

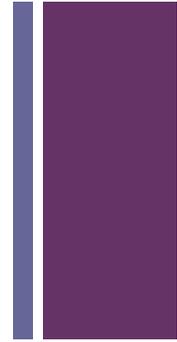
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Patient perspectives
on using
telerheumatology in
the management of
inflammatory
arthritis

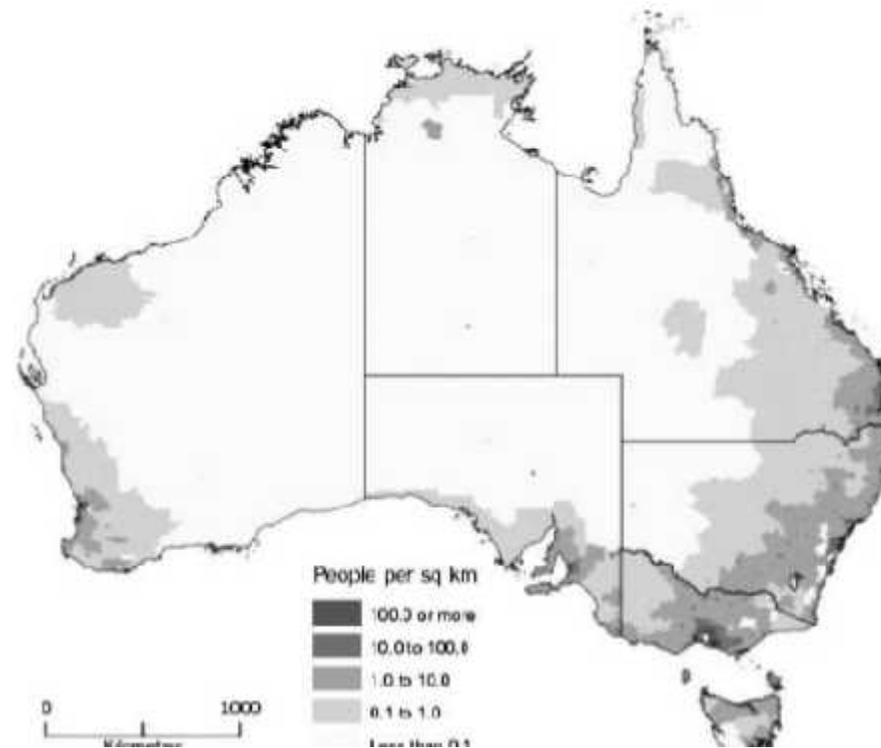
Dr.Swapna Devadula, Rheumatology Advanced Trainee,
Princess Alexandra Hospital
National Rural and Remote Telehealth Conference 2016, Toowoomba

+ Definition and background

- Telemedicine is the use of advanced telecommunication technologies to exchange health information and provide health care services across geographic, time, social and cultural barriers.
- Research from the early 1990s has confirmed that telemedicine is an efficient mode of quality healthcare delivery, for patients who are unable to access health care due to geographical and/or personal resource barriers.

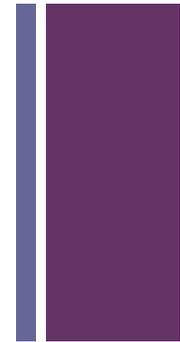


+ Population density 2012 , Australian Bureau of Statistics

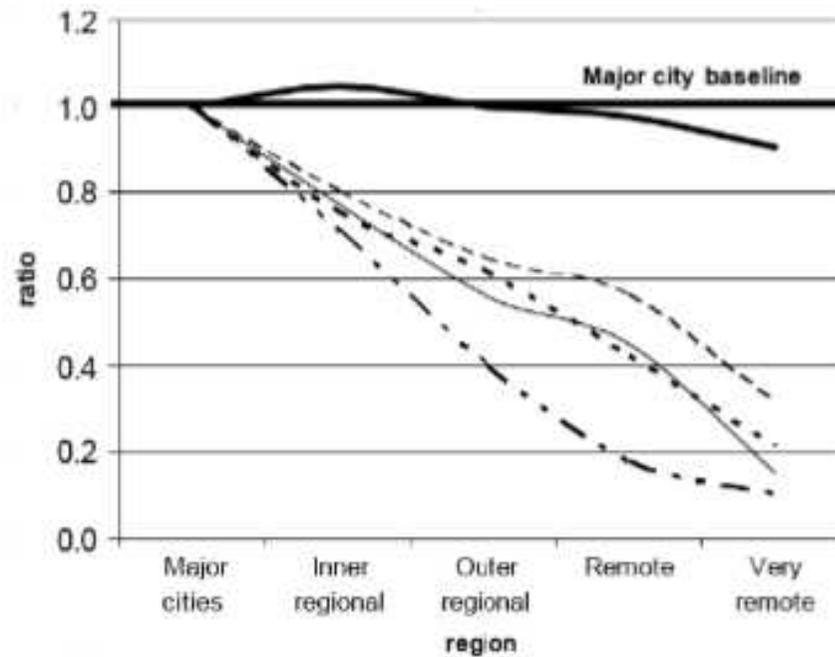
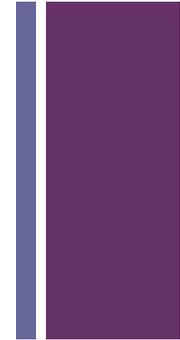


+Population density statistics

- 6th largest country by size
- 52nd largest by population density -3/km²
- 1/3 rd –live outside major cities
- 11% - outer regional, remote and very remote
- QLD – second largest state
- <2.8/km²
- 18% -outer regional or beyond

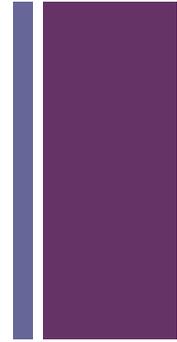


+ Practitioner to population ratios by area, Australian Productivity Commission



+ Consequences...

- Concentration of specialist services in major cities and large regional centres.
- Access is not similar.
- Poses a challenge
- Travel distances of 100s of kms
- Overnight accommodation.
- Overwhelming parking prices.
- “Follow up in 4-6/52 with results.”
- Poorer health outcomes.

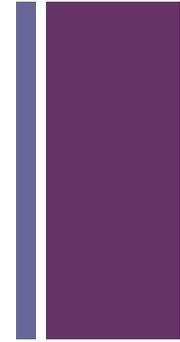


+ Financial Burden on health care

- There are 6 million Australians with arthritis and this will grow to 8 million by 2030.
- Arthritis currently costs the health system \$5.5 billion and this will grow to \$7.6 billion by 2030 unless more is done to prevent and better manage the condition.
- Arthritis is a major cause of disability and early retirement due to ill-health. This costs the government \$1.1 billion in extra welfare payments and lost taxation revenue and costs the economy \$7.2 billion in lost GDP alone.

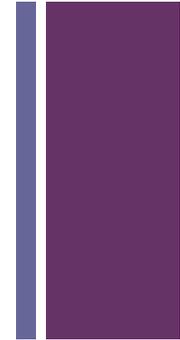
+ Satisfaction with rural rheumatology telemedicine service

- Sabesan et al found medical oncology clinics through videoconferencing an acceptable model for rural patients.
- Agha et al – RCT from Wisconsin, USA found telemedicine service non inferior to face to face.
- Poulsen et al - patient satisfaction of 90% of the rheumatological telemedicine services provided at Mt Isa and Townsville Hospitals in QLD.
- Davies et al, consistent with findings from telemedicine model of health care.
- Thaker et al published cost savings from telehealth model of care in northern Queensland.



+ Literature review, UQ School of Medicine, Rural Clinical School, Toowoomba

- The reported benefits of telehealth for rural Australians - Moffatt et al 2010
- Rural Australians
 - improved access and quality of clinical care, health services
 - availability of upskilled health professionals
 - reduce urban rural disparities.
- Health professionals
 - upskilling from increased contact with specialists
 - increased access to CPD.

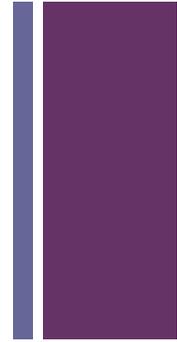


+ Research In The North

- “Patient and provider perspectives on using telemedicine for chronic disease management among Native Hawaiian and Alaska Native People” Hiratsuka et al 2013
- benefits and barriers of using telemedicine
- building patient provider relationships
- elements of an acceptable primary care encounter.

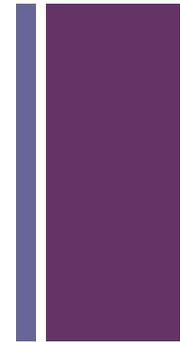
Results:

- initial patient provider interaction should be face to face
- patients must see the same provider on follow up visits



+ Keys to successful telehealth

- Stringent uninterrupted web interface
- Clear physician patient interaction
- Overcoming barriers of communication
- Physician as well as patient satisfaction
- Feasibility and acceptability

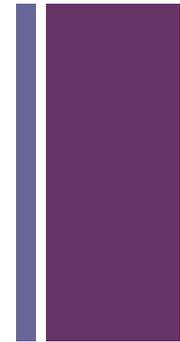


+ Conclusions..

- Telerheumatology is very likely to make a significant contribution to improved healthcare delivery to Queenslanders, given both the geography and the lack of rheumatologists in Queensland.
- Cost efficient and time efficient for patients and health sector.
- Reduces urban rural disparities
- Oncology, Dermatology and Geriatrics are providing telemedicine services throughout Queensland³.

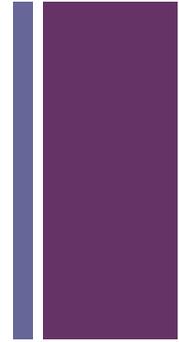
+ Pilot Project at PAH

- Identified the areas of maximal clinical need in Metro South QLD by the available data on current pt numbers separated by distance
- Commenced in January 2016.
- Pilot Project on Telerheumatology in QLD.
- Active implementation of outpatient T/R services at 4 hub sites – Ipswich, Toowoomba, Beaudesert, Roma Hospitals with the primary site being PAH Telehealth Department.



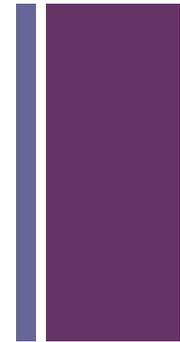
+ Inclusion criteria

- Patients separated by distance.
- Consenters
- Review patients
- RA, Vasculitis, Myositis, PMR, GCA..
- Pregnant women
- One on one face to face review atleast once a year at PAH



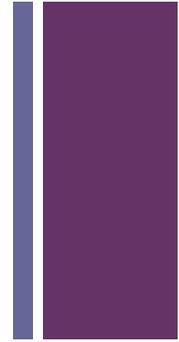
+ Exclusion criteria

- New patients
- Active disease requiring physical examination more than joint count.
- Pts requiring active multiple speciality inputs.
- Non consenters
- Triaging by the T/H rheumatologist.



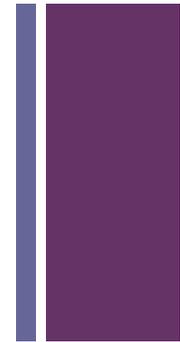
+ How are the clinics unique?

- 4 clinics at QLD Health facilities.
- 1 clinic per week / 1 facility per month.
- Each clinic is run by a trained telehealth nurse.
- Review by the T/H nurse prior and joints assessed.
- RAPID 3 scores, which is the patient reported outcome and presented to specialist
- Standard consulting format.



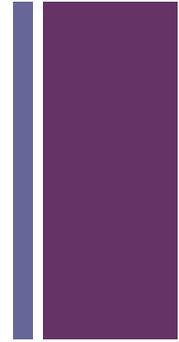
+ Limitations...

- A limitation in the existing telemedicine literature is the lack of studies examining patient acceptability and perspectives of telemedicine encounters⁵, which go beyond “patient satisfaction”, traditionally viewed as easier access to specialists, reduced travel time and financial savings.
- It is the patient perspectives like patient provider interaction, models of care, cultural factors, communication factors, technical factors, that are most crucial to the delivery of patient centred telerheumatology care.



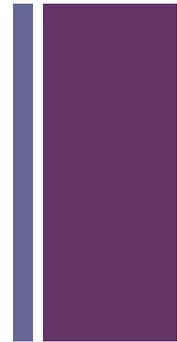
+ Research Objectives

- First of its kind in QLD
- To understand the patient perspectives of quality attributes of telerheumatology
- Investigate the relevance and significance of those attributes.
- Work towards strategic improvements in the delivery of telerheumatology services.



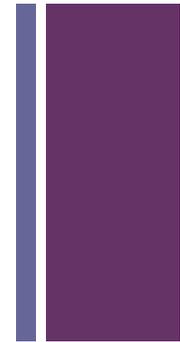
+ Research Aims

- Two step process
- Prospective
- quantitative and qualitative research study
- 9 month period – Nov 2016
- Pending Ethics approval.
- Utilisation of the data to develop patient centred framework towards healthcare delivery via T/R.



+ Experimental plan.....

- Invitation to participate in a survey.
- Research Assistant for qualitative analysis
- Small patient focus groups.
- Investigate patient acceptability of telerheumatology care models with goals towards modification of protocols, patient education and resource allocation.





We would like to invite your opinion as a patient who has been reviewed by the **Telehealth Rheumatology** service at Princess Alexandra Hospital.

Your input will help us to assess if the **Telehealth Rheumatology** service is effective in providing quality care and to understand your perspectives as a patient having their medical condition managed by **telehealth**.

This survey below asks your opinions and will take you no more than 5 minutes.

Your participation is completely voluntary. All the information you provide is anonymous. Some of the information you provide may be used in aggregate form for publication purposes.

This study has been approved by the Metro South Human Research Ethics Committee

Your submission of this survey will imply your consent to participate.

If you have any questions please don't hesitate to contact Helen.Benham@health.qld.gov.au or Swapna.Devadula@health.qld.gov.au

Thank you in advance for your time and valuable opinion.

What is your age?

Sex (please circle): **Female** **Male**

Do you identify as Aboriginal or Torres Strait Islander? (please circle): **Yes** **No**

Are you comfortable speaking English? (please circle): **Yes** **No**

Which site did you videoconference from? (please circle): **Ipswich, Toowoomba, Beaudesert or Roma**

Is this the first time you have participated in a videoconference/telehealth appointment? (please circle): **Yes** **No**

How far do you usually travel to come to Princess Alexandra Hospital? (approx).....km

How far did you travel for your telehealth appointment? (approx).....km

Did the telehealth appointment compared to a face to face review at PA Hospital save you time? **Yes** **No**

Did the telehealth appointment compared to a face to face review at PA Hospital save you money? **Yes** **No**

Did the telehealth appointment save you from taking time off work? **Yes** **No**

Which medical condition are you being treated for by your rheumatologist: (please circle): Rheumatoid Arthritis, Psoriatic Arthritis, Gout, Osteoarthritis, Polymyalgia Rheumatica, Systemic Lupus Erythematosus, Giant Cell (Temporal) Arteritis, Myositis, Connective Tissue disease, not sure or other (please list).....

Did you have any difficulty being able to hear or see the rheumatologist? (please circle): **Yes** **No**



Please read the following statements and indicate how much you agree or disagree by circling the numbers

1. I was able to talk to the rheumatologist in a similar way as a face to face appointment
1 2 3 4 5
Strongly Disagree Disagree Neutral Agree Strongly Agree
2. I felt comfortable with the rheumatologist and was able to talk openly
1 2 3 4 5
Strongly Disagree Disagree Neutral Agree Strongly Agree
1. I was comfortable with the nurse preparing me for the appointment
1 2 3 4 5
Strongly Disagree Disagree Neutral Agree Strongly Agree
2. I felt I could discuss difficult or sensitive issues about my illness during the appointment
1 2 3 4 5
Strongly Disagree Disagree Neutral Agree Strongly Agree
3. I was comfortable with the nurse examining my joints
1 2 3 4 5
Strongly Disagree Disagree Neutral Agree Strongly Agree
4. I was easily able to fill in the RAPID-3 (patient reported outcome) form with the nurses help
1 2 3 4 5
Strongly Disagree Disagree Neutral Agree Strongly Agree
5. I like the idea of having a nurse with me during videoconferencing (telehealth)
1 2 3 4 5
Strongly Disagree Disagree Neutral Agree Strongly Agree
6. I still feel the need for a physical examination by my specialist
1 2 3 4 5
Strongly Disagree Disagree Neutral Agree Strongly Agree
7. I think a face to face appointment establishes a better rapport with my specialist.
1 2 3 4 5
Strongly Disagree Disagree Neutral Agree Strongly Agree
8. I was confident with my medications after the (telehealth) appointment
1 2 3 4 5
Strongly Disagree Disagree Neutral Agree Strongly Agree
9. I understood the plan for my future care and visits after the (telehealth) appointment
1 2 3 4 5
Strongly Disagree Disagree Neutral Agree Strongly Agree



10. All my questions were answered by the rheumatologist and the nurse
1-----2-----3-----4-----5
Strongly Disagree Disagree Neutral Agree Strongly Agree
11. I was overall satisfied with the videoconferencing (telehealth) appointment
1-----2-----3-----4-----5
Strongly Disagree Disagree Neutral Agree Strongly Agree
12. I would be happy to attend videoconferencing (telehealth) appointments in the future
1-----2-----3-----4-----5
Strongly Disagree Disagree Neutral Agree Strongly Agree
13. I think it is important for me to be seen in person by my rheumatologist for every visit
1-----2-----3-----4-----5
Strongly Disagree Disagree Neutral Agree Strongly Agree
14. I felt I received satisfactory care from my rheumatologist with the help of the local nurse
1-----2-----3-----4-----5
Strongly Disagree Disagree Neutral Agree Strongly Agree
15. I would rather have a videoconferencing (telehealth) appointment than attend PA Hospital to see the rheumatologist
1-----2-----3-----4-----5
Strongly Disagree Disagree Neutral Agree Strongly Agree
16. I would be open to receiving education about my medical condition via videoconferencing (telehealth)
1-----2-----3-----4-----5
Strongly Disagree Disagree Neutral Agree Strongly Agree

Please provide any other feedback and/or comments that you have regarding your Rheumatology Telehealth visit

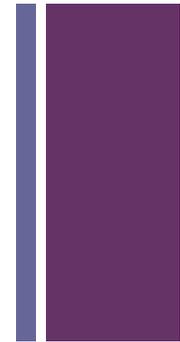
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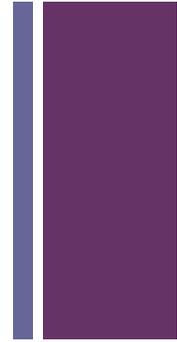
+ Significance and Innovation

- Targets rural and remote Australians lacking direct access to healthcare.
- Involves both quantitative as well as qualitative investigation.
- Strengthens current services
- Provides evidence based framework
- Improves outcomes for Queenslanders living with Rheumatic diseases.
- Sustainable in the long run.



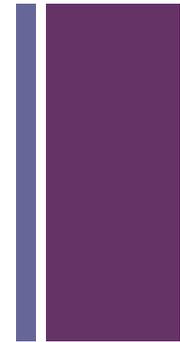
+ Disclosure

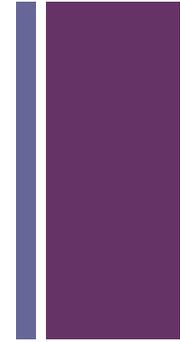
- Grant recipient of the Rheumatology Registrar Bursary from Arthritis Queensland 2015.



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- 2. Kennedy C, Blignault I, Hornsby D, Yellowlees P (2001) Videoconferencing in the Queensland health service. *J Telemed Telecare* 7, 266–71.
- 3. Sabesan S, Simcox K, Marr I (2012) Medical oncology clinics through videoconferencing: an acceptable tele- health model for rural patients and health workers. *Intern Med J* 42 (7), 780–5.





- 4. Hiratsuka et al (2013), Patient and provider perspectives on using telemedicine for chronic disease management among Native Hawaiian and Alaska Native people. Int J of Circumpolar Health, 72 : 21401
- 5. Lerouge et al (2004) Telemedicine encounter quality: Comparing patient and provider perspectives of a Sociotechnical system. Proceedings of the 37th Hawaii International Conference on System Sciences – 2004