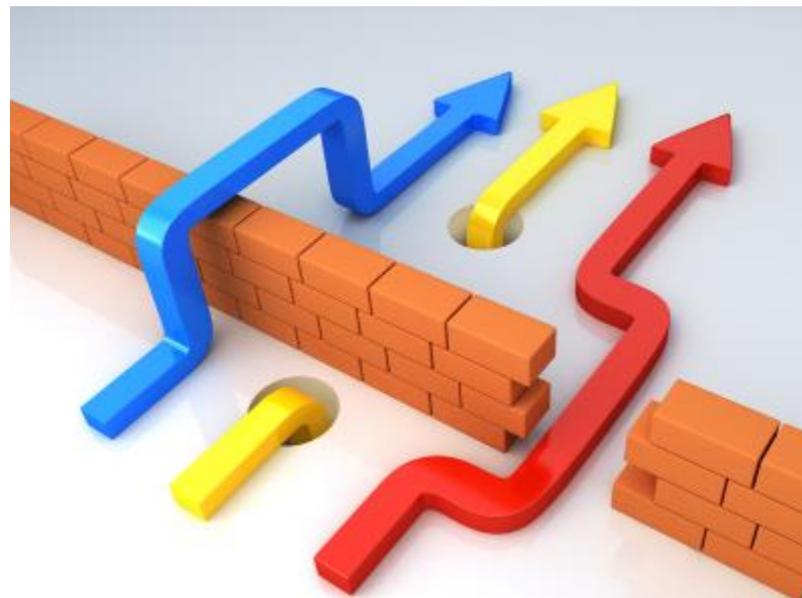
Telemedicine in diabetes foot care delivery: health care professionals' experience

Beate-Christin Hope Kolltveit^{1*}, Eva Gjengedal^{2,3}, Marit Graue¹, Marjolein M. Iversen^{1,4}, Sally Thorne⁵ and Marit Kirkevold^{1,6}

Overcoming potential barriers to make the referral

Queensland Clinical Skills Development Centre has agreed:

- To develop short education packages, including short 'how to' video clips
- Available on www
- Printable 'how to' documents
- Where to find and how to order: probes, post-op shoes, removable cast walkers
- No cost to access
- Open access for all: Qld Health, non government organisations, private
- Choice of resources for what "you" need to know



Time is Tissue – Recognize, Respond & Refer

Clinical photography – store and forward

- Telehealth services related to wound management is often includes taking photos of the wound and transferring these images to a remote clinician +/- additional written and verbal information
- Clark's study, in 2017, tested the validity and reliability of this process
- Concluded that the photos, in isolation, have low diagnostic accuracy.

The validity and reliability of remote diabetic foot ulcer assessment using mobile phone images

2017

Jaap J. van Netten^{1,2}, Damien Clark^{2,3}, Peter A. Lazzarini^{1,2,3,4}, Monika Janda⁵ & Lloyd F. Reed¹



Figure 1. Example of the four mobile phone images taken for remote assessment.

Looking into the Future

Evaluation of the Telehealth High Risk Foot Service to demonstrate that it does deliver:

- Health outcomes are equivalent to other high risk foot services in Queensland
- Access to care for more Queenslanders
- Economically sustainable service
- Satisfaction for consumers and clinicians
- Increased skills and knowledge in the assessment and management of foot disease by health professionals
- Improved integration of services across sectors including tertiary, secondary and primary healthcare services

and

Paves the way for more telehealth services for foot disease within each of the Hospital and Health Services.



Thank you, Jason.Warnock@health.qld.gov.au

QUESTIONS?

Photo sources for slides

- 2 - <https://www.dynamiccio.com/adopt-sd-wan-to-meet-changing-networking-infrastructure-needs/>
- 3 <https://www.shutterstock.com/image-vector/communication-smartphone-vector-illustration-524876680>
- 3 courtesy of TPCH podiatry, MNHHS
- 4 <http://fundacionhelp.org/en/daniela-castellanos-2/>
- 5 https://miri.health.qld.gov.au/tems_u_sim/
- 7 <https://www.matrixofmotion.com/balance-your-muscles-first/>
- 8 <https://benedura.com/value-virtual-cio-services/>
- 9 <https://www.worldatlas.com/articles/how-did-mars-get-its-name.html>
- 10 <https://possibilitychange.com/self-confidence/>
- 11 courtesy of TPCH podiatry, MNHHS
- 12 <http://fromaddict2advocate.com/recovery-is-overcoming-barriers-and-obstacles/>
- 12 <http://www.elearningsuperstars.com/project/queensland-government-clinical-skills-development-service/>
- 13 <https://cdn-01.media-brady.com/store/stus/media/catalog/product/cache/4/image/85e4522595efc69f496374d01ef2bf13/1544627174/r/e/reflective-warning-signs-caution-ac0563-lg.jpg>
- 14 <https://tesy.com/about-us/history/looking-into-the-future>