

# Understanding the support needs of rural and remote clinicians providing non critical emergency care.

Presenters:

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Government**



# Research Team:

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# Inception of this study:



- \* During the clinical implementation of TEMSU in Barcaldine in 2014 we recognised that service implementation was based on a narrow evidence base
- \* After service implementation was established we were in a position to pursue the project

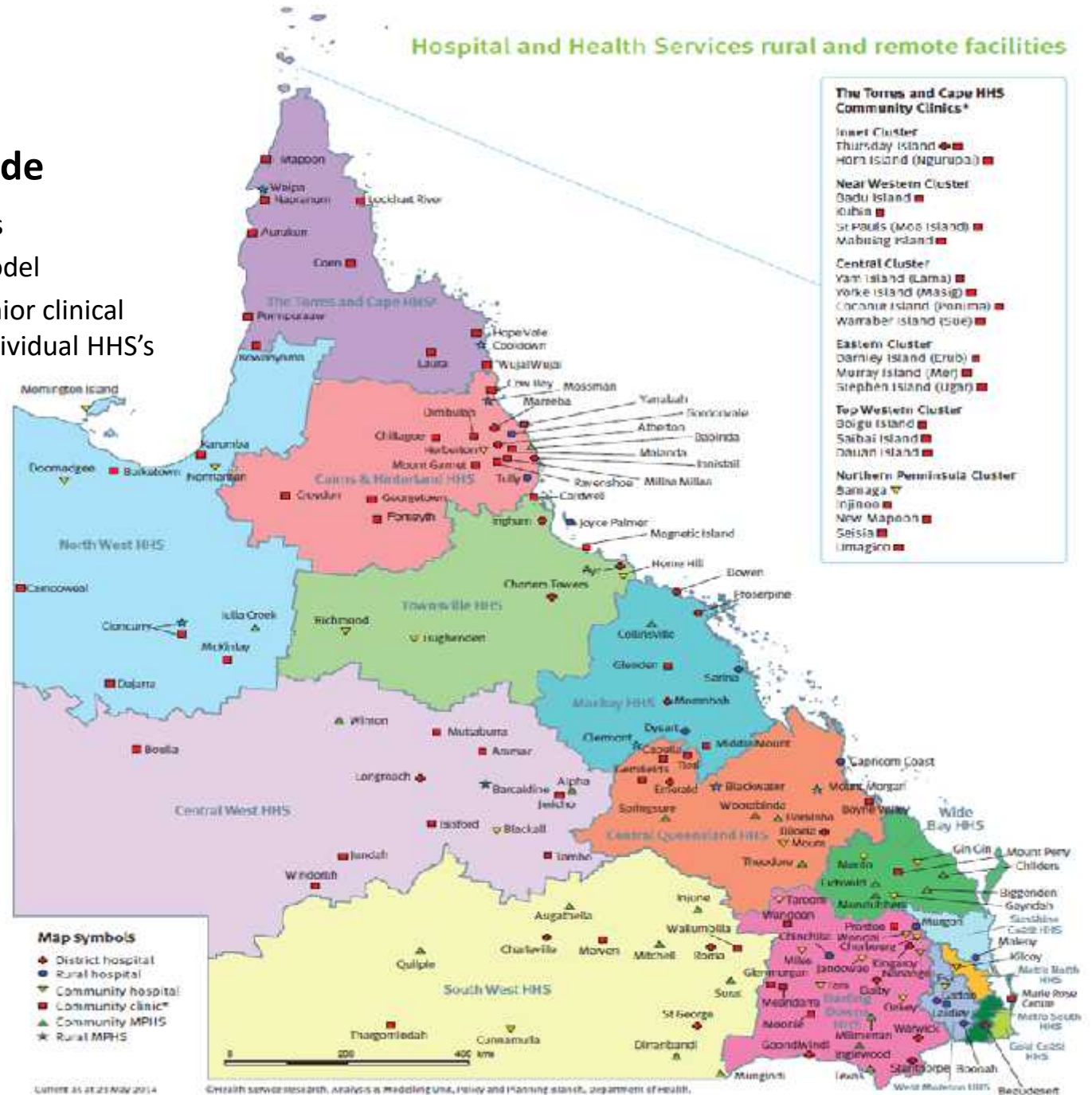


# What is TEMSU?

- \* Telehealth Emergency Management Support Unit (TEMSU)
- \* Service provision governed by Retrieval Services Queensland (RSQ)
- \* Low acuity, nurse run service
- \* Links sites together for clinical support with local HHS hub site/s via Videoconferencing (VC)

# Queensland Wide

- Currently 121 sites
- Hub and spoke model
- Junior to more senior clinical support within individual HHS's
- Nursing support



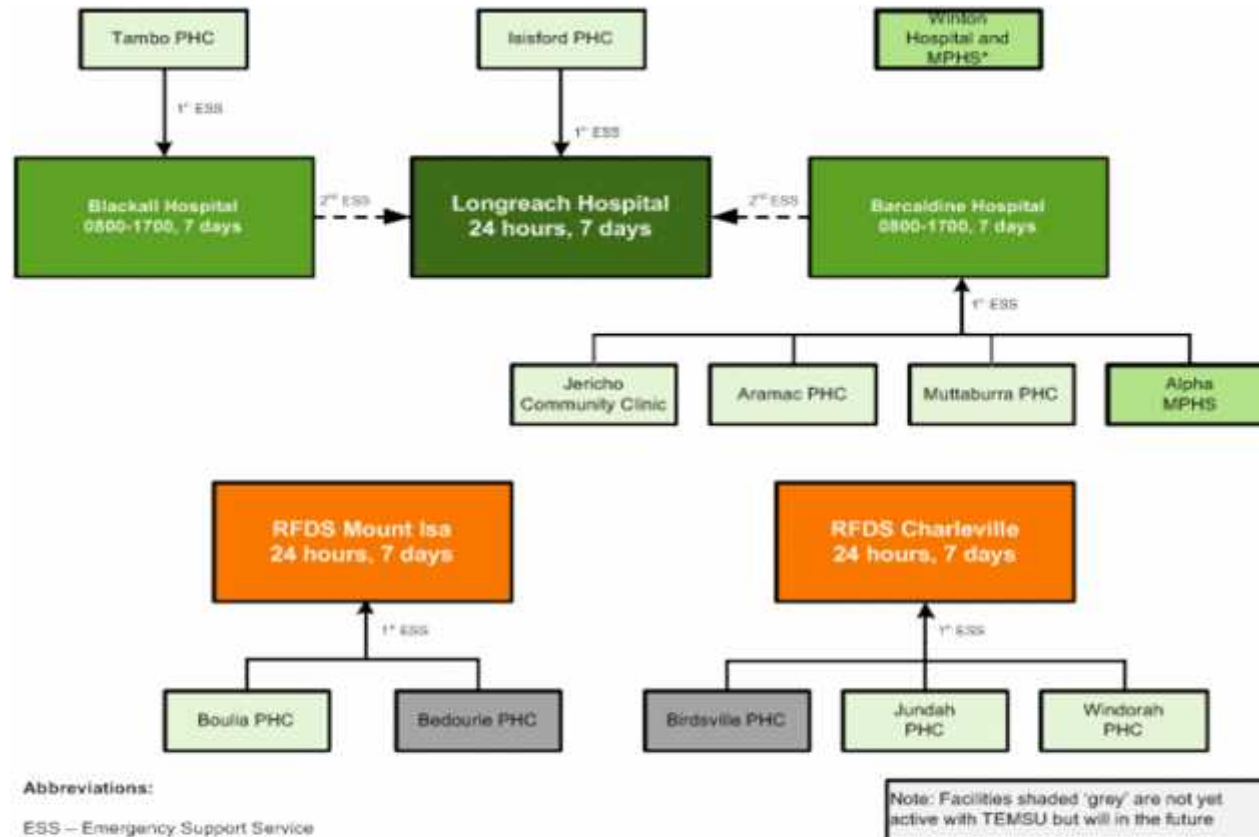
Current as at 23 May 2014

Health services research, analysis & modelling unit, Policy and Planning branch, Department of Health.

# TEMSU Room



# TEMSU Model example – Central West HHS



**Abbreviations:**

ESS – Emergency Support Service  
 PHC – Primary Health Centre  
 RFDS – Royal Flying Doctor Service  
 TEMSU – Telehealth Emergency Management Support Unit

Note: Facilities shaded 'grey' are not yet active with TEMSU but will in the future

**Notes:**

1. Where a facility has access to a local Medical Officer, all requests for medical support should be made by the local Medical Officer unless otherwise specifically agreed upon.
2. All calls from a RFDS supported PHC requesting medical support should be made directly to RFDS who will then contact TEMSU if telehealth is required.
3. \* Winton Hospital only has TEMSU Nursing Support available as they are medically supported by Townsville who is not live with TEMSU.
4. Retrieval Services Queensland Northern Operations Medical Coordinator is available to provide backup support.

# Potential Study Impact:

- \* This research aims to provide a basis:
  - \* For a critical evaluation of TEMSU and develop recommendations for service model adjustment
  - \* To increase clinician engagement with Telehealth service models to positively impact under resourced areas
  - \* For a national approach to validate support needs and telehealth service models across the country



# Focus:

- \* What are the support needs of rural and remote clinicians (RNs, MOs) when providing non-critical emergency care in rural/remote Queensland
- \* *In this study non-critical emergency care is emergency care for patients who do **NOT** need immediate retrieval to another health service*

# First the literature:

## Method:

- \* Integrative literature review using a systematic structure.
- \* Inclusion Criteria: Written in English, published from 2000-2016, research articles, single site studies/case study reports, reports of care provision for adults or children or both, articles describing emergency care support for clinicians in rural/remote areas.
- \* Search terms: Emergencies, Emergency medical services, Emergency nursing, Rural Hospitals, Rural health, Rural Health Services, Remote rural nursing, Rural Nursing, Clinical decision support systems, Decision support techniques, remote consultation, telemedicine, telehealth, Clinician Support.
- \* Databases searched: PubMed, Cumulative Index to Nursing and Allied Health (CINAHL), Web of Science, The Cochrane Database of Systematic Reviews Library, The Cochrane Central Register of Controlled Trials and Embase.

# Literature review results:

- \* **Results:** A total 1074 papers were initially retrieved. Initial review reduced this number to 151 papers. Initial review of the remaining papers showed four themes:
  1. The scope of support services already in place. Significant support via telehealth in multiple locations are available and in place for particular presentation types such as:
    - Stroke
    - Mental health and psychiatry
    - Trauma
    - Ophthalmic issues
    - Acute burn injury
    - Chest pain/cardiac events
    - Paediatric emergencies
    - Tasking of aeromedical retrieval
    - Pre-hospital emergency care
    - Acute brain injury interventions

# Literature review results: continued

2. How well utilised/successful existing telehealth services were:
  - The characteristics needed to make a telehealth support service work
  - Factors that hinder or support implementation of a telehealth support service
3. Cost effectiveness of telehealth services:
  - Decision making for transfer avoidance
  - Business analysis of services
4. Telehealth as a resource for workforce:
  - The impact of a telehealth support service on recruitment of health personnel in rural and remote areas
  - Telehealth- an education tool for clinicians

# Rationale:

- \* Support Services - well established for trauma and critical emergency care in rural and remote areas of QLD however not for non critical patients
- \* Needs of rural and remote clinicians not been reported on before
- \* Uptake of telehealth support services is lower than expected (Parliamentary Committees, 2014)
- \* Service models - based on anecdotal and local needs highlighted by critical incidents and poor patient outcomes

# Background:

- \* Emergency care in rural and remote areas is not uniform
- \* Health care provided with minimal resources and support (Gregory, 2010)
- \* Skill mix in these environments may be low due to issues of attracting and retaining skilled staff in rural and remote areas
- \* There is significant diversity in the types of patient presentations that staff manage
- \* These factors can result in crises when providing emergency care in regional areas and a reduced level of clinician confidence (Kidd, Kenny, & Meehan-Andrews, 2012)

# Cohort and Method:

- \* Doctors and Registered Nurses who regularly work in rural and remote sites in Queensland would be eligible for inclusion in this study
  - \* Regular work in a rural or remote area is defined as *more than 50% of the clinicians' work time is spent providing health care in rural or remote settings*
- \* Individual semi-structured interviews
  - \* Face to face
  - \* In work location or other if nominated by the participant
  - \* Choice of interviewer
- \* Inductive thematic analysis

# Research Questions:

1. What are the challenges in providing non-critical emergency care in rural and remote settings?
2. What impact do these challenges place on:
  - patient safety and engagement in care
  - staff safety
  - timely care provision
  - developing patient treatment and management plans
  - staff skill sets and
  - issues of access and distance?
3. What support currently exists and what else is needed/could be provided to ease these challenges and access support?



# Conceptual Framework:

- \* This study will be conducted using a qualitative, inductive method, using the conceptual framework of rural and remote health proposed by Bourke et al., (2012) as the theoretical basis of this investigation
  
- \* This conceptual framework is made of six key concepts:
  - (i) geographical isolation
  - (ii) the rural locale
  - (iii) health responses in rural locales
  - (iv) broader health systems
  - (v) broader social structures and
  - (vi) power relations at all levels (Bourke et al., 2012, p. 498)

# Study Setting/Location

- \* Ethics approval has been granted for all sites in QLD
  - \* Approval reference HREC/16/QRBW/254, and GU reference 2016/562
- \* Currently recruiting HHSs – likely to be in 7 HHSs in QLD
- \* Likely to start recruiting participants in at least 2 HHSs in next two weeks

# References:

- \* Bourke, L., Humphreys, J. S., Wakerman, J., & Taylor, J. (2012). Understanding rural and remote health: a framework for analysis in Australia. *Health & Place*, 18, 496-503.
- \* Gregory, G. (2010). Health reform and the immediate needs of rural and remote communities. *The Australian Journal of Rural Health*, 18, 47-48.
- \* Kidd, T., Kenny, A., & Meehan-Andrews, T. (2012). The experience of general nurses in rural Australian emergency departments. *Nurse Education in Practice*, 12, 11-15.
- \* Parliamentary Committees. (2014). *Inquiry into telehealth services in Queensland*. Report No. 55, Health and Community Services Committee, September 2014.