Design: This is a cross-sectional observational study of physical, occupational and speech therapists working with patients in a community-based hospital critical care unit using a self-developed survey.
Setting: Community-based hospital critical care unit
Participants: This cross-sectional observational study surveyed physical, occupational, and speech therapists working with patients in a community-based hospital critical care unit (ICU).
Interventions: N/A
Main Outcome Measures: The primary outcome was therapist's self-perceived confidence in managing ICU patients, measured on a 5-point Likert scale (collapsed into confident vs. less confident). Our hypothesis is that lower confidence would be associated with longer response times, longer length of stay (LOS), and reduced mobility.
Results: Respondents included 20 therapists, 71% of whom were female, with an average of 10.0 years (SD = 9.57) of experience as therapists and 6.7 years (SD = 6.0) in acute care. When asked about confidence in working in the ICU, only 14.3% reported feeling confident overall managing critically ill patients, and 23.8% reported feeling confident providing therapeutic interventions in the ICU. Regarding perceived support, 42.9% felt supported by fellow therapists, 14.0% felt supported by critical care intensivists, and only 4.8% felt supported by hospital administration. For secondary outcomes, the average response time from therapy consult to initial evaluation in the ICU was 25.91 hours, exceeding the department's typical response time of 15.78 hours. The average ICU length of stay (LOS) was 13.88 days, higher than the hospital's expected geometric LOS of 4.26 days. In terms of mobility, only 48.1% of patients were able to ambulate on the day of hospital discharge.
Conclusions: Therapists' self-rated confidence appears to influence response times, hospital length of stay, and patients' functional mobility. Enhancing confidence through targeted education and skills training in evidence-based ICU practices may help improve therapist performance. Furthermore, feeling supported by the multidisciplinary team can further bolster therapists' confidence and effectiveness.
Key Words: Early Mobilization, Critical Care, Therapist Confidence, Length of Stay, Productivity

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Late Breaking Research Poster 3230921

mRehab: A Community-engaging Study of an Ai-powered Mobile Rehabilitation System

Anarghya Das (University at Buffalo), Tanmay Anishkumar Master, Wei Bo, Wenjie Ji, Alexander Gherardi, Rohin Kumar, Sutanuka Bhattacharjya, Lora Cavuoto, Heamchand Subryan, Wenyao Xu

Research Objectives: The primary objective of this study was to evaluate stakeholder perspectives on the usability, clinical utility, and potential value of the mRehab platform, a low-cost, smartphone-based tool for home-delivered rehabilitation in stroke survivors. The mRehab platform utilizes a smartphone's integrated inertial measurement unit (IMU) and algorithmic models to provide real-time feedback for task-specific upper limb training. It integrates with 3D-printed tools shaped as household objects, making the rehabilitation process more practical and goal-oriented. This approach addresses a critical need for accessible and effective therapy in the chronic phase of stroke recovery.
Design: This was a qualitative, exploratory study that employed semi-structured interviews and focus group discussions with a diverse group of stakeholders, including stroke survivors, caregivers, and healthcare professionals.
Setting: This session was structured to include a 15-minute presentation introducing the mRehab concept, a 10-minute live demonstration of the system's features, a 20-minute hands-on session where participants used the system themselves, and a 75-minute facilitated group discussion.
Participants: A total of 31 individuals took part, including 19 clinicians (occupational therapists, physical therapists, medical students, and pharmacists) and 12 patient advocates with stroke experience, of whom 5 were stroke survivors and 7 were caregivers.
Interventions: During the 20-minute hands-on session, participants used a smartphone placed inside two different 3D-printed household objects: a bowl and a mug. They performed activities using these objects, such as moving them horizontally or vertically, to simulate real-world tasks and engage in task-specific upper limb training.
Main Outcome Measures: The primary outcome measures were qualitative feedback and thematic analysis of interview and focus group data, focusing on the platform's perceived usability, accessibility, clinical utility, and potential for improving home-based rehabilitation adherence and outcomes.
Results: Stakeholders expressed positive feedback on the mRehab platform's simplicity, portability, and potential for providing accessible, engaging, and cost-effective home therapy. Key themes identified were the platform's potential to improve motivation and adherence to home exercise programs, its utility as a monitoring tool for clinicians, and the need for personalized feedback and seamless integration into existing care pathways. Concerns were raised regarding potential user fatigue and the need for clinical supervision.
Conclusions: The mRehab platform shows significant promise as an accessible and engaging tool to bridge the gap in chronic stroke rehabilitation. The findings support its potential for clinical adoption and highlight key areas for future development, including enhancing user experience and integrating it with clinical practice.
Key Words: Stroke Rehabilitation, Digital Therapeutics, Smartphone-Based, Upper Limb Function, Stakeholder Evaluation

Author(s) Disclosures: None

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Patient Priorities for Brain Health Equity in Traumatic Brain Injury: A Priority-setting Initiative Using the Progress-plus Framework

Urooba Shaikh (KITE Research Institute, University Health Network), Thaisa Tylinski Sant'Ana, Tatyana Mollayeva

Research Objectives: To engage people with traumatic brain injury (TBI) and other relevant groups in generating, discussing, and ranking priorities for equity consideration in research, policy, and practices concerning brain health.
Design: This research is part of a larger project that aims to study the effect of social parameters on brain health in people with TBI. We distributed an online survey to reach out to five stakeholder groups: people with TBI, their families, researchers, healthcare professionals, and representatives of community organizations working in the field of TBI. We asked participants to rank social parameters of most importance for: (1) brain health outcomes, (2) integration into TBI research, policy, and practice, and (3) resource distribution. We analyzed and shared survey results with team members, including Brain Injury Canada and Acquired Brain Injury Ireland leaders, patient partner, researchers, academics, and clinicians. Team members ranked ideas for knowledge translation based on the survey responses, feasibility and impact.
Setting: Large rehabilitation research teaching hospitals in North America. We created an online survey through the platform SurveyMonkey and shared it through our team's networks and social media platforms.
Participants: To participate, a person had to be 18+ years old, able to communicate in English and identify with at least one of these knowledge user groups: 1) people with TBI, 2) their families, 3) researchers, 4) healthcare professionals, and 5) community organizations working in the field of TBI.
Interventions: Survey results were shared with team members, including Brain Injury Canada leader, patient partner, researchers, academics, and clinicians. Team members ranked ideas for knowledge translation based on the survey responses, feasibility and impact.