



# BMJ Open Co-designing action-oriented mental health conversations between care providers and ageing Canadians in the community: a participatory mixed-methods study protocol

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## ABSTRACT

**Introduction** The mental health of ageing Canadians is a growing concern, particularly post-pandemic. Older adults face systemic ageism and mental health stigma as pervasive barriers to seeking needed mental health support, care and treatment within health and social care systems. These barriers are exacerbated when service providers focus on physical healthcare needs or lack the skills and confidence to talk about and/or address mental health during routine visits. This study aims to co-design and test an evidence-based approach to mental health conversations at the point-of-care in home and community settings with older adults, family and friend caregivers and health and social care providers that could facilitate help-seeking activities and care access.

**Methods and analysis** A participatory mixed-methods study design will be applied, guided by a Working Group of experts-by-experience (n=30). Phase 1 engages ageing Canadians in four online workshops (n=60) and a national survey (n=1000) to adapt an evidence-based visual model of mental health for use with older adults in home and community care. Phase 2 includes six co-design workshops with community providers (n=90) in rural and urban sites across three Canadian provinces to co-design tools, resources and processes for enabling the use of the adapted model as a conversation guide. Phase 3 involves pilot and feasibility testing the co-designed conversations with older adult clients of providers from Phase 2 (n=180).

**Ethics and dissemination** Phases 1 and 2 of this study have received ethics clearance at the University of Waterloo (ORE #44187), University of British Columbia (#H22-02306) and St. Francis Xavier University (#26075). While an overview of Phase 3 is included, details will rely on Phase 2 outcomes. Knowledge mobilisation activities will include peer-reviewed publications, conference presentations, webinars, newsletters, infographics and policy briefs. Interested audiences may include community organisations, policy and decision-makers and health and social care providers.

## STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ This study directly responds to ageing and mental health research priorities that were previously identified by ageing Canadians during the COVID-19 pandemic.
- ⇒ This study is guided by a Working Group of experts-by-experience which includes older adults, caregivers and health and social care providers from across Canada.
- ⇒ This study uses a participatory research framework that supports the consistent, meaningful and authentic engagement of often underrepresented expert-by-experience participants.
- ⇒ This study includes home and community care providers in many aspects, and their participation may be affected by the ongoing health and human resource challenges in Canada.

## INTRODUCTION

Mental health can be defined as our ‘positive sense of well-being, or the capacity to enjoy life and deal with the challenges we face’.<sup>1</sup> The COVID-19 pandemic has heightened mental health awareness for Canadians,<sup>2</sup> while also exposing inequitable access to mental health supports within Canada’s health and social systems<sup>2,3</sup> intersecting with factors such as but not limited to geography, sex and gender, race, ethnicity and culture, comorbid health conditions and socioeconomic status.<sup>4–6</sup> There is also a longstanding systemic tendency for service providers to focus on physical healthcare needs,<sup>7</sup> which is perpetuated by inflexible funding structures,<sup>8</sup> biomedically focused clinical education models<sup>9</sup> and limited co-location of physical and social healthcare services.<sup>10</sup> Combined, these realities lead to missed opportunities



for integrated mental health support, care and treatment for Canadians.<sup>11</sup>

Older adults' mental health is a significant post-pandemic concern in Canadian health and social care. This heterogeneous population encounters systemic ageism and stigma towards mental health and mental illness<sup>12-14</sup> which is reinforced when these conditions interact with the inequities and system challenges described above.<sup>15</sup> A 2020 systematic review found providers were less likely to offer support, care and treatment to older patients in comparison to younger patients in 85% of the 149 included studies on healthcare access.<sup>16</sup> This was true even when people in either age group were equally likely to benefit.<sup>16</sup> Negative attitudes towards mental illness often stem from misunderstanding mental health as a unidimensional and binary concept of wellness versus illness.<sup>17 18</sup> In contrast, a dual continuum model of mental health supports that both positive mental health while living *with* a mental health illness and poor mental health *without* a mental illness are possible.<sup>19</sup> These stigmas create persistent barriers to older adults seeking out needed mental health support, care or treatment.<sup>20-22</sup> Stigma may also deter providers from discussing mental health during routine practice.<sup>23 24</sup> Ultimately this can lead to older adults' mental health being under-addressed, under-reported or misdiagnosed.<sup>23 24</sup>

In Canada, primary care providers are often gatekeepers to specialist health and social care supports, which include mental healthcare providers.<sup>8 25 26</sup> Although primary care clinicians in Canada spend 12.1% of their practice attending to the mental health needs of their patients,<sup>27</sup> ~12.6% of Canadians over age 50 do not have a primary care clinician.<sup>28</sup> Additionally, many primary care physicians report a lack of confidence or expertise in mental healthcare<sup>27</sup> and the typically episodic, short-visit format of primary care may not facilitate the assessment and delivery of appropriate mental health services. Consequently, the mental health needs of older adults often remain hidden from the healthcare system<sup>29</sup> until a crisis state is reached. This can result in care delivered in environments not conducive to person-centred mental healthcare (eg, hospital emergency departments).<sup>30 31</sup> Efforts have been made to improve collaboration between primary care providers and mental health clinicians.<sup>32</sup> However, there is a need for broader integration of collaborative mental healthcare practices across the system, including training allied health professionals and community providers to foster mental health support, care and treatment for Canadians.<sup>11</sup>

At the onset of the COVID-19 pandemic, members of the research team worked in collaboration with the Canadian Mental Health Association National office on a modified James Lind Alliance Priority-Setting Partnership initiative.<sup>33 34</sup> The goal was to identify priority research questions on ageing and mental health according to older adults, family/friend caregivers and health and social care providers across Canada.<sup>35</sup> Two of the priority questions identified, included: (1) how can healthcare

providers without specialised training in mental health build their skills in providing mental healthcare to older adults?; and (2) are there easy-to-use tools available to help people identify signs of positive or poor mental health in themselves or others?

### Priority 1 building mental health-related skills in non-specialist providers

In the recently published Centre for Addiction and Mental Health (CAMH) Policy Framework on Ageing and Mental Health, home and community care is recognised as a setting where improvements are needed to support long-term pandemic recovery.<sup>14</sup> One effective strategy to build improvements and care capacity is training non-specialist health workers in mental healthcare.<sup>36</sup>

Most older adults in Canada live at home and many require care and support to safely continue to do so.<sup>14</sup> Home and community care services 'help people to receive care at home, rather than in a hospital or long-term care facility, and to live as independently as possible in the community'.<sup>37</sup> Up to 80% of home and community care is delivered by unregulated care workers in Canada (eg, personal support workers, community health workers).<sup>38</sup> Other health and social care providers in these settings include other paid (eg, nurses, occupational therapists, recreationists) and unpaid individuals (eg, family caregivers, volunteers).<sup>37</sup> Providers often work independently in personal environments like an older adult's home, which offers a unique insight into life circumstances (eg, relationships, culture) and helps build trusting therapeutic relationships.<sup>39</sup> However, this existing structure lacks in-person team support for real-time problem-solving related to client care, and community-based mental health resources are notably underfunded.<sup>11 14 40</sup> Additionally, missed opportunities in home and community care can occur when providers witness mental health concerns/challenges experienced by older adult clients, but hesitate to discuss these due to lack of confidence/skill gaps, prioritization of physical health concerns, over-reliance on family caregivers and stigma.<sup>41</sup>

### Priority 2 easy-to-use tools to identify positive and poor mental health in older adults

The research team identified the Mental Health Continuum (MHC) model as an existing, user-friendly and publicly available visual model.<sup>42</sup> The MHC was developed by the Department of National Defence and the Canadian Armed Forces and is rooted in the Stress Continuum Model.<sup>43</sup> This model depicts mental health as a multidimensional and dynamic spectrum using a common language and colour-coded scale.<sup>44</sup> It is intended to support self-reflection and to facilitate monitoring of signs and behaviour indicators of positive and poor mental health in oneself or others.<sup>36</sup> The MHC model is employed by the Canadian Armed Forces in their Road to Mental Readiness programme, and it has also been validated for use with university students and showed promise for building resilience.<sup>44 45</sup> To our

knowledge, the MHC has not been validated for use by older adults, caregivers and/ or providers in home and community care and therefore adaptations should be explored prior to expanded use of the model to ensure context relevance of the evidence base.

## OBJECTIVES

The intention of this study was to address the priority research questions on ageing and mental health identified by Canadians, in response to existing literature gaps and calls for research to address the wider impacts of COVID-19. The goal of this study is to co-design and test an evidence-based approach to mental health conversations at the point-of-care in home and community settings across Canada with older adults, family caregivers and health and social care providers. The three objectives are:

1. To adapt and validate the evidence-based MHC model for use in the context of ageing-focused home and community care;
2. To co-design mental health conversations, including tools, resources, processes and follow-up actions in community health and social care settings; and
3. To pilot test the co-designed and evidence-based mental health conversations at the point-of care to assess feasibility and preliminary outcomes.

The three objectives are aligned with the research study's three phases, and this protocol paper describes Phases 1 and 2 in depth, as well as the overall design of Phase 3. Due to the nature of co-design, the details of Phase 3 are reliant on the outcomes of Phase 2 and will be developed further when findings are available.

## METHODS AND ANALYSIS

### Research design

This study will apply a participatory mixed-methods design, guided by the Participatory Research to Action (PR2A) Framework (see [figure 1](#)),<sup>46</sup> which brings together concepts from service design,<sup>47</sup> co-design and integrated knowledge translation<sup>48</sup> as a six-step process

for participatory applied health services research.<sup>46</sup> The Saint Elizabeth (SE) Research Centre of SE Health developed the PR2A Framework<sup>46</sup> through 15+ years of experience partnering with health system users in all stages of impact-oriented applied health services research. The PR2A Framework emphasises equity, diversity and inclusion to support authentic engagement of experts-by-experience in all research steps from study inception through data collection, analysis, implementation and knowledge mobilisation.<sup>46</sup>

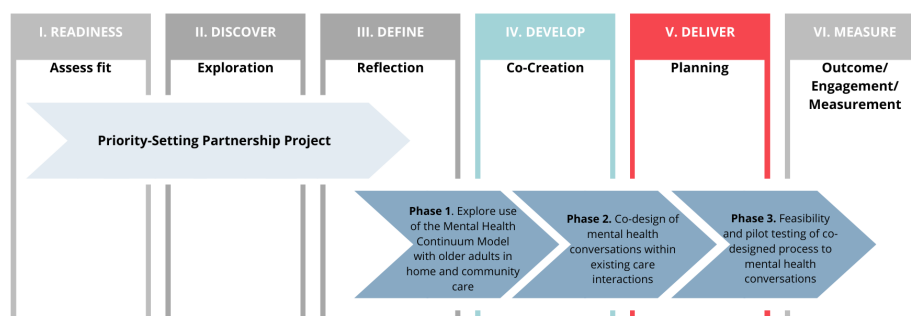
The present study builds on previous work (the modified priority-setting-partnership described above)<sup>35</sup> which constituted steps one to three of the PR2A Framework. The present study is organised into three phases to address the remaining steps of the PR2A Framework (see [figure 1](#)):

1. Conducting a 3-stage ADAPTE<sup>49</sup> process to develop a purposive recruitment strategy (Stage 1), adapt the MHC model (Stage 2) and validate the adapted model for ageing Canadians in home and community care (Stage 3).
2. Co-designing tools, resources and processes to support mental health conversations at the point-of-care, building on the adapted model from Phase 1.
3. Piloting and feasibility testing the co-designed mental health conversation outputs from Phase 2.

### Setting and participants

This study will take place in Canada. Phase 1 involves national participation from Canadians who self-identify with one or more of the following perspectives:

1. An older adult (aged 55+) living in a home or home-like environment in the community (eg, private residence, retirement home);
2. A friend or family member who provides unpaid care to an older adult; or
3. A health or social care provider who provides paid care to older adults in a home or community health setting (eg, home care, clinic, community health centre, community support service).



**Figure 1** The Participatory Research to Action (PR2A) Framework as mapped to the previously completed modified Priority-Setting Partnership (PSP) project and the three phases of this study. The PSP covered the Readiness (I) Discover (II) and first component of the Define step (III) of the PR2A Framework. Phase 1 will be a continuation of the Define step (III) Phase 2 will focus on the Develop step (IV) and Phase 3 will involve the Deliver step (V) and the start of the Measure step (VI).



Phase 2 involves only health or social care providers (ie, perspective 3 above) from collaborating home and community care organisations in rural and urban communities in three Canadian provinces (British Columbia, Ontario and Nova Scotia). Phase 3 will involve participants who are clients, family/friend caregivers of a client, or employees of one of the rural and urban communities from Phase 2. Participants will be excluded if they do not live in Canada, if they cannot participate in one of the two official languages in Canada—English or French, or if they are unable to provide their own consent, due to the participatory nature of the study. Health or social care providers who work in facility-based long-term care, primary care and/or a hospital setting will be excluded from the study as their work does not fall within scope of the study's definition of home and community care.

As part of the PR2A Framework approach,<sup>46</sup> a pan-Canadian Working Group of experts-by-experience (n=30) will guide all aspects of the study including: the original grant proposal; development of recruitment materials and data collection tools and approaches; intersectional data analysis and interpretation; and knowledge mobilisation with diverse groups. Working Group meetings will take place quarterly online and participating members will be offered honoraria in recognition of their time supporting the research study.

### Phase 1 (Objective 1)—'Define': adapt and validate the evidence-based MHC model for use in the context of ageing-focused home and community care

#### Sample size

No participants will be recruited in the Set-Up stage. In the Adaptation stage, the four ADAPTE workshops will involve 60 participants from across Canada, with 9–15 participants in each. Qualitative sampling guidelines suggest this is a small enough group size for participants to interact with one another, but large enough to incorporate diverse perspectives.<sup>50</sup> Qualitative sampling prioritises having enough participants to capture a range of opinions, but not so many that the findings become repetitive—the goal is to reach saturation, at which point no new information is identified.<sup>51–53</sup> To promote deep engagement, the first three workshops will focus on one perspective each (ie, older adult, caregiver, health and social care provider) and the fourth workshop will include participants from all three perspectives. Prior research indicates that nearly 90% of all themes are uncovered within three to six workshops.<sup>54</sup> In the Finalisation stage approximately 1000 Canadians will complete an online survey to validate the acceptability of the adapted MHC model. Equal ratios of all three perspectives of interest will be targeted, with a minimum goal of at least 300 individuals within each perspective.

#### Recruitment

The Set-Up stage will involve the study team consulting the Working Group to develop a stratified purposive

**Table 1** List of participant characteristics that will be collected across Phases 1–3 of the study

Study phases	Phase 1		Phase 2	Phase 3	
Participant perspectives	All perspective participants				
Participant characteristics	Adaptation stage	Finalisation stage	Health or social care providers	Health or social care providers	Older adult clients
Age	✓	✓	✓	✓	✓
Gender identity	✓	✓	✓	✓	✓
Sexual orientation	✓	✓	–	–	✓
Living with a disability	✓	✓	–	–	✓
Number of comorbid health issues	✓	✓	–	–	✓
Perspective(s) for research study	✓	✓	–	–	✓
Current province of dwelling	✓	✓	✓	✓	✓
Racial/ethnic group	✓	✓	✓	✓	✓
Indigenous identity	✓	✓	✓	✓	✓
Place of birth (Canada or outside Canada)	✓	✓	✓	✓	✓
Total family income	✓	✓	–	–	✓
Number of people family income supports	✓	✓	–	–	✓
First three digits of current postal code	✓	✓	✓	✓	✓



sampling strategy for engagement of participants representing all three perspectives in both the Adaptation stage and Finalisation stage.<sup>55</sup> Efforts will be made to recruit diverse participants and examine intersecting structures and conditions shaping mental health service access.

Participant recruitment in the Adaptation stage and Finalisation stage will use: (1) direct emails; (2) social media; and (3) email-based newsletters. Study researchers, Working Group members and knowledge users will send recruitment materials to their affiliated organisations (eg, collaborators and partners in home and community care, national and provincial ageing or mental health organisations). Recruitment materials will be shared on social media platforms (ie, Twitter, Facebook and LinkedIn) and web portals (eg, REACH BC) and amplified from team member and organisation accounts. All recruitment materials will be written in French and English and will include a link to an online survey in Qualtrics.<sup>56</sup>

In the Adaptation stage, an online survey using the Qualtrics<sup>56</sup> platform, will confirm participants' preferred language of engagement, eligibility, availability and preferred contact time and method. A member of the research study team will contact interested individuals by phone to obtain informed consent and confirm workshop details, including an overview of the key features within the online platform(s) that will be used during the workshop. All workshop participants will have the option to receive a gift card honorarium. In the Finalisation stage, the online Qualtrics<sup>56</sup> survey will confirm participants' preferred language for completing the survey and eligibility. Participants will then be directed to an online information letter and asked to provide informed consent by clicking a radio button marked 'I consent to participate in the survey'. The contact information for the study lead will be provided to participants, in the event they would prefer to complete the survey by telephone. All survey participants will have the opportunity to enter a draw to win a gift card honorarium.

#### Data collection and analysis

For the Adaptation phase, participants will be asked to provide answers to a demographic questionnaire during the informed consent telephone call (see [table 1](#) for participant characteristics). Participant responses will be documented in Qualtrics<sup>56</sup> by a member of the research study team. The demographic information will guide purposive sampling and support intersectional analysis. Participants will receive a pre-workshop activity package by email or mail, including a copy of the MHC model, a case study narrative about older adult mental health involving all three perspectives of interest (ie, older adult, caregiver and care provider), and broad reflection questions about the case study narrative and MHC model. The activity package will be developed by study investigators in consultation with the Working Group. Participants will be encouraged to review and complete the activity package in advance of the session.

Adaptation stage workshops will be facilitated online by members of the study investigator team (JLG, PH, EK, OHP). Three main activities will be conducted with participants, each organised as round-table style discussions using an interactive online whiteboard (MIRO) to visually capture live participant input (see [table 2](#)). Activity 1 will involve participants assessing the face validity<sup>57</sup> of the four colour-coded levels (health, reacting, injured and ill) and six domains of the MHC model (mood, attitude and performance, sleep, physical symptoms, social behaviour and alcohol and gambling) in the context of the case study narrative and ageing and mental health more broadly. In Activity 2 participants will explore content validity<sup>57</sup> of the prompts/signals/signs related to each of six domains; assessing them for relevance and coverage within the context of use by health and social care providers working in home and community care settings.<sup>57</sup> Participants will also be asked to brainstorm additional prompts/signals/signals they feel are needed. Activity 3 will involve participants assessing the language used in the model for interpretability, including reading level, ambiguous wording and jargon.<sup>57</sup> The workshops will be video recorded, and audio transcribed verbatim.

De-identified transcripts will be analysed using directed content analysis<sup>58</sup> in NVivo V.20, supported by an intersectional approach<sup>59–61</sup> using data on participant characteristics, to produce an adapted MHC model. The analysis will be iterative, and the findings from the first three workshops will be combined and shared in the fourth, mixed perspectives workshop. Participants in the fourth workshop will complete the same three activities. The goal of the final workshop will be to reach a consensus on an adapted MHC model for use in a home and community care context with older adults. Members of the research study team including Working Group members will be involved in the iterative data analysis process.

In the Finalisation stage, the online survey will be conducted via Qualtrics<sup>56</sup> to evaluate the acceptability of the adapted MHC model domains and the signs, cues and prompts in each domain. Participants will be asked to indicate on a 5-point Likert scale their level of agreement with each adaptation in the context of supporting mental health conversations with older adults in home and community care. It is anticipated that there will be 10–20 questions in the survey, depending on the adapted number of domains and prompts/signals/signals. Participants will also have an opportunity to provide comments in an open-ended text box to supplement their Likert scale responses. A self-reported demographics survey will follow the main survey online (see [table 1](#)).

The quantitative survey responses will be analysed using descriptive statistics in SPSS V.29 and reported as stacked bar frequency plots. Intersectional analysis will be completed according to variation in demographics/subgroups within the sample (eg, by perspective, age, gender identity, geography) to identify patterns and/or differences in respondents. Qualitative survey responses will be de-identified and directed content analysis<sup>58</sup> will

**Table 2** Description, purpose and sample prompt questions from the Phase 1 ADAPTE<sup>49</sup> workshop activities

	Activity 1	Activity 2	Activity 3
Description	Provide overall impression of the MHC model.	Ask detailed questions about the four colour-coded levels and six domains of the MHC model.	Discuss with participants the language used in the model.
Purpose	Obtaining unfiltered reactions will allow researchers to understand the preliminary face validity of the MHC model for use in an ageing and mental health context within a home and community care interaction.	To explore content validity of the four colour-coded levels and six domains, assessing them for relevance and coverage of key areas related to mental health for older adults. To brainstorm prompts, signs, cues and/or signals for each domain that participants feel would be indicative of each level and would be something that could be observed and/or discussed during a home and community care interaction.	Indicate whether the language used to describe the domains, levels and signs and signals is clear and unambiguous.
Sample question	How do you feel about the use of colour to visually represent moving from a positive state to a more negative state of mental health? When you look at the six categories overall, do you feel they represent all the elements/aspects of mental health a person might experience?	Would these signs and signals be helpful cues for a care provider to start a conversation about mental health with an older adult in a community care setting? Are any signs/signals missing that would be helpful in this context related to mood that a care provider might use to open a discussion?	Does the wording within the model resonate for use with older adults? Which words within the model appear ambiguous? Are there words that are difficult to understand/interpret?

MHC, Mental Health Continuum.

be used to analyse these in NVivo V.20. The goal will be to identify themes to explain agreement and/or disagreement patterns in the quantitative data. Members of the research team including Working Group members will be involved in the iterative data analysis process.

### Phase 2 (Objective 2)—‘Develop’: co-design mental health conversations, including tools, resources, processes and follow-up actions in community health and social care settings

#### Sample size

Co-design workshops will involve 90 community-based health or social care providers across three urban and three rural sites in Ontario, British Columbia and Nova Scotia, Canada. One co-design workshop will be conducted in each site with 9–15 health and social care providers, in alignment with qualitative sampling guidelines.<sup>50</sup>

#### Recruitment

To explore collaboration with home and community care organisations in each of the three provinces for Phase 2 (and Phase 3), the team will leverage the networks of local co-investigators and Working Group members for facilitating initial connections. Rural and urban sites will be chosen according to interest from home and community care organisations.

Once sites are identified and organisations agree to collaborate, recruitment of health and social care providers within each organisation to participate in

co-design workshops will follow a purposive, convenience sampling strategy using a combination of methods: (1) recruitment posters shared in person at the collaborating organisation, or distributed online via email-based newsletters or social media; (2) in-person information sessions at the collaborating organisation; (3) direct emails sent to providers by a lead contact at the collaborating organisation. All recruitment materials will be written in French and English and recruitment methods will direct participants to an online screening and scheduling survey. The screening and scheduling survey, telephone follow-up, informed consent approach and demographics survey will follow the same process as Phase 1—Adaptation phase (see table 1). Some of the more invisible diversity characteristics were excluded from data collection with providers in Phases 2 and 3 to avoid potential deterrence in the recruitment process due to privacy concerns, and in alignment with the focus of the study on co-designing conversations that prioritise responding to variation in the needs of older clients and caregivers in home and community care. Participants will also be asked to provide informed consent to be contacted again for Phase 3 participation. Phase 2 participants will have the option to receive a gift card honorarium. Travel expenses (ie, mileage, public transit costs, parking fees) will be covered for in-person workshop participants.

**Table 3** Description and steps for the Phase 2 co-design workshop activities

	Activity 1 empathy mapping	Activity 2 bodystorming
Purpose	To build understanding among participants who have different lenses of user needs and assist in decision-making to respond to those needs.	To allow participants to brainstorm with their bodies and be grounded in the idea that people can figure things out by acting and trying them out.
Steps	<ol style="list-style-type: none"> <li>Using an empathy map worksheet, participants will indicate what they feel their character might say, do, think and/or feel in reaction to the prompt at the end of the case study narrative.</li> <li>Following individual reflection work, participants will be able to share their ideas and a large empathy map will be created by a facilitator to amalgamate the input.</li> <li>Empathy mapping will be repeated for several alternative prompts. All prompts will be designed to tap into the domains, levels and signs and signals of the validated/adapted Mental Health Continuum model.</li> </ol>	<ol style="list-style-type: none"> <li>Each group will be given one of the prompts from the empathy mapping exercise and a worksheet to help them 'script' out a scene, which should represent their idea for the most successful mental health conversation in response to the prompt.</li> <li>Participants will be encouraged to include details in their scene about the resources, education, tools and supports that would be needed in advance, during or after the scene to make it realistic, feasible and embedded into routine practice.</li> <li>Each group will be given time to act out their scene, with time for reactions and discussion with the whole group following each scene.</li> </ol>

### Data collection and analysis

Participants will receive a pre-workshop activity package by email or mail in advance of the workshop. The pre-workshop package will include a copy of the validated MHC model, the same case study narrative as Phase 1 and broad reflection questions. Participants will be encouraged to review and complete the activity package in advance of the session.

Co-design workshops will be facilitated in-person by members of the study investigator team (JLG, PH and Co-Is/ students local to each province). A hybrid option (combined online and in-person) will be made available if some participants are not able to attend in-person. Two main co-design activities will be included in the workshops, focusing on what people say, make and do during the activities as part of the co-creation process (see table 3).<sup>47</sup> Empathy mapping will help participants take on the role of one of the characters depicted in the case study narrative.<sup>62</sup> The goal of empathy mapping is to uncover as many potential considerations as possible that would be necessary for successfully engaging in a conversation on ageing and mental health in this context. 'Bodystorming' is a gamestorming activity that allows participants to act and try out scenarios by role-playing with their bodies.<sup>63</sup> Participants will complete bodystorming in small groups using their empathy mapping roles so each group will have at least one participant each acting as a patient, a caregiver and a health/social care provider. The workshops will be audio recorded and transcribed verbatim. Physical artefacts (eg, worksheets) from the co-design activities will be collected for analysis.

Framework analysis, with both inductive and deductive coding, will be used to analyse de-identified workshop transcripts,<sup>64</sup> facilitator notes and other artefacts created by participants during the workshops via NVivo V.20 to develop an implementation framework to guide the implementation of mental health conversations at each site. The 3-C model<sup>65</sup> for implementation of sustainable

complex interventions in healthcare services will be used to organise the framework findings into three categories for successful and sustainable implementation in Phase 3:

1. Consultation (enablers: prioritising ideas, identifying areas for improvement, designing a process map);
2. Collaboration (enablers: role clarity, understanding organisational change, organisational culture); and
3. Consolidation (enablers: standardising policies and procedures, right staff mix, knowledge of patients, sufficient resources, business intelligence models).

A cross-comparison of the implementation framework for each site will reveal both required and flexible elements for implementation to be included in a generalisable implementation framework. Key similarities and differences based on demographic factors being considered from an intersectional perspective will also be documented. The iterative data analysis process will be like that of Phase 1.

### Phase 3 (Objective 3)—'Deliver/ Measure': pilot test the co-designed and evidence-based mental health conversations at the point-of care to assess feasibility and preliminary outcomes

#### Sample size

Participants from the Phase 2 co-design workshops who also consented to be part of Phase 3 will be asked to engage a collective total of 12–30 older adult clients (approximately 1–3 client conversations/participant) in pilot and feasibility testing per site. The sample size aligns with pilot and feasibility study guidelines for precise estimates of feasibility and outcome variability.<sup>50</sup>

#### Planned recruitment

Recruitment of older adult participants (representing perspective A above) in Phase 3 will take place using information letters and posters that consented health and social care provider participants and/or their organisations can provide to current and prospective older



adult clients. Provider participants will be equipped with a Frequently Asked Questions document about the project to address preliminary questions from potential older adult participants. All recruitment materials will be written in French and English. Interested older adult clients will be directed to an online screening and scheduling survey. The screening and scheduling survey, telephone follow-up, informed consent approach and demographics survey will follow the same process as Phase 1—Adaptation phase and Phase 2 (see [table 1](#)). Compensation and/or honoraria will be offered to Phase 3 participants in accordance with future Phase 3 protocol development, ethics review and approval.

#### Planned data collection and analysis

Consented health and social care provider participants will engage consented older adult client participants in a mental health conversation using the validated/adapted MHC model and implementation framework(s) at the point-of-care. Following these conversations, a member of the study investigator team will conduct online or in-person semi-structured interviews with participants to explore feasibility and overall experiences. Interviews will be audio recorded and transcribed verbatim. Pre/post online or telephone surveys will also be administered to older adults and health and/or social care providers to explore preliminary outcomes that include short-term indicators of resilience (eg, help-seeking behaviours, patient and provider experience and quality of life). Family caregivers may also be consented to participate in data collection, depending on the unique circumstances of each client. The specific implementation details, interview questions, metrics and tools will be designed and informed by the outcomes of Phase 2 and detailed in a follow-up manuscript.

Thematic analysis of qualitative data from Phase 3 will be guided by an inductive coding approach using NVivo V.20. Quantitative data will be analysed using descriptive statistics in SPSS V.29. The iterative data analysis process will be similar to Phases 1 and 2.

#### Patient and public involvement

Patients/the public will be involved in all phases of this study. Older adult, family caregiver and health and social care provider members of the Working Group were involved in research design and will help with recruitment, guide data collection and support data analysis for all phases. The study's objectives and research questions were directly informed by previous consultation with the public on ageing and mental health research priorities.<sup>35</sup> The expertise and lived experiences of participants will guide the adaptation, validation, co-design and implementation of evidence, tools and resources to facilitate mental health conversations in home and community care. Phase 3 will include participants' feedback and assessment of the burden of implementation of the mental health conversations. Knowledge mobilisation

efforts will involve Working Group members and findings will be disseminated to participants and the broader public.

#### ETHICS AND DISSEMINATION

Phase 1 and Phase 2 of this study has received ethics clearance from the University of Waterloo Office of Research Ethics (ORE #44187), the University of British Columbia (#H22-02306) and St. Francis Xavier University (#26075). The details of Phase 3 rely on Phase 2 outcomes, therefore ethics approval for Phase 3 will be sought at such time. Knowledge mobilisation will be organised as an ongoing, multipronged strategy across the study including peer-reviewed journal articles, conference presentations, webinars, social media communications (eg, infographics) and policy briefs. Target audiences will include researchers, older adults, caregivers, health and social care providers, home and community care organisations, policymakers and the broader public.

#### DISCUSSION

##### Unique methodological contributions

To our knowledge this is the first adaptation of the MHC model<sup>42</sup> for use with ageing Canadians in home and community care. This participatory research study was driven by priority research questions on ageing and mental health identified by Canadians during the pandemic, minimising researcher and funder bias in the study questions and rationale.<sup>66</sup> Co-design research is a relational process between researchers and participants, service providers, service users, policymakers and community makers that should prioritise addressing inequities.<sup>67</sup> This work authentically engages with groups that are under-represented in science: older adults with mental health concerns, family caregivers of older adults and home and community health and social care providers.<sup>68–70</sup> These experts-by-experience are not only being included as research participants but also in the project governance structure as members of the Working Group, which is aligned with Canada's strategy for patient-oriented research.<sup>71</sup>

##### Challenges/limitations and risk mitigation

Study findings have the potential to reveal additional gaps and inequities in community mental health services for older adults; yet this could help to build further data-driven rationale for addressing the community mental health priorities in the CAMH Policy Framework on Ageing and Mental Health.<sup>14</sup> Revealing gaps in mental health support, care and treatment services within specific rural and urban geographies may assist study collaborating organisations to continue working together beyond the project to design, to implement and advocate for additional services to address most urgent needs. Another potential limitation of this study is Canada's ongoing health human resources challenges,<sup>72</sup> which



may prevent home and community care providers from getting involved. To mitigate this risk, we have reserved a budget to support staff payment for their time, if needed. We are also making honoraria available to participants and offering flexible participation options to support inclusion (eg, interpretation services).

### Potential for mental health conversations to improve mental health

Fostering more mental health conversations in home and community care has the potential to: help destigmatise ageing and negative attitudes towards mental health<sup>12–14</sup>; build confidence in providers who are not mental health specialists to respond to the growing need for mental health support, care and treatment in the community<sup>11</sup>; and encourage positive help-seeking behaviours in ageing Canadians.<sup>22</sup> Co-designing mental health conversations to be embedded into existing routine care practices will help to promote uptake and feasibility in a resource-constrained health system<sup>14 73</sup> and promote better integration of physical and mental healthcare services across community settings in Canada.<sup>11</sup> Combined, these anticipated outcomes will proactively create capacity for a more resilient health system that is better equipped to address the mental healthcare needs of ageing Canadians.<sup>14</sup>

### STUDY STATUS

The planned study duration is 3 years, from February 2022 to February 2025. Phase 1 data collection and analysis were completed in Spring 2023. Phase 2 co-design workshops commenced in May 2023 with data collection and analysis continuing through Fall 2023/Winter 2024. Phase 3 is anticipated to start in February 2024.

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