Evidence Based Library and Information Practice

Using Evidence in Practice

Evidence Based Principles to Accelerate Health Information Flow and Uptake Among Older Adults

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Setting

This article describes the development of evidence based principles for increasing health information flow among older adults and how those principles were implemented in a major knowledge mobilization project in Canada. The Canadian Coalition for Seniors' Mental Health (CCSMH) is a national charitable organization seeking to improve the mental health of older adults by creating clinical practice guidelines, mobilizing knowledge, and advocating for policy change. CCSMH was initiated by the Canadian Academy of Geriatric Psychiatry (CAGP) and continues to operate under its oversight. Thanks to recent financial investments from the Public Health Agency of Canada, CCSMH significantly increased its knowledge mobilization initiatives in 2022-2024, covering a wide range of mental health topics and

targeting diverse knowledge users, including older adults; health care and other service providers; and care partners of older adults. The CCSMH knowledge mobilization team was responsible for developing the strategy, identifying key messages, (co)creating evidence-informed knowledge products, and disseminating the products widely using innovative approaches.

Problem

An iterative process of knowledge mobilization encompasses a range of activities tailored to the unique needs of different knowledge users who may benefit from integrating this evidence into their personal or professional life (Canadian Institutes of Health Research, 2016). Knowledge mobilization can be holistically conceptualized as facilitating information flow (McDonald, 2019). The purpose of our knowledge mobilization activities was to support evidence based decision making to improve older adult mental health across our focus areas.

An understanding of the information needs, behaviours, and contexts of health care providers was embedded within our organization because of its foundation in geriatric psychiatry and our existing multidisciplinary working groups. However, we lacked critical information about older adult patterns of seeking, encountering, receiving, and integrating health information. Identifying and synthesizing this information would enable us to use evidence based practices to anticipate and alleviate barriers that impede information flow and enhance the efficacy of our knowledge mobilization initiatives.

Evidence

Scope and Limitations

We searched academic databases including EBSCO's Academic Search Elite, ProQuest Central, and Google Scholar to identify relevant sources. Articles were included if they addressed older adults' health information interactions or provided useful theoretical framing to help us better understand this topic. We examined findings from 36 sources; most were peer-reviewed research articles (n=28), supplemented by relevant grey literature studies and reports, conference proceedings, and reference materials (n = 8). It was noticeable that the literature lacked intersectional analysis of both older adult demographics and their information needs, preferences, and behaviours. A core principle of our knowledge mobilization work was to attend to the many points of diversity within this large demographic cohort.

Evidence Synthesis

Effective information flow can be understood as three interdependent domains: people, venue, and formats (Lokker et al. 2021), which is how our review findings are presented.

1. People

The People domain examines the characteristics of individuals seeking, receiving, and integrating information and others who support this process. For this review we focused on older adults performing everyday life (e.g. non-work related) information seeking (Savolainen, 2010). Older adult everyday life information seeking may be passive, active, or most often a dynamic process involving a combination of both (Altizer et al., 2013; Bates, 2010; Lokker et al., 2021; Savolainen, 2010; Soong et al., 2020; Sy & Binnie, 2014; Williamson, 1998; Wilson, 2000; Zhao, 2022). Their interactions with the information they encounter are iterative, inter-related, influenced by affective factors such as perceived likelihood of success, and can

be motivated by curiosity, interest, problem-solving, or addressing a perceived knowledge gap (Choi et al., 2022; Savlolainen, 2010; Sy & Binnie, 2014; Zhao et al., 2022).

Health information is identified as the most significant information need for older adults (Hayat et al., 2021; Sy & Binnie, 2014). Studies demonstrate that aging is correlated with paying greater attention to new health information in unexpected contexts (Palsdottir, 2011). Older adults are also more likely to actively seek out health information when they encounter a health problem or recognize a knowledge gap (Soong et al., 2020; Sy & Binnie, 2014).

Older adults' acceptance of health information is mediated by the perceived trustworthiness of the information source (Medlosck et al., 2015; Soong et al., 2020; Sy & Binnie, 2014). Older adults' social networks are rich settings for sharing valuable information (Palsdottir, 2011) and information from other older adults with similar experiences is seen as particularly credible (Kim & Choi, 2014). Health care providers, friends, and relatives are also described as highly trusted sources. Other credible sources include librarians, community service providers, and spiritual leaders (Asla & Williamson, 2015; Boughtwood, 2011; Chaudhuri et al., 2013; Choi, 2019; Goodall & Newman, 2014; Lokker et al., 2021; Medlosck et al., 2015; McDonald, 2019; McGrath et al., 2016; Palsdottir, 2011; Park et al., 2021; Wicks, 2004; Williamson, 1998). These trusted sources often act as proxy information seekers, meaning older adults frequently turn to them for assistance with active information seeking (Alsa & Williamson, 2016; Chaudhuri et al., 2013; McKenzie, 2003).

Topics relevant to proxy information seekers overlap 80% with those of older adults (Soong et al., 2020). Equipping proxy information seekers with knowledge of relevant resources and how to find them will directly benefit older adults who rely on their support.

2. Venues

Venues are the physical and digital spaces that enable information flow and have also been characterized as information worlds, environments, and ecologies (Greyson et al., 2019; Srinivason, 2007; Nardi & O'Day, 2000). When actively seeking information, older adults are likely to visit familiar, trusted venues that provide reliable support, such as pharmacies, libraries, and community centres (Lokker et al., 2021; Park et al., 2021).

Some venues double as information grounds which facilitate information flow socially (Fisher, 1999; Fisher & Naumer, 2006) so that non-purposive information seeking occurs (Fisher & Naumer, 2006; Savolainen, 2010). Common information grounds for older adults include religious and cultural institutions, community centres, libraries, coffee shops and restaurants, retail stores, activity clubs, waiting rooms, and social media communities (Altizer et al., 2013; Fisher & Naumer, 2006; Lokker, 2021; Park et al., 2021; Palsdottir, 2011; Sy & Binnie, 2014). Identifying information grounds and introducing relevant information through workshops, ambient outreach, or physical media can be an effective intervention (Bates, 2010; Lokker et al., 2021).

The internet is a significant venue for health information seeking. While used by older adults most frequently, the internet is simultaneously a less trusted venue for this demographic (Alsa and Williamson, 2015; Altizer et al., 2013; Auxier & Anderson, 2021; Chaudhuri et al., 2013; Davidson & Schimmele, 2017; Faveiro, 2022; Lokker et al., 2021; Medlosck et al., 2015; Park et al., 2021). For some, the internet poses significant barriers (Na and Jeong, 2020; Park et al., 2021; Stanziano, 2016). These barriers can be individual (i.e., literacy, self-efficacy, beliefs or attitudes), social (i.e., stigma, lack of social

support), or information and communications technology-related (i.e., infrastructure, quality, information overload, user experience) (Zhao et al., 2022). Information provided online should mitigate these barriers by increasing ease-of-use, reducing information overload, and demonstrating its credibility.

3. Formats

Formats are both the manner in which information is presented and the various delivery mechanisms of that information. They encompass dynamic and static communication media (e.g., podcasts, news articles, books, and social media) and interpersonal communications (e.g., individual conversations, workshops, and talks).

Print material is the most preferred format, but TV, radio, and helplines are also used widely (Altizer et al., 2013; Lokker et al., 2021; Medlosck et al., 2015; Palsdottir, 2011; Sy & Binnie 2014). Multi-format, multi-lingual health information interventions are the most accessible and effective (Lokker et al., 2021; Sy & Binnie, 2014). Interacting with digital material (e.g. medical websites, audio books, and videos) can be simultaneously empowering and overwhelming (Stanziano, 2016). An associated increase in technology-related anxiety can impact decision-making time, cause frustration, and reduce available cognitive load, which is critical to understanding, assessing, and using new information (Na and Jeong, 2020; Stanziano, 2016). Online information overload is a concern for more than half of older adults (Rodat, 2021; Zhao et al, 2022). FAQs, how-to-videos, and service-related information are preferred components that increase the uptake and effectiveness of a digital information source (Soong et al., 2020).

Relevance, clarity, concision, credibility, and hopeful tone are key characteristics of information presentation to support uptake by older adults (Asla & Williamson, 2015; Kim & Choi, 2014; Lokker et al., 2021; Sy & Binnie, 2014). Organizing information based on what older adults are looking for (e.g., topic, purpose, and type of media) supports clarity (Sy & Binnie, 2014). Using plain language, defining terminology, providing real-life examples, activating prior knowledge, and using positive statements can also increase clarity and receptivity (Na & Jeong, 2020; Sy & Binnie, 2014). Involving older adults in the design of information materials using the persona method is an evidence based strategy to improve uptake (Lokker et al., 2021).

Evidence Based Principles for Information Flow

By understanding and anticipating factors to enhance and inhibit information flow, we can design more effective knowledge mobilization. Examining the enabling characteristics associated with people, venues, and formats, we distilled four evidence based principles that influence older adults' information interactions:

1. **Tone and content:** Make your message relevant, clear, concise, credible, and hopeful.
2. **Format and presentation:** Use multiple formats to improve access.
3. **Context:** Tap into rich environments for accessing health information.
4. **Support networks:** Reach out to trusted sources and helpers.

Following each of these principles helps alleviate barriers that often obstruct health information flow for older adults and impede knowledge mobilization.

Implementation

The four evidence based principles laid a strong foundation for us to develop an effective knowledge mobilization strategy for getting mental health information into the hands of older adults to support their health decision-making. To disseminate these principles within CCSMH, we shared a summary through a synchronous, online workshop, an infographic (figure 1), and a discussion paper. Defining and communicating these evidence based principles at the outset of our project enabled us to integrate them into our knowledge mobilization (e.g., workflows from content creation through to design and into dissemination).

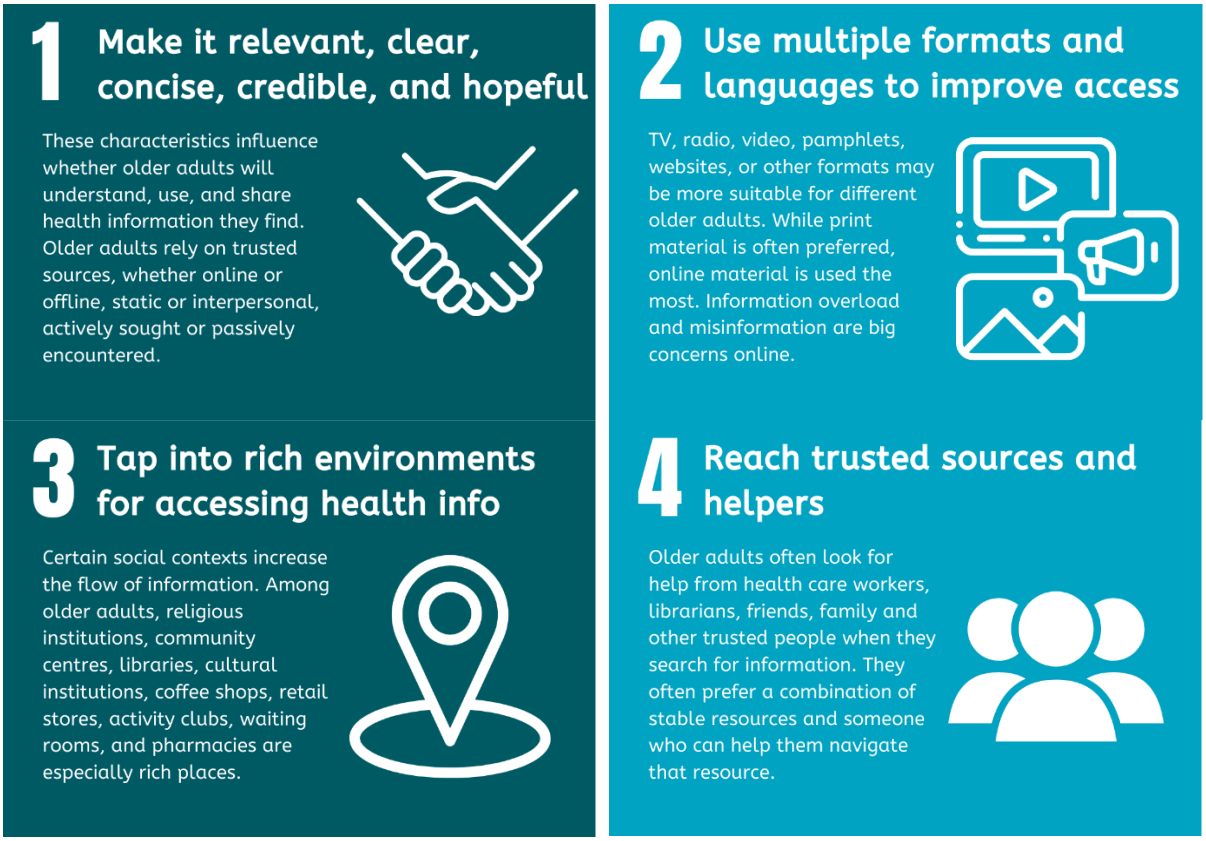

Figure 1
Infographics summarizing evidence findings shared with CCSMH staff.

Engaging diverse older adults and proxy information seekers in our work was a critical component to our success. These activities included one-on-one meetings with health care and service providers and people with lived experience (with an emphasis on those representing equity perspectives), public webinars, focus groups, and a content evaluation survey accompanied by 12 one-on-one user testing sessions designed to improve the usability of the Behaviours in Dementia Toolkit (described in Outcome). Consistent engagement through varied opportunities meant diverse knowledge users enriched our understanding of the unique perspectives and contexts of the older adults we aimed to reach.

Outcome

A major project that was shaped by these principles was the *Behaviours in Dementia Toolkit*; a free, online library of more than 300 evidence-informed, practical, and inclusive information resources to better support people experiencing dementia-related changes in mood or behaviour (figure 2). For example, we developed website wireframes to avoid information overload and mirror user purpose (Principle 2: Format and Presentation). We continued to refine our content presentation through user feedback to prioritize clarity, hopeful tone, and relevance (Principle 1: Tone and Content). We also worked with an Indigenous Elder to create a welcome message that centres Indigenous perspectives on dementia. We intentionally selected resources by and for Indigenous peoples, as well as 2SLGBTQIA+, racialized, disabled, and remote and rural people living with dementia in Canada (Principle 4: Support Networks). We connected with older adults to co-create blog posts highlighting their perspectives and recommended resources (Principle 3: Context). Older adult input significantly influenced Toolkit development, including establishing the website name, refining our custom metadata schema, and participating in user testing sessions. The website was launched on 7 February 2024; early reception has been overwhelmingly positive with 111,568 visits representing 81,740 unique users from 128 countries within the first two months.

Since conducting this review, our knowledge mobilization team completed a wide range of activities that integrated these principles. These encompass more than 135 discrete knowledge mobilization projects, including 75 public-facing products, ranging from infographics, brochures, and pocket cards, to postcards, social media campaigns, and more. We have connected directly with service providers, care partner organizations, and older adults in order to inject these resources into information grounds where they are most likely to be seen, used, and shared. This includes deliberate outreach to frequent information proxies, such as library and community service workers and care partners.

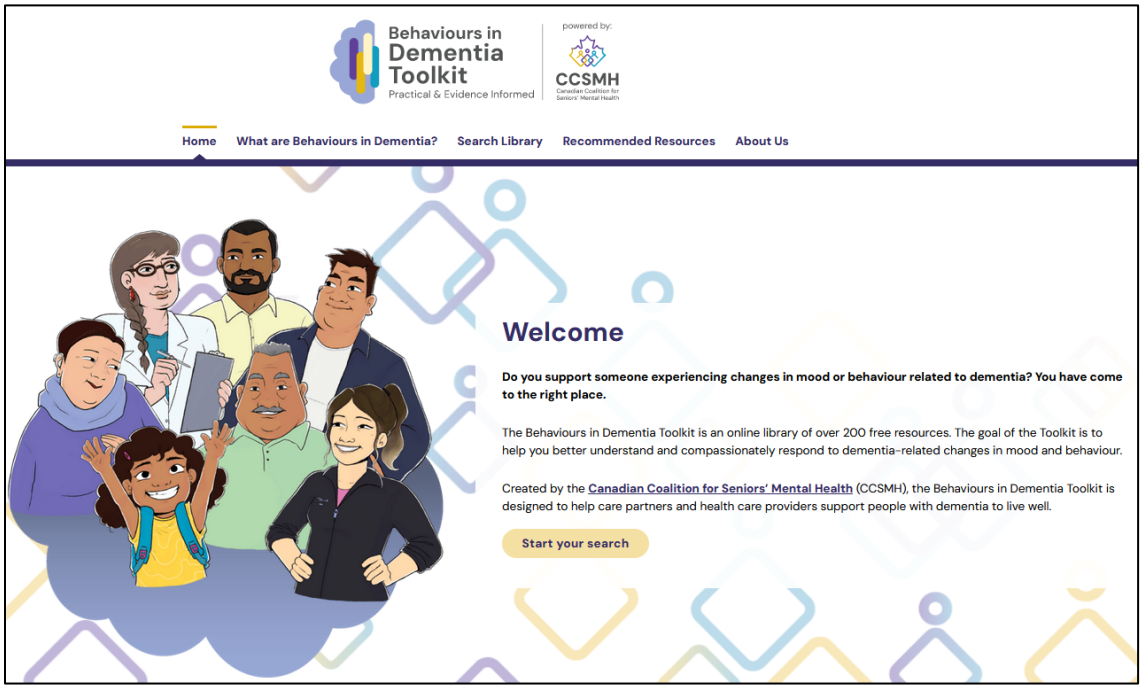

Figure 2
A screenshot of the homepage of the Behaviours in Dementia Toolkit.

Reflection

Synthesizing relevant evidence for facilitating effective information flow for older adults provided an opportunity for us to draw these principles into conversation with both our professional expertise and older adults' lived expertise. Engaging in these critical conversations helped guide our work to successful delivery of a significant number of information resources. The reality of grant-funded project work is that we were challenged by a limited timeframe and working within a swiftly expanded organizational structure. Creating effective health information products for older adults requires iteration and deep engagement with those for whom these products are most relevant. At the same time, these constraints enabled us to be pragmatic and experimental in our approach. As we continue to launch and evaluate our plethora of products, we will learn more about which products and approaches are the most effective in practice.

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Author Contributions

Nick Ubels: Conceptualization (lead), Investigation, Methodology (equal), Writing – original draft, Writing – review & editing (equal) **Lauren Albrecht:** Conceptualization (supporting), Methodology (equal), Project administration, Supervision, Writing – review & editing (equal)

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