

Finding the Innovation in e-health for Rural Allied Health Service Delivery

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Victorian Allied Health Conference 2017

The Questions



Is there research to support effective allied health service delivery through ehealth?

Is there evidence of innovation, especially in addressing rural/regional needs and challenges?

How willing are allied health practitioners to engage in ehealth?

Are allied health practitioners being prepared adequately for creativity and innovation in ehealth?

Some key concepts!

e-health

Use of Information Communications Technologies (ICT) for the delivery of health services

Innovation



“...the application of better solutions that meet new requirements, unarticulated needs, or existing market needs” (<https://en.wikipedia.org/wiki/Innovation>)

The need

Allied health workforce issues in regional/ rural Australia

- numbers
- opportunities for skill growth
- opportunities to develop specialisations
- heterogeneous client/ patient groups spread across large distances
- limited access to technology (portable devices & dodgy internet access)



Creative Solutions?



Australian Research – A Scoping Review

Question:

What aspects of e-health use by allied health clinicians have been addressed in research conducted in Australia?

What are the outcomes of this research?

Search Terms:

telemedicine, telerehabilitation, telehealth, telecare, M-health, E-health, ICT, health; combined with allied health, speech therap*, speech patholog*, occupational therap*, physiotherap*, physical therap*, podiatr*, exercise physiolog*, dietetic*, social work*, audiolog*

Publication Period:

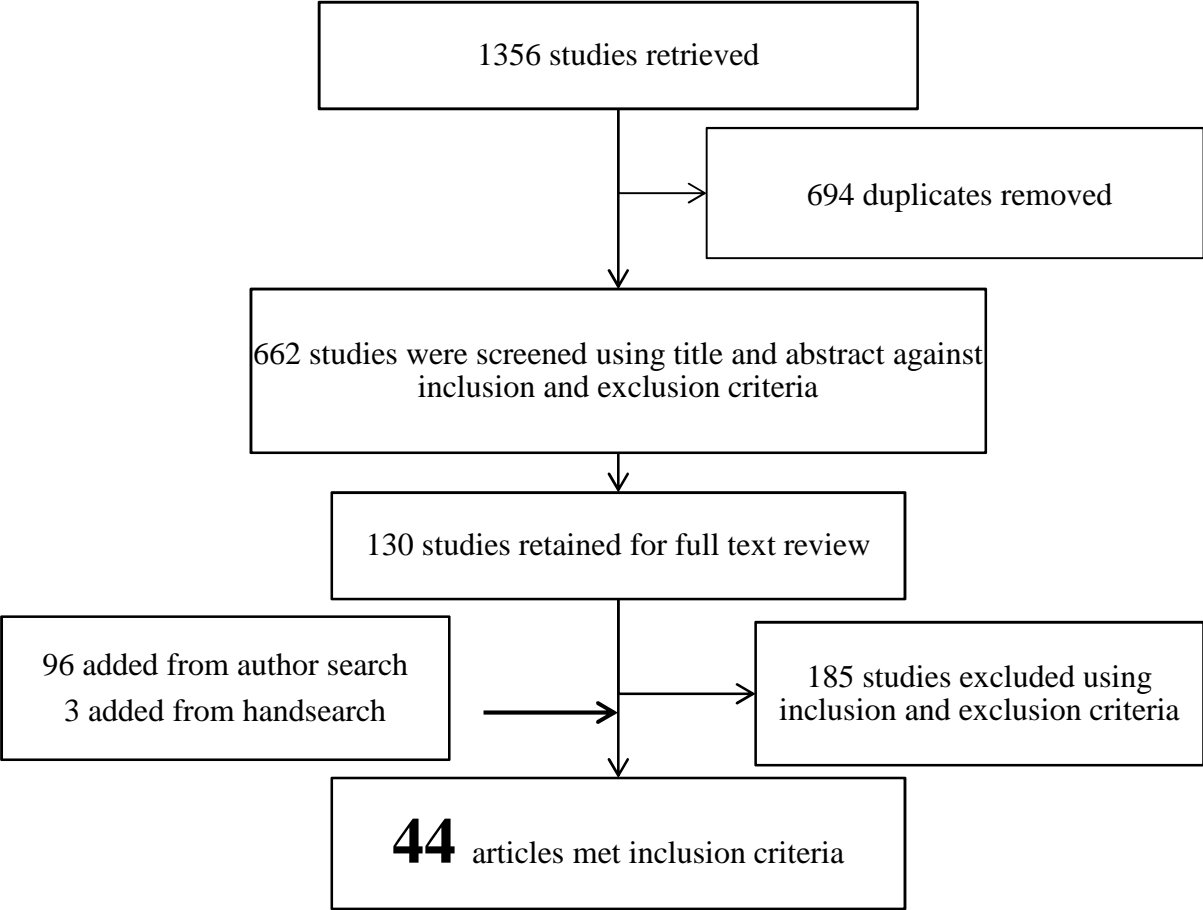
Jan 2004 – June 2015

Databases:

CINAHL (EBSCO), Cochrane Library, PsycINFO (1806 – Ovid), MEDLINE (Ovid) and AMED (Ovid)

(Iacono, Stagg, Pearce, Hulme Chambers, 2016)

Scoping Review



Scoping Review

Direct Trials (n = 33)

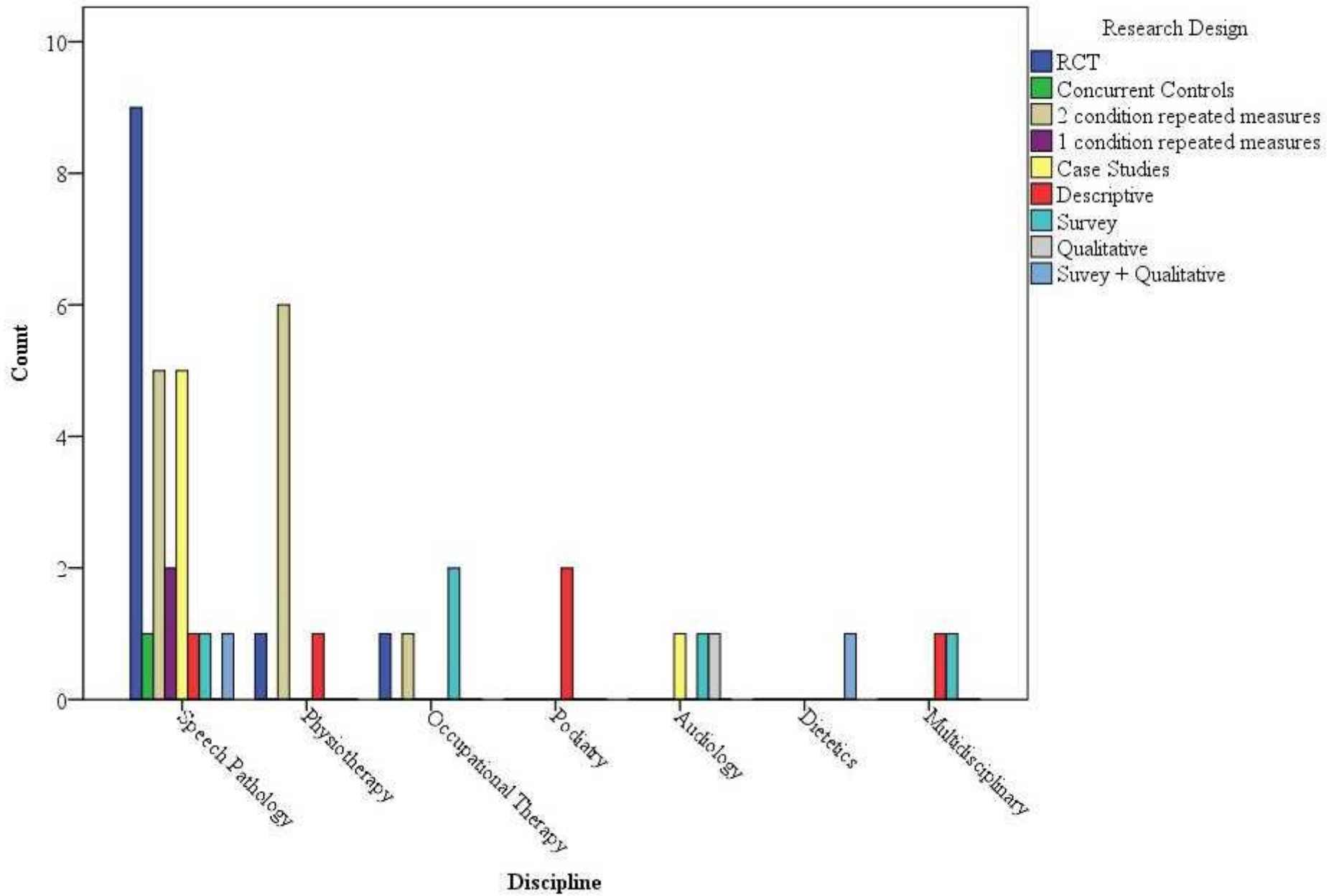
Largely from two research teams – USyd & UQ

Clinician and in some cases client opinion (n=11)



FIG. 4. Scheme of motion capture module.

Scoping Review



Scoping Review

Clinicians can do much of what they do face-to-face at a distance using technology

- assessments are likely to yield valid and reliable information
- intervention can be delivered with fidelity
- but many don't want to, even if their clients do

Clinicians would rather use ICT for work management



Telehealth as a service option – some additional and local evidence

19 Regional Surveyed Practitioners in ASD Early Childhood Intervention

- rarely used telehealth as a service option; when they did, preferred it for consulting with other professionals
- did not use it for direct interactions with families or children
- concerned about disrupting the child-practitioner interaction, transmission quality
- were willing to try it, seeing benefits in terms of reducing travel for families

Iacono, Dissanayake et al., 2016

Telehealth as a service option

8 Interviewed Practitioners

- used a variety of technologies, but mostly for work-management tasks
- very little use of Skype® or other video-call systems for personal use; none for work.
- valued technology, but struggled to see how it could be used for service delivery; wondered if families would reject it, be unable to benefit & concerned about quality
- concerned about reliable internet access
- thought it most useful for learning about best practice.

Telehealth as a service option

Families

- undecided or willing to use telehealth
- access to the internet was unreliable and costly
- saw benefits in reduced travel and not needing to take children to an unfamiliar setting

Are we Preparing Undergraduate Allied Health Students to Develop the Digital Literacy Skills Needed to Initiate and Lead Innovation in eHealth?

(Kenny, Iacono, McKinstry, Knight & Whitrow, 2016)

Assumptions



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Conceptualizing digital literacy beyond ICT

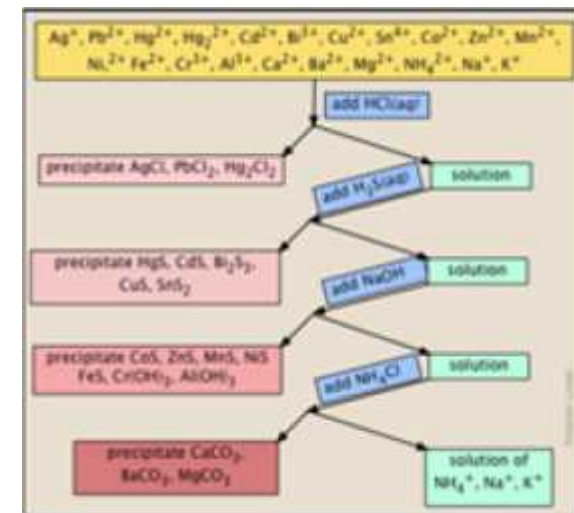
Interviews of
telehealth
experts



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Qualitative Analysis: Engagement with Belshaw's (2011) Elements of a Digitally Literate Individual

1. Cultural
2. Cognitive
3. Constructive
4. Communicative
5. Confidant
6. Creative
7. Critical
8. Civic



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Contextualised digital literacy framework



The importance of context, connections, boundaries and responsibilities



Basic: Works within boundaries set by learning context

Intermediate: Behaves appropriately using digital tools in closed and open spaces

Advanced: Establishes and maintains professional boundaries

Actively embraces technology driven health care changes, leads & supports them to empower consumers



Basic: Supports peers; identifies problems solvable with technology
Intermediate: Leads in using tools & accessible spaces
Advanced: Initiates transformative change

Mapping the Framework to an Occupational Therapy Curriculum

Digital Literacy	Basic	Inter.	Adv.
Creating understandings		++	
Developing the culture	+++++++		+
Building Connections	++++	++++	
Using the full capacity	+++++	++++	
Owning the space	++++		
Transformative thinking		+++	

Project Conclusions

- Centrality of digital literacies beyond ICT in preparing a health care workforce
- Need to embed explicit digital literacies in undergraduate curricula
- Practical tools
 - Digital Literacy Mapping Tool
 - Digitalliteraciesforhealthgraduates.com.au

Digital Literacies for health graduates

Developing ehealth capabilities for practice in a rapidly changing healthcare environment

HOME

PROJECT
OVERVIEW

DEVELOPING
THEM'S

MAPPING
CURRICULA

REPORTING OUR WORKS
TO HEALTH CONTACT

OUR
TEAM

18/01



"Digital Literacy is the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyse and synthesise digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process"



Is there research to support effective allied health service delivery through ehealth?

YES

Is there evidence of innovation, especially in addressing rural/regional needs and challenges?

NOT MUCH

How willing are allied health practitioners to engage in ehealth?

NOT VERY

Are allied health practitioners being prepared adequately for creativity and innovation in ehealth?

MORE NEEDED

Final Thoughts

Despite connectivity issues, ICT does provide the mechanism needed to support creative solutions to rural allied health service delivery

- the evidence supports the validity and reliability of conducting assessments and interventions at a distance using these technologies
- UG students are developing some digital literacies to support their use, and as the basis for being creative and leading change
- UG allied health students are also being given increasing opportunities to engage in ehealth (tele-therapy, tele-rehabilitation)

Workplaces are becoming increasingly ehealth-friendly

Allied health practitioners need to move to the front of the pack and lead the way



References

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Thank you

Funding:

La Trobe University, Building Healthy
Communities

Australian Government Office for Learning and
Teaching for funding this project

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