The Hopkins Centre
Research for Rehabilitation and Resilience

Integrating telehealth in to a community based interdisciplinary brain injury service – 1 year on

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Introduction

Telehealth refers to the use of information and communication technologies for providing health-related services.

Telehealth is an efficient, cost-effective means of delivering health services. It can reduce travel time and improve access to specialist services, especially for regional, rural and remote regions.

The Acquired Brain Injury Transitional Rehabilitation Service (ABI TRS) provides interdisciplinary community rehabilitation for individuals with ABI, for the immediate 10 week period post hospital discharge. Clients who are living within a 50km radius of Brisbane CBD are seen within their homes, while individuals outside of this catchment reside in one of four ABI TRS owned accommodation options for the duration of their program. During service start-up (2017), telehealth was considered as a complimentary form of service delivery, to increase access to the service and for efficiency of service delivery.

Purpose

The objectives of this project were to investigate the role of telehealth within a community-based interdisciplinary brain injury service, with an aim to increase intensity of and improve access to community rehabilitation.

Methods

A combined knowledge translation (Theodoros et al., 2016) and change management approach was used to understand the specific service requirements, develop the required resources, and implement / evaluate the effectiveness of these resources. The initial knowledge gathering phase (Phase 1) included reviewing literature, client considerations, equipment needs, and benchmarking. Clinician barriers/facilitators were also examined. The innovation phase (Phase 2) involved development of a local training package and development of service specific processes. The implementation and evaluation phase (Phase 3) involved the provision of training packages and embedding processes in to usual practice alongside various quantitative and qualitative measures of success (e.g., occasions of service, staff travel time saved).

Phase 1: KNOWLEDGE

Efficacy of telerehabilitation: A systematic review (Ownsworth et al., 2018) revealed a need for more research on videoconferencing and telehealth durability, along with engagement with end users in design and trialling of technology. There were limited availability of brain injury specific telehealth implementation guidelines. Therefore, a general approach to knowledge translation/implementation was utilized (Theodoros et al., 2016). Further, discipline specific guidelines (e.g., OT Australia, Better Access Guidelines) were used.
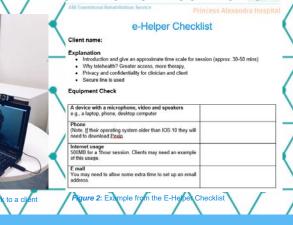
Clinician feedback (focus groups x 2): Low confidence was reported in use of videoconferencing services.

Potential facilitators identified by clinicians: could provide client access to group & rehabilitation that otherwise would not have been able to attend; potentially could reduce travel time; may increase program intensity due to efficiency; may allow AHA observation; may improve engagement from "digital native" clients; client able to return home earlier due to telehealth access;

Potential barriers identified by clinicians: low staff confidence in using equipment; significant time to set up; limited instructions; difficulties on client end; system not working; client unable to access internet; client difficulties focusing on screen;

Phase 2: INNOVATION

Based on Phase 1 results, a local service package was created to address these needs. Equipment needs were identified and purchased (example equipment in Figure 1). Service processes developed included: an e-helper package to up-skill clients (Figure 2), suitability criteria, instructions, checklists, scripts, and troubleshooting documentation. Processes were also embedded into established service components. A staff training package was developed and completed. The staff training package involved a practical training session (2hours) and an individual discipline training (2hours).

Figure 1: ABI TRS clinician utilising equipment to talk to a client

Figure 2: Example from the E-Helper Checklist

Phase 3: IMPLEMENTATION AND EVALUATION

Occasions of service (OOS):
     Baseline (3 months prior to training) = 0 OOS
     Post intervention (3 months post training) = 24 therapy sessions (19 with AHP staff, 5 with AHAs)
     9 e-helper packages delivered
Travel distance saved = 1203km
Travel time saved = 26hours 16min (no traffic)

Services offered included: education, assessment, cognitive and communication rehabilitation, AHA training, physical rehab, vocational tasks, rural/remote outreach, psychosocial support, and interdisciplinary group participation. Indirect clinical work included professional development and supervision; linkage with researchers.

Summary and recommendations

Overall, telehealth was integrated into a community brain injury service, enabling greater access to rehabilitation. Ongoing review of use, staff and consumer feedback will be necessary to continue developing and maintaining the service.

References

Ownsworth, T., Arnautovska, U., Beadle, E., Shum, D., & Moyle, W. (2018) Efficacy of telerehabilitation for adults with traumatic brain injury a systematic review. Journal of Head Trauma Readdle, 33: 4. E33-E46
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Disclosure