
CONFERENCE ABSTRACT**Pilot randomized controlled trial of EMBOLDEN: a novel co-designed community-based intervention to enhance mobility in older adults.**

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Introduction: Physical mobility and social participation are essential for maintaining independence and improving quality of life with aging. These are also interrelated, with barriers to mobility leading to social isolation, as well as poor physical and mental health. Most mobility-enhancing interventions in older adults have been designed by researchers without public input and delivered in controlled settings. This traditional approach to intervention design and testing may not meet the needs of older adults or prove effective in real-world implementation. To have sustained real-world impact, a model aimed at improving mobility that is person-centred, supports social network engagement, and leverages existing community health and social services is more likely to realize impacts. The EMBOLDEN intervention is a novel evidence-informed and contextually relevant community program. A Strategic Guiding Council comprised of older adults and health and social service providers co-designed the 3-month, multi-component group-based program to enhance mobility in older adults living in neighbourhoods experiencing health inequities. In this analysis, we present the implementation results of our pilot randomized controlled trial (RCT).

Aims & Methods: The pilot trial aimed to explore the feasibility and implementation of a multi-component intervention to improve mobility in older adults in preparation for a large effectiveness-implementation pragmatic RCT (EMBOLDEN, NCT05008159). Core intervention components include physical activity, healthy eating, socialization, and system navigation. Community-dwelling older adults (≥ 55 years) living in one neighbourhood in Hamilton, Canada, were randomized (2:1) to either: a weekly 90-minute virtual group program for 9 weeks (intervention) or continued normal routine (control). The intervention team integrated providers from recreation, primary care, and public health. A Community Advisory Board, including older adults and local providers, informed intervention modifications and implementation. Data were collected through participant quantitative surveys, study documentation, and qualitative interviews with participants and interventionists. Survey data were analyzed descriptively; survey open-text data, intervention team documentation, and transcripts were analyzed using content analysis. Process outcomes included program acceptability, intervention fidelity, implementation barriers and facilitators, and intervention feasibility/acceptability to participants and interventionists.

Results: 11 participants were enrolled; 10 were randomized (6 INT; 4 CON). Participant age ranged from 57-76 years. Most participants identified as female (73%), had a total household income of <\$50,000 (73%) and lived alone (55%). Five participants received the allocated intervention. Quantitative and qualitative data collection are complete; analyses are underway. Intervention participants expressed perceived changes to their behaviours related to program outcomes: mobility and health; as well as increased awareness of community supports. Intervention group participants expressed positive experiences with the intervention and perceived impacts on their health and community connections. However, participants expressed a preference for in-person delivery. Interventionists gained experience delivering this multi-component intervention as a team. The COVID-19 pandemic impacted intervention duration (9 vs. 12 weeks), mode of delivery (virtual vs. in-person), and recruitment. Adaptations for the RCT include in-person delivery, longer duration, and new recruitment approaches.

Conclusions: This pilot trial demonstrated that implementing the EMBOLDEN intervention was feasible and acceptable to participants and interventionists. The team gained important insight into modifications necessary for the larger, pragmatic RCT.