Developmental Evaluation of the IAMABLE app: Providing web-based rehabilitation self-management supports for people with multiple chronic conditions L. Letts, J. Richardson, S. Sinclair, J. Miller, J Smith-Turchyn, D Chan, C. Donnelly, J Gravesande, S. Wojkowski, *Gerontechnology* 25(s)

Purpose Across Canada, and internationally, there is a high prevalence of chronic conditions predominantly in older adults. Rehabilitation professionals have been challenged to integrate self-management support into rehabilitation service provision. Self-management support can be delivered in many ways, but e-health or mobile technologies have been reported to provide accessible and convenient methods of delivery across a variety of chronic conditions. IAMABLE (I am able) is a web-based app designed to support people living with multiple chronic conditions to access evidence-based rehabilitation strategies to support them in self-managing their conditions, using technological support. The app was developed in a step-wise approach, that included development of content and design, usability testing, heuristic evaluation and a focus group; the development included older adults living with chronic conditions and therapists with expertise in providing self-management supports [1]. The app includes goal-setting based on activities affected by the health condition, and modules on six topics relevant to self-management and rehabilitation (exercise, physical activity, falls prevention, fatigue management, pain management, stress management). Modules include self-assessments to allow tailoring based on function and risk, video and handout information, management strategies, and prompting to develop 7-day action plans. When the IAMABLE app was ready for further testing, a clinical testing phase was undertaken. The purpose of this study was to examine the utility and clinical applicability of the IAMABLE app with dyads of therapists in primary care and patients with chronic conditions. **Method** A developmental evaluation, using multiple methods was designed to conduct this study. Participants included 6 occupational therapists or physiotherapists whose patients (n=20) met the inclusion criteria (≥44 years of age with at least 1 chronic condition, who were computer proficient). Therapists oriented patient participants to the IAMABLE app, and responded to questions either in-person or through secure messaging (Ask a Therapist) available within the app. After 6 weeks, patients completed a survey adapted from the Unified Theory of the Acceptance and Use of Technology (UTAUT) [2]. Aggregated analytics were also used to understand patient use of the app components. Therapists and patients participated in individual qualitative interviews to explore their impressions of the app including strengths, challenges, as well as suggestions for improvement; conventional content analyses [3] were used to analyse these data. **Results and Discussion** On the UTAUT scale, facilitating conditions were rated highly (Mean: 4.42/5), implying participants felt they had adequate computer skills, knowledge and abilities to use the app. They also rated effort expectancy (how easy the app was to use) and performance expectancy (perceived usefulness) highly (Mean 4.20/5, 4.06/5 respectively). Anxiety associated with use of the app was reported to be low (Mean 1.81/5). Analytics indicated that exercise modules within the app were most frequently used, followed by falls prevention, pain management, and personal goal setting. All modules were accessed at least once by all users; participants did not consistently complete self-assessments within modules. Qualitative interviews with therapists and patients converged around common challenges and benefits of the IAMABLE app. Challenges included some technical issues (passwords and tracking activities in the 7-day action plan), and self-management challenges for patients (goal-setting, and initial app orientation). App features facilitated use including reminders and tailoring based on self-assessment (when completed). Perceived benefits for patients included increased understanding, motivation, and learning new self-management strategies. Overall quantitative and qualitative data confirmed that the app offered new learning and tailored advice for patients, reinforcing previously published research. Benefits of the app outweighed challenges. Subsequent modifications have addressed some issues identified through this developmental evaluation. These modifications are being evaluated in our current study with participants who do not have rehabilitation access, using a hybrid implementation-effectiveness study design.

References

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