A comparison between rural speech pathologists’ and rural residents’ access and attitudes towards the use of information technology and telecommunications for speech pathology service delivery.
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Outline

- Background for the research
- Purpose of the research
- Methodology
- Results
- Implications
- Summary & Conclusion
Literature

- Already identified inequities to health care in rural areas including speech pathology (Wilson, Lincoln, & Onslow, 2002; Dixon & Welch, 2000).
  - Barriers to accessing health care (O’Callaghan, 2003)
    - Socioeconomic
    - Geographical
    - Service provision
    - Physical & cultural

Telehealth

- A method of providing clinical, educational and administrative services across distance utilising IT&T (Prerost, 1999).

- IT&T classified in two groups (Ash, 1997)
  - Synchronous
  - Asynchronous

- Telehealth is becoming more frequently used in some states (e.g., WA & Qld)
Our research questions

- What was the access of rural speech pathologists (SP) and rural residents (RR) in NSW and Victoria to IT&T?
- What did SPs & RRs use IT&T for?
- How often did SPs & RRs access IT&T?
- How confident were SPs & RRs in using IT&T?
- What were the attitudes of SPs & RRs towards IT&T?
- Did SPS and RRs attitudes towards IT&T potentially affect their use of IT&T for service delivery?
Method

- Mixed method approach
  - Quantitative (questionnaire)
  - Qualitative (interviews)

- Questionnaires: 1100 mailed to rural residents in NSW; mailed to 210 speech pathologists in NSW;

- Interviews: 10 interviews with rural residents and 4 with speech pathologists to elicit their views and personal experiences with IT&T
Data Analysis

- Questionnaires: descriptive statistics & some correlations.

- Interviews: content analysis to identify themes and patterns.
Questionnaire Respondents

43 Rural Residents
- Mode of 35-44 years
- 41 females, 2 males
- Range of education levels, employment etc.

49 Speech Pathologists
- Mode of 25-29 years
- 47 females, 2 males
- 92% anglo-saxon/anglo-celtic background
- Mode professional experience of 0.5 years
## Uses of IT&T

- Education/school
- Business
- Accounting/finance
- Hobbies/entertainment
- Information/research
- Games
- Music
- Shopping
- Weather information
- Meetings
- Staying in touch
- Telehealth
- Guitar lessons
- Gambling
- Report writing
- PD
- Caseload mx
- Stats
- Resource access/dev.
- Prof. correspondence
- Research/info access
- Meetings/case conf.
- Networking
- SD (asynch only)
Frequency of IT&T use

**Rural residents**
(N=43)

- Videoconferencing: 72%
- Teleconferencing: 79%
- Satellite phone: 86%
- Video Camera: 49%
- VCR/DVD: 23%

**Speech Pathologists**
(N=49)

- Videoconferencing: 60%
- Teleconferencing: 60%
- Satellite phone: 86%
- Web Camera: 76%
- Video Camera: 43%

- CD: 46%
- VCR: 22%

**Every day**

- Computer: 98%
- Email: 94%
- Internet: 38%
- CD: 28%

**Never**

- Computer: 65%
- Email: 44%
- Internet: 40%
- VCR/DVD: 23%
Confidence using IT&T

Rural residents (N=43)

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<th>Very confident</th>
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<tbody>
<tr>
<td>Satellite phone 74%</td>
<td>VCR/DVD 56%</td>
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<tr>
<td>Web Camera 72%</td>
<td>Computer 49%</td>
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<td>Videoconferencing 67%</td>
<td>CD 49%</td>
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<tr>
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<td>Email 49%</td>
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<tr>
<td>Web Camera 88%</td>
<td>Internet 42%</td>
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<tr>
<td>Satellite phone 84%</td>
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<tr>
<td>Videoconferencing 58%</td>
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Speech Pathologists (N=49)

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<th>Not confident</th>
<th>Very confident</th>
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<tbody>
<tr>
<td>Email 97%</td>
<td>VCR 96%</td>
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<td>VCR 96%</td>
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<tr>
<td>DVD 75%</td>
<td>Video Camera 67%</td>
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<tr>
<td>Video Camera 67%</td>
<td>Teleconferencing 49%</td>
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Identified Barriers for IT&T Service Delivery (SD)

- Personal Barriers
- Systemic Barriers
Personal barriers

- Speech pathologists’ ignorance regarding IT&T uses, clients’ access and skills
  
  - SP: “Clients in remote settings are often not in good financial situations and won’t have IT&T”
  
  - RR: “our access is about average, like everyone else we’ve got a fax and a computer and the internet [satellite connection] and all that”
Personal barriers cont.

- General unwillingness of SP to use IT&T
  
  - SP: “if you’re not willing or wanting to use IT&T then that’s a barrier as well”
  
  - SP: “it’s a total intrusion on my time as a clinician”
  
  - SP: “Younger speech pathologists just accept IT&T as part of normal routine”
Belief that face to face service delivery is better than IT&T SD

- SP: “To treat a client properly you need to be face to face”
- RR: “I don’t think my son could cope with high tech link ups but it might be ok for other kids”
- SP: “Nobody wants to give up their face to face visits”
- RR: “I don’t think the electronic system will ever, ever replace a heart to heart, face to face, eyeball each other across the table type approach to it [healthcare]”
Systemic barriers

- Infrastructure
  - Availability
  - Cost

- SP: “Anything that costs money the department won’t come at”
- RR: “It would be too expensive for me to buy the high tech stuff”
- RR: “This is a low income area. As long as the government subsidises it [telehealth], like Telstra or the health department subsidise it, I think it would be great.”
Systemic barriers

Provision of appropriate IT&T support

- Managerial
- Technical support

- SP: “Management are... forgetting that if you want SP to continue what they’re already doing and use technology you need to give them more time and more resources to do that”.
- SP “SP don’t have the technical know-how for using IT SD and there is a need for better supports in place to use this technology”
- SP: “having a helpdesk available...knowing that it’s there is more comforting”
- RR: “as long as there’s a hotline or something, I’d give it [new technology] a go.”
Systemic barriers

- Already recognised limitations of IT&T for SP

- SP: “because of the nature of people I work with we need to be a lot more hands on. Especially with feeding... you can’t exactly just do that over the phone or by a videoconference”.
Discussion points

- RRs had greater IT&T access and confidence
- SPs had less access and confidence
- SPs beliefs that RRs did not have access to technology and were unwilling to use it were not supported by the data
- Both personal and systemic barriers for using IT&T for SD exist for both SPs & RRs
- Proposed barrier solutions
- Perceived positive impacts
Where to now?

- Telehealth is viewed as a possible solution to healthcare inequities in rural areas by both SPs and RRs
  - However, RRs are more positive about it than SPs
- Need for more telehealth infrastructure
- Need for funded training for SPs to use telehealth
- Need for attitude shift in SPs to catch up with those of RRs
- Need for improved communication between RRs and SPs
- Need for future research into efficacy of telehealth in SP (Hill, Theodoros, Russell et al., 2006; Wilson, McAllister, Atkinson & Sefton, 2006)
References


“People are leaving the bush and [lack of health services] is one of the reasons, and if this telehealth is going to help that then bring it on I say!”

(Rural NSW Resident)