Canadian Clinical Guidelines on Social Isolation and Loneliness in Older Adults

2024

CCSMH Canadian Coalition for Seniors' Mental Health
CCSMPA Coalition canadienne pour la santé mentale des personnes âgées
cagp CANADIAN ACADEMY OF GERIATRIC PSYCHIATRY | acgp ACADÉMIE CANADIENNE DE GÉRONTOPSYCHIATRIE

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The CCSMH is a project of the Canadian Academy of Geriatric Psychiatry.

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20 Crown Steel Drive Unit #6
Markham, ON L3R 9X9
Phone: 1-888-214-7080 extension 102
Email: info@ccsmh.ca
www.ccsmh.ca

Working Group

David K. Conn, MB, BCh, BAO, FRCPC
Lead

- Executive VP, Education and Chief Academic Officer, Baycrest Academy for Research & Education
- Co-Chair, CCSMH
- Professor, Department of Psychiatry, University of Toronto

Tanya Billard, MSW, RSW

- Systemic Advocacy Consultant, Office of the Seniors' Advocate, Newfoundland & Labrador

Suzanne Dupuis-Blanchard, RN, PhD, FCAN, FRSC

- Full Professor, School of Nursing
- Research Chair in Population Aging & Director Centre on Aging, Université de Moncton

Amy K. Freedman, MD, CCFP (COE), FCFP

- Assistant Professor, Department of Family and Community Medicine, University of Toronto
- Family Physician, St. Michael's Academic Family Health Team and Baycrest Health Sciences

Peter M. Hoang, MD, FRCPC

- Geriatric Medicine Resident, University of Toronto, Department of Medicine, Division of Geriatric Medicine

Mélanie Levasseur, PhD, OT

- Full Professor, School of Rehabilitation, Faculty of Medicine and Health Sciences, Université de Sherbrooke
- Director of the Research Lab Connect and Tier 1 Canada Research Chair in Social Participation and Connection for Older Adults, Research Centre on Aging, CIUSSS de l'Estrie-CHUS

Nancy E. Newall, PhD

- Associate Professor, Psychology Department, Faculty of Science, Brandon University
- Research Affiliate, Centre on Aging, University of Manitoba

Mary Pat Sullivan, BSW, MSW, PhD

- Full Professor, School of Social Work & Director, Rare Dementia Support Canada, Nipissing University

Andrew V. Wister, HBA, MA, PhD

- Director & Professor, Gerontology Research Centre & Department, Simon Fraser University

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CCSMH Project Staff

Claire Checkland, BA

- Executive Director

Bette Watson-Borg, BSc, MA

- Project Manager

John Saunders, PhD, MA, BA

- Coordinator, Communications & KT

Lisa Tinley, BA, BRLS

- Coordinator, Outreach & Engagement

Research Associates

Jeanette C. Prorok, BHSc, MSc, PhD

- Consultant, JPRO Research & Consulting
- Adjunct, School of Rehabilitation Sciences, Queen's University

Salinda Horgan, BHSc, MA, PhD

- Health Services Research & Evaluation Consultant
- Adjunct, School of Rehabilitation Sciences & Department of Psychiatry Queen's University

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Scope

The Canadian Coalition for Seniors' Mental Health (CCSMH) received a grant from an anonymous foundation to create a set of clinical guidelines regarding social isolation and loneliness in older adults for health care and social service professionals (HCSSPs). The purpose of these guidelines is to empower and support clinicians in their work with older adults who may be at risk of or already experiencing the health impacts of social isolation and loneliness. We have specifically named both health care and social service professionals as we believe both groups play a vital role, ideally working together. Our literature review indicates that these clinical guidelines are the first of their kind to be developed in Canada and internationally.

This project clearly identified that the research on this topic is very much in the formative stages. Despite an increasing prominence of work undertaken in communities, the nonprofit and government sectors across Canada to recognize and address social isolation and loneliness among older adults, there remain limitations to the breadth and depth of published evidence to support best practice in this area. This context led to an adapted GRADE methodology (outlined below), which was used in the creation of these guidelines.

Appreciating the diversity of intended clinical audiences, the guidelines have been structured so readers will hopefully find recommendations that align with their roles and responsibilities and may also stimulate new perspectives and actions. In addition, these guidelines are meant to inform and support older adults, their care partners, care administrators and policy makers. Building on the initial review of literature, we include four main foci: prevention, screening, assessment and interventions. It is hoped that these guidelines will also raise awareness, stimulate thinking and support conversations about this growing health and societal challenge.

Glossary of Terms

These guidelines recognize that the terms "social isolation" and "loneliness" are both defined in a variety of ways in the research, grey literature, as well as in the diversity of mainstream media, publications and informal conversations. In some cases, there is specificity to either social isolation or loneliness; however, in most cases, the terms are used in conjunction. These guidelines frequently use the terms together, noting that they are different but overlapping concepts.

Loneliness can be defined as: a distressing **subjective** "feeling that accompanies the perception that one's social needs are not being met by the quantity or especially the quality of one's social relationships" (Hawkley & Cacioppo, 2010; p.1).

This definition emphasizes the significance of desired versus actual social connections, thereby understanding loneliness as an emotional experience: a perceived deficiency in the amount and/or quality of someone's existing relationships.

Types of loneliness

There are different types of loneliness. The following three are the most commonly identified in evidence and literature on loneliness:

- ***Emotional*** *loneliness – the feeling of absence of meaningful relationships*
- ***Social*** *loneliness – a perceived deficit in the quality and quantity of social connections*
- ***Existential*** *loneliness – a feeling of fundamental separateness from others and the wider world*

Social isolation can be defined as "having few social relationships or infrequent social contact with others" (Wu, 2020; p.2). It is an **objective** measurable state capturing the level and frequency of one's social interactions.

Loneliness is often, but not always associated with isolation. It is also important to emphasize that a person can be socially isolated by choice, and this may be a preferred state for them and that a person may experience feelings of loneliness, in spite of being socially connected.

Abbreviations

CCSMH: Canadian Coalition for Seniors' Mental Health.

HCSSPs: Health Care and Social Service Professionals. These guidelines are intended for the diversity of clinical practices and professionals involved in health and social services. The term for this collective of professionals has been abbreviated in these guidelines to HCSSPs.

2SLGBTQIA+: Two-Spirit, Lesbian, Gay, Bisexual, Transgender, Queer and/or Questioning, Intersex, Asexual, and the plus reflects the diverse affirmative ways in which people choose to self-identify.

The GRADE Approach

The GRADE approach (Grading of Recommendations, Assessment, Development and Evaluation) was used as a method of grading the quality of evidence and the strength of recommendations. In following the GRADE process, the initial step was to grade the quality of available evidence supporting each recommendation. Subsequently, the overall strength of the recommendation was graded, taking into account the quality of the evidence but also other factors such as the potential to do harm, the cost and the feasibility. A separate category for recommendations was also developed, which is not primarily based on empirical evidence, but rather on the consensus of the expert working group that they represent best clinical practice. Examples include optimal assessment processes and those related to education and/or policy. These recommendations have been categorized as **Consensus**. The GRADE process was not used for these recommendations. Other guideline groups have used a similar approach, e.g., British Association for Psychopharmacology Guidelines (Lingford-Hughes et al., 2012). While such recommendations lack empirical evidence, it is believed they are also useful and important.

GRADE

Quality of Evidence	Strength of Recommendation
The quality of evidence for each recommendation is determined through an examination of the following factors: 1. The study design and the quality of the studies that were included; 2. The directness of the evidence (generalizability or applicability); and 3. The confidence that patients/clients will benefit from the treatment.	The strength of each recommendation is determined through an examination of the following factors: 1. The balance between benefits and undesirable effects/risks; 2. The uncertainty or variability of patient/client values and preferences; and 3. The resources associated with management options.

Note: High-quality evidence doesn't necessarily imply strong recommendations, and strong recommendations can arise from low-quality evidence.

Quality of Evidence	
High	Further research is unlikely to change confidence in the estimate of effect.
Moderate	Further research is likely to have an important impact on the confidence in the estimate of effect and may change the estimate.
Low	Further research is very likely to have an important impact on the confidence in the estimate of effect and is likely to change the estimate.

Note: Meta analyses and randomized controlled trials are considered high quality vs. observational studies which are considered low quality.

Strength of Recommendation	
Strong	Strong recommendations indicate high confidence that desirable consequences of the proposed course of action outweigh the undesirable consequences or vice versa. In some cases, strong recommendations are made without high-quality evidence.
Weak	Weak recommendations indicate that there is either a close balance between benefits and downsides (including adverse effects and burden of treatment), uncertainty regarding the magnitude of benefits and downsides, uncertainty or great variability in patients'/clients' values and preferences, or that the cost or burden of the proposed intervention may not be justified.

(Adapted from Guyatt et al., 2008)

Summary of Recommendations

Recommendation #1 – Knowledge of risk factors for social isolation and loneliness in older adults

Health Care and Social Service Professionals (HCSSPs) should have knowledge of major risk factors for social isolation and loneliness to identify older adults who may be socially isolated or lonely, and to anticipate with their patients/clients any possible changes in their life circumstances that could put them at risk of social isolation and loneliness.

GRADE: Evidence: Moderate; Strength: Strong

Recommendation #2 – Education and training for health care and social service professionals

Education regarding social isolation and loneliness in older adults should be part of the curriculum for health care and social service students as well as practicing HCSSPs. Education should include prevention, risk factors, screening, assessment and interventions, as well as strategies to engage with their patients/clients, care partners and the community.

Consensus

Recommendation #3 – Health care and social service professionals as agents of change

HCSSPs should use their role, as agents of change, to help inform and educate patients/clients and the general public about the association between social isolation and loneliness and poor mental and physical health and to promote social connection.

Consensus

Recommendation #4 – Targeted screening for older adults at risk

HCSSPs should use targeted screening for those older adults who have risk factors for social isolation and loneliness.

Consensus

Recommendation #5 – Screening tools

When screening patients/clients, HCSSPs should use evidence-based screening tools to identify patients/clients who are socially isolated and/or lonely, to assess the severity of the problem, and to use in routine follow-up to determine whether the patient's/client's social situation has changed and whether interventions are effective.

GRADE: Evidence: Moderate; Strength: Strong

Recommendation #6 – Health records

When social isolation and loneliness is identified in older adults, it should be documented in the health record like other medical conditions and risk factors. Efforts should be made to collect data on social isolation and loneliness as important social determinants of health. Loneliness and social isolation may be considered "psychosocial vital signs" given their impact on health.

Consensus

Recommendation #7 – Assessment

A thorough clinical assessment with a patient/client who is socially isolated and/or lonely should aim to explore the possible causes and identify any underlying health conditions that may be contributing factors. Other causes that may be contributing should also be identified adopting a biopsychosocial approach. A comprehensive assessment can guide the development of an appropriate management plan. The assessment may vary according to the health care and social service professional's scope of practice.

Key components in the assessment may include:

a. Medical history
b. Social history
c. Mental health
d. Cognition
e. Screening for substance use
f. Environment and finances
g. Recent life events
h. Lifestyle factors
i. Insight and motivation for change

Consensus

Recommendation #8 – Intervention: an overall approach

HCSSPs should apply several principles to help older patients/clients who are socially isolated and/or lonely including:

a. Ensure initially or concurrently that treatment is provided for any underlying medical conditions identified in their assessment;

b. Take an individualized approach, with shared decision-making;

c. Identify individuals' interests to determine interventions that may be the best fit, while appraising the individual and environmental resources available; and

d. Recognize the diversity within older adult populations and together with their patient/client consider the incorporation of their culture and lived experience.

HCSSPs should consider the following possible interventions for older adults: Social Prescribing, Social Activity, Physical Activity, Psychological Therapies, Animal Assisted Therapies and Animal Ownership, Leisure Skill Development and Leisure Activities, Technology. Pharmacological therapy is not recommended except for treatment of an underlying disorder. It should be noted that there is some overlap between these intervention categories.

Consensus

Recommendation #9 – Social prescribing

a. Social prescribing should be considered to manage or alleviate social isolation and loneliness. This can include, for instance, connecting individual patients/clients with suitable organizations, programming or community resources that provide opportunities for social interaction and/or self-care. Social prescribing may also address the social determinants of health which are often key to improving health outcomes that may be impacted by social isolation or loneliness.

b. HCSSPs should consider a stepped-care approach to social prescribing, starting with the least intensive interventions, like other mental health interventions. Regular review through a stepped-care approach can help determine whether other interventions are necessary, or whether recipients have been able to build or expand their capacity.

c. Link workers or system navigators can play an important role in assessing an individual's needs and connecting them with suitable organizations to build or foster greater social connection and reduce loneliness. In this way, they may support clinicians who may not have the same knowledge of resources.

d. Health and social service organizations should consider developing social prescribing strategies or teams, including designating a core team of staff to support implementing the strategy.

e. Similarly, community organizations should consider developing relationships or partnerships with clinical organizations to share relevant social prescribing resources.

GRADE: Evidence: Moderate; Strength: Strong

Recommendation #10 – Social activity

HCSSPs should support, encourage and empower individuals to engage at their optimal level of social activity.

GRADE: Evidence: Moderate; Strength: Strong

Recommendation #11 – Physical activity

HCSSPs should encourage their patients/clients to engage in group and/or individual physical activity as a means to reduce social isolation and loneliness and to improve their overall health. There is insufficient data to recommend a specific form of physical activity. HCSSPs are encouraged to have conversations with their patients/clients regarding opportunities for physical activity and active lifestyles.

GRADE: Evidence: Moderate; Strength: Strong

Recommendation #12 – Psychological therapies

Psychological therapies should be considered for some older adults experiencing social isolation and/or loneliness. Psychological therapies include, but are not limited to cognitive behavioural therapy, social cognitive therapy, reminiscence therapy and mindfulness-based stress reduction. There is greater available evidence for psychological therapies in reducing loneliness compared to social isolation.

GRADE: Evidence: Moderate; Strength: Strong

Recommendation #13 – Animal-assisted therapies and animal ownership

Animal-assisted interventions and pet ownership may be helpful to some individuals although the evidence for this intervention is limited.

GRADE: Evidence: Low; Strength: Strong

Recommendation #14 – Leisure skill development and leisure activities

HCSSPs are encouraged to discuss leisure-skill development and activities as an opportunity for older adults to learn new skills and engage in the local community. These activities and skills may include leisure education, art therapy, bibliotherapy, horticulture and nature-related interventions and music therapy, amongst others.

GRADE: Evidence: Low; Strength: Weak

Recommendation #15 – Technology

HCSSPs should intentionally engage with their patients/clients to further understand their access to and/or use of technology in their daily lives and potential opportunities for using technology to reduce social isolation and loneliness. It is important to take into account the interest of the individual, their digital literacy, any sensory limitations and financial capacity to access the internet and digital devices.

GRADE: Evidence: Moderate; Strength: Strong

Recommendation #16 – Pharmacological therapy

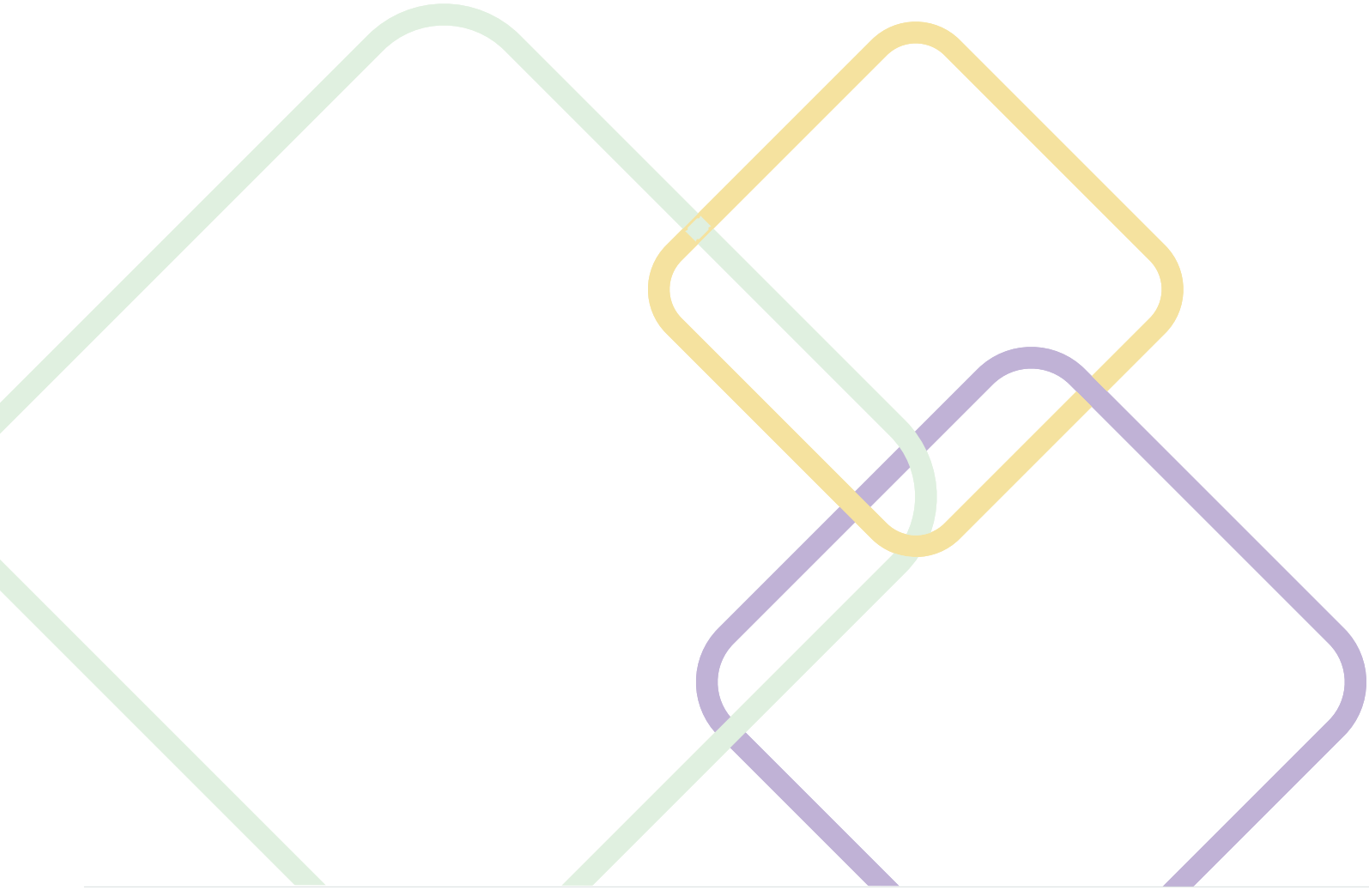
HCSSPs should not use pharmacological agents as a treatment for social isolation and loneliness in older adults. Medication may be indicated if there is an underlying mental disorder or physical illness.

GRADE: Evidence: Low; Strength: Strong

Recommendation #17 – Reassessment

HCSSPs should take an individualized approach to the follow-up of social isolation and loneliness. We recommend HCSSPs reassess intervention efficacy and adherence, with a preference towards short-term follow-up.

Consensus



Introduction

Social isolation and loneliness is a relatively new social construct, with the initial appearance of words such as "lonely" and "loneliness" originating in the 1800s. Early definitions referred to people and places who were far from neighbours, coupled with a sense of potential danger from being isolated. "Until a century or so ago, almost no one lived alone; now many endure shutdowns and lockdowns on their own. How did modern life get so lonely?" (Lepore, 2020).

Over the past two centuries and up to the present time, there has been a societal evolution with respect to what loneliness and social isolation mean in a modern context. Worsley (2018) notes that "... loneliness has since moved inward – and has become much harder to cure. Because it's taken up residence inside minds, even the minds of people living in bustling cities, it can't always be solved by company. Modern loneliness isn't just about being physically removed from other people. Instead, it's an emotional state of feeling apart from others – without necessarily being so."

There is growing recognition of the significant health impacts of social isolation and loneliness, particularly among older adults. Even prior to the COVID-19 pandemic and enforced "shuttering in place", a report by the National Seniors Council (2017) emphasized the importance of this issue. Possibly due to the universal experience of the COVID-19 pandemic, the issue of social isolation and loneliness is receiving growing attention from multiple perspectives. The Canadian Longitudinal Study on Aging (CLSA) data showed estimated relative increases in loneliness during the pandemic ranging between 33% and 67% depending on age or gender (Kadowaki and Wister, 2023). Data from studies about the prevalence of social isolation and loneliness vary significantly depending on the methods used. The latest Canadian estimates from the National Institutes on Aging (NIA) 2022 survey of adults over age 50 found that up to 58% have experienced some degree of loneliness and that 41% are at risk of social isolation (NIA, 2023).

Several large reports have been undertaken to raise awareness of social isolation and loneliness. In 2018, the United Kingdom launched a national Campaign to End Loneliness. The 2022 report by Canada's National Institute on Ageing, Understanding Social Isolation and Loneliness among Older Canadians and How to Address It, presents six Canadian policy recommendations to help advance a national and collective approach. In early 2023, the report by the US Surgeon General argues that "Our epidemic of loneliness and isolation has been an underappreciated public health crisis that has harmed individual and societal health. Given the significant health consequences of loneliness and isolation, we must prioritize building social connection the same way we have prioritized other critical public health issues such as tobacco use, obesity, and substance use disorders. Together, we can build a country that's healthier, more resilient, less lonely, and more connected" (U.S. Surgeon General's Office, 2023).

More specifically, there are growing numbers and diversity of voices speaking about the important roles that front-line health and social service professionals might be able to play in addressing this issue. The National Academy of Science, Engineering and Medicine Report on Social Isolation and Loneliness in Older Adults: Opportunities for the Health Care System (2020) discusses the opportunity of enhancing the role of the health care systems in addressing health impacts of social isolation and loneliness in older adults.

Holt-Lunstad and Perissinotto (2023) highlight the importance of social isolation as a "medical issue". They emphasize that older adults often face multiple factors that increase the likelihood of experiencing social isolation and loneliness. They recommend periodic assessment for social isolation and loneliness and including it in health records. This allows clinicians to monitor over time and adjust their responses as needs and circumstances change. They acknowledge that despite knowing the evidence on the health effects of social isolation and loneliness, HCSSPs often struggle with how best to help. They suggest that responding to a patient's/client's social needs can be integrated into clinical care to improve treatment outcomes. Freedman and Nicolle (2020) reinforce this as an opportunity in that family physicians are uniquely positioned to identify and initiate services for lonely and socially isolated older adults.

As a result of the growing global interest and momentum around social isolation and loneliness in older adults as a serious health issue, and supported by an anonymous foundation, the CCSMH initiated a two-year project to research and develop the Canadian Clinical Guidelines on Social Isolation and Loneliness in Older Adults. This work on social isolation and loneliness in older adults builds on CCSMH's background and experience in developing clinical guidelines on a variety of mental health topics for older adults including anxiety, depression, mental health in long-term care, substance use and addiction and suicide risk & prevention (CCSMH).

An initial literature review for this project highlighted that there were no existing clinical guidelines available for social isolation and loneliness in older adults. The majority of the publications identified the limited evidence in this area and recommended further research to build the body of knowledge around clinical practices. The lack of existing clinical guidelines may reflect the complexity of this issue and the fact that social isolation and loneliness are not medical diagnoses.

The present guidelines are intended to highlight what is currently known, including grey literature and promising practices. It is acknowledged that this subject is highly complex and there are a growing number of organizations working in this area. Within this context, the recommendations contained within the guidelines are intended to support the diversity of health care and social

service professionals in their critical roles supporting the unique individual health needs and interests of older adults.

These guidelines also recognize that HCSSPs are part of complex and multi-faceted health and community systems as well as society. The results of a national survey of HCSSPs in early 2023, followed by a national survey of over 2,000 older adults later that year, reinforced that to successfully bring these guidelines to life, there must be a patient- or client-centered approach. This includes empowering older adults with an understanding of how they can prevent loneliness and be socially connected, working collaboratively with clinicians, care partners, family and community.

Guiding Principles

The following Guiding Principles were developed by the Working Group at the beginning of the project to serve as "touchstones" to which we aspired during the development of the clinical guidelines:

1. Engaging and integrating the voices and experiences of health and social service providers
2. Engaging and integrating the voices and experiences of older adults
3. Recognizing the importance of culturally responsive processes, linguistic diversity and the use of language/words that reflect the diversity of the audiences for these guidelines
4. Integrating evidence from academic and grey literature, including promising practices
5. Relating to the individual within their biological, psychological and social context
6. Building on existing knowledge and identifying knowledge gaps
7. Recognizing and accounting for the complexity of patients/clients, health and social situations, diversity of settings in which people practice and the availability of resources
8. Recognizing work that incorporates different methodologies
9. Prioritizing high-risk and/or marginalized groups
10. Utilizing a strengths-based approach can help identify an individual's positive attributes and protective factors while avoiding stigmatization that can result from deficit language, ageism, images of dependency, etc.

Methodology

The methodology and associated processes for the development of these guidelines included:

a. A group of clinical and academic leaders were recruited from across Canada to engage as volunteer members of a Guidelines Working Group, and to carry out roles that included research, writing and providing professional insights and experience to the overall guidelines document. Details regarding any conflicts of interest were obtained.

b. Guiding principles were established to serve as touchstones for guidelines development.

c. A literature and promising practices review was conducted, including a search of academic and grey literature (Canadian and international). The search focused on tools and interventions, with a specific focus on those relevant to frontline health and social care providers across care settings. The initial search of the academic literature, utilizing a rapid, integrative scoping review process, was limited to systematic reviews between January 2017 and August 2022, written in English or French and pertaining to adults 45 years and older. The initial search produced 1,576 hits. A total of 1,109 documents were initially removed due to duplication and title relevance. The abstracts of the remaining 467 documents were reviewed. This process identified 267 documents not meeting eligibility criteria. A full-text review was conducted on the remaining 200 documents. This resulted in the subsequent removal of another 129 documents, leaving a final total of 71 documents, including 38 review articles. Initially, five focus areas were identified, with the understanding that these may evolve as the literature was explored. These areas included: prevention, screening, assessment, interventions, and monitoring.

d. The Working Group and staff team identified additional supporting research and grey literature and carried out focused literature searches related to individual guideline recommendations. Of note, we were unable to identify any previous clinical guidelines focused on social isolation and/or loneliness.

e. Due to the limited evidence in the literature, an adapted GRADE method was used including the use of a consensus recommendation for a few recommendations that lacked empirical evidence.

f. Two national surveys were designed and implemented, inclusive of Research Ethic approval by Queen's University, to understand the perspectives, experiences and ideas around social isolation and loneliness in older adults. The first survey engaged health and social service providers. More than 350 responses were received. The second survey engaged adults 65 years of age and older. More than 2,000 people responded. Related learnings were incorporated into the guidelines.

g. Clinicians across Canada were engaged through several workshop opportunities for further insights and constructive feedback on the guidelines.

h. An expert review panel was recruited to provide further insights and constructive feedback for clarity and content.

i. The final guidelines recommendations were approved by the Working Group following an interactive process to reach agreement and a subsequent vote.

Prevention

Universal prevention focuses on the general public or a whole population group regardless of risk status. *Selective* prevention targets individuals or subgroups that are at higher risk of developing a disorder than average individuals or subgroups. A third category called *indicated* prevention targets people who have early symptoms. There is limited evidence regarding successful interventions for *universal* prevention of social isolation and loneliness, although there is currently a growing and hopeful emphasis on promoting social connection. In these guidelines, *indicated* prevention approaches are included within the Interventions section. Our recommendations in this section focus on knowledge of risk factors, the need for education and training and the role of HCSSPs as agents of change.

Recommendation #1 – Knowledge of risk factors for social isolation and loneliness in older adults

Health Care and Social Service Professionals (HCSSPs) should have knowledge of major risk factors for social isolation and loneliness to identify older adults who may be socially isolated or lonely, and to anticipate with their patients/clients any possible changes in their life circumstances that could put them at risk of social isolation and loneliness.

GRADE: Evidence: Moderate; Strength: Strong

Numerous risk and protective factors associated with social isolation and loneliness among older adults have been identified in the literature (e.g., NSC, 2014a, 2014b, 2016; De Jong Gierveld et al., 2015; Courtin & Knapp, 2017; Donovan & Blazer, 2022). This research has been accelerated by the deleterious effects of the COVID-19 pandemic exacerbating social isolation and loneliness as a public health issue (Adepoju et al., 2021; Choi et al., 2021; Holt-Lunstad, 2021; Kadowaki & Wister, 2022; Holt-Lunstad & Perissinotto, 2023; Kirkland et al., 2023; Li et al., 2023). Risk and protective factors that are modifiable are of particular interest for the purpose of this report from a health promotion perspective; however, risk attributes are also helpful for the identification of target groups of older adults. It is also noteworthy that there may be bidirectional patterns between risk factors and isolation propensity. Furthermore, it is often the intersectionality or cumulative effects of multiple risk factors that result in greater levels of social isolation and loneliness.

Several social demographic determinants include age, sex, gender, partnership status and living arrangement, especially among older people who are unattached (single, widowed, divorced) and living alone (De Jong Gierveld et al., 2014; NSC, 2014a, 2014b, 2016; Courtin & Knapp, 2017; Choi et al., 2021; Wister & Kadowaki, 2021; Li et al., 2023). Being an older woman has been associated with higher isolation and loneliness in some studies (De Jong Gierveld, 2015; Kirkland et al., 2015; Choi et al., 2021; Kirkland et al., 2023).

Research also shows that social isolation and loneliness are more prevalent among older adults living with low income and poverty, and those with lower education or unstable housing and living arrangements (De Jong Gierveld, 2015; Kirkland et al., 2015; Choi et al., 2021; Kadowaki and Wister, 2022; Li et al., 2023). Research also supports associations demonstrating higher levels of social isolation among those who are racialized (including Indigenous elders, and new immigrants) (NSC, 2014a, 2014b; Kadowaki and Wister, 2022; Georgeou et al., 2023), LGBTQ2+ older adults (NSC 2014a, 2014b; Kneale et al., 2021), and those living in remote/rural environments with poor access to community and home and health services (NSC, 2014a,b, 2016; De Jong Gierveld et al., 2015; Kadowaki et al., 2015; Levasseur et al., 2015, 2017; Courtin & Knapp, 2017; D'cruz & Banerjee, 2020; Losada-Baltar et al., 2021; Kadowaki and Wister, 2022; Kirkland et al., 2023).

Not surprisingly, poor health status, including multiple chronic conditions and low levels of mental health have been demonstrated as risk factors for social isolation and loneliness in many studies both pre- and peri-pandemic (e.g., NSC 2014a, 2014b; De Jong Gierveld et al., 2015; Kirkland et al., 2015; Courtin & Knapp, 2017; Donovan & Blazer, 2022; Kadowaki and Wister, 2022; Kirkland et al., 2023; Li et al., 2023). In addition, health conditions that result in functional limitations in performing daily tasks, such as multimorbidity, are risk factors for social isolation (NSC 2016; Mauvais-Jarvis, 2020; Mitra et al., 2020; Wister and Kadowaki, 2021). Additionally, poor mental health conditions (depression, anxiety, psychoses, etc.) are also risk factors for social isolation (Kirkland et al., 2015; NCS 2014a, 2014b; Robb et al., 2020; Kadowaki and Wister, 2022; Kirkland et al., 2023).

Being a caregiver for an older adult also increases the risk of social isolation and exclusion (Li et al., 2020, 2023), especially for spouses and non-kin (compared to adult children) and those providing intensive care (D'cruz & Banerjee, 2020; Li et al., 2020, 2023).

Research drawn from multiple disciplines also identified protective factors against social isolation and loneliness, including strong support networks, leisure pursuits, and social participation (De Jong Gierveld et al., 2015; Fortier, 2016; Burholt

et al., 2019; Levasseur et al., 2015, 2017; Polenick et al., 2021; Strutt et al., 2021), living with others (Van Tilburg et al., 2020, Polenick et al., 2021) and access to technologies, especially during the pandemic (Ibarra et al., 2021; Strutt et al., 2021).

The recent pandemic increased levels of social isolation and loneliness (Wister and Kadowaki, 2022), and while most risk factors were common pre- and peri-pandemic, some differences can be observed. In terms of pandemic-specific contexts, social isolation and loneliness were associated with experiencing personal losses, such as a death (Van Tilburg et al., 2020), financial strain (Polenick et al., 2021), COVID-19 anxiety or worries (Van Tilburg et al., 2020; Gaeta & Brydges, 2020; Kivi et al., 2021; Polenick et al., 2021), intolerance of uncertainty (Parlapani et al., 2020), caregiving roles and intensity (Li et al., 2020; Wister et al., 2022), and having a family member infected with COVID-19 (Cihan & Gökgöz Durmaz, 2021). Living alone was consistently identified as a risk factor associated with higher rates of loneliness during the pandemic (Emerson, 2020; Fingerman et al., 2020; Choi et al., 2021; Stolz et al., 2021; Strutt et al., 2021; Kirkland et al., 2023; Li et al., 2023).

Recommendation #2 - Education and training for health care and social service professionals

Education regarding social isolation and loneliness in older adults should be part of the curriculum for health care and social service students as well as practicing HCSSPs. Education should include prevention, risk factors, screening, assessment, and interventions, as well as strategies to engage with their patients/clients, care partners and the community.

Consensus

With growing awareness about social isolation and loneliness, and as more HCSSPs focus on interventions towards addressing this issue, appropriate education, training and support is needed (NASEM, 2020). Thompson and Halcomb (2023) discussed the need to understand the physical and mental health impacts, and how clinicians can address this as part of their regular patient/client care. Understanding the risk factors, assessment strategies, morbidity and mortality as well as available interventions and referral strategies is essential (NASEM, 2020).

NASEM (2020) recommends that health care professions have social isolation and loneliness incorporated into their standards and competencies and that schools and colleges for health care and social service professionals should include social isolation and loneliness education and training in their curricula. The U.S. Surgeon General's Advisory on the Healing Effects of Social Connection and Community (U.S. Surgeon General's Office, 2023) makes similar recommendations.

The NASEM report notes that educating users about evidence-based practices (EBPs) is a necessary but not sufficient step to change practice, and didactic education alone does little to change practice behavior. Leathers et al. (2016) note that in-person training in a time-limited workshop format is a common implementation strategy used to provide information about new practices to existing mental health providers. Additionally, post-training support, such as performance feedback, reminders and expert consultations, increases the use of new practices.

Education should also focus on a collaborative team approach. This would include understanding the role of other interdisciplinary members. This training should also include a focus on partnerships with community organizations - what is available in the community and by whom, to ensure a full range of services and care. HCSSPs working with socially isolated or lonely older adults should also consider training in cultural safety (Centre for Effective Practice, 2023).

Recommendation #3 - Health care and social service professionals as agents of change

HCSSPs should use their role, as agents of change, to help inform and educate patients/clients and the general public about the association between social isolation and loneliness and poor mental and physical health and to promote social connection.

Consensus

As people age, often their number of visits to health care professionals increase, particularly if they have chronic conditions. HCSSPs often become a point of contact for older adults and are therefore well positioned to reach out to older adults who are socially isolated and/or lonely during their visits. Clinicians have often developed a trusting relationship with patients/clients through frequent visits, which provides an opportunity for clinicians to educate patients/clients (Thompson & Halcomb, 2023). Holt-Lunstad & Perissinotto (2023) introduced the EAR framework – Educate, Assess and Respond – for addressing social isolation and loneliness. They emphasized the importance of educating patients/clients and how having education integrated into patient/client care can assist with taking appropriate actions to reduce the risk.

The 2023 U.S. Surgeon General's Advisory on the Healing Effects of Social Connection and Community report on loneliness and isolation states "we must also create systems that enable and incentivize health care providers to educate patients as part of preventative care, assess for social disconnection, and respond to patient's health-related social needs." It also suggests public education programs and awareness campaigns developed and lead by health care clinicians (U.S. Surgeon General's Office, 2023).

Table 1. Risk Factors and Groups Associated with Social Isolation and Loneliness

a.	**Advanced age** (NSC, 2014a, 2014b; Kadowaki & Wister, 2023; Kirkland et al., 2023)
b.	**Being female** (De Jong Gierveld, 2015; Kirkland et al., 2015; Choi et al., 2021; Kirkland et al., 2023)
c.	**Race/Ethnicity/Indigenous/Culture** (NSC, 2014a, 2014b; Kadowaki and Wister, 2023; Georgeou et al., 2023)
d.	**Living alone** (De Jong Gierveld, 2015; Kirkland et al., 2015; Choi et al., 2021; Kadowaki and Wister, 2023; Li et al., 2023)
e.	**Widowhood/Divorce** (NSC 2014a, 2014b; De Jong Gierveld, 2015; Kirkland et al., 2015; Kadowaki and Wister, 2023; Kirkland et al., 2023)
f.	**Low income, poverty or education** (De Jong Gierveld, 2015; Kirkland et al., 2015; Choi et al., 2021; Kadowaki and Wister, 2023; Kirkland et al., 2023; Li et al., 2023)
g.	**Lack of affordable housing and shelter,** poor neighborhood conditions, loss of community, urban, and home care options (NSC 2014a, 2014b, 2016; Kadowaki et al., 2015; Levasseur et al., 2015; Kadowaki and Wister, 2023; Kirkland et al., 2023)
h.	**Episodic or lifelong physical health issues,** including Alzheimer's disease or other dementias, frailty including loss of mobility, sensory loss (hearing and vision), multimorbidity (NSC 2014a, 2014b; Kirkland et al., 2015; Kadowaki and Wister, 2023; Kirkland et al., 2023; Li et al., 2023)
i.	**Episodic or lifelong mental health issues** including depression, pandemic or other forms of anxiety, psychosis (Kirkland et al., 2015; NCS 2014a, 2014b; Robb et al., 2020; Kadowaki and Wister, 2023; Kirkland et al., 2023)
j.	**Poor health behaviours,** including smoking, heavy drinking, sedentary lifestyle, obesity/poor nutrition (Kirkland et al., 2023)
k.	**Small or shrinking social network** (NSC 2014a, 2014b; De Jong Gierveld, 2015; Kirkland et al., 2015; Kadowaki and Wister, 2023; Kirkland et al., 2023; Li et al., 2023)
l.	**Challenges relating to technology use** such as digital divide/literacy, access to WiFi, costs, literacy, comfort (Cosco et al., 2021; Wister et al., 2022; Kadowaki and Wister, 2023)
m.	**2SLGBTQIA+** older adults (NSC 2014a, 2014b; Kneale et al., 2021)
n.	**Caregivers** (especially spouses and non-kin) with a heavy intensity (Li et al. 2020, 2023)

Screening & Assessment

The Screening & Assessment section includes recommendations for targeted screening of older adults at risk, the use of evidence-based screening tools and the need for documentation in health records. It concludes with the recommendation for a comprehensive assessment utilizing a biopsychosocial approach.

Recommendation #4 - Targeted screening for older adults at risk

HCSSPs should use targeted screening for those older adults who have risk factors for social isolation and loneliness.

Consensus

There is insufficient evidence to recommend universal systematic screening for social isolation and loneliness in all older adults. The Canadian Task Force on Preventive Health and the US Preventive Services Task Force review evidence and develop guidelines that support primary care providers in delivering preventive health care in North America. These task forces have not reviewed screening for social isolation and loneliness.

The National Academies of Science, Engineering and Medicine (2020) report concluded that "due to the paucity of literature on successful interventions for specific populations, it is difficult to conclude that formal screening protocols for social isolation and loneliness in the general population could reduce prevalence or negative health consequences of social isolation and loneliness". The scoping review for this project did not identify any studies that assessed the cost-effectiveness (quality-adjusted life years gained) of screening or interventions for social isolation and loneliness. As an alternative to universal screening, we recommend targeted screening of individuals with risk factors.

Structural barriers in primary care (such as administrative and clinical workloads, multiple competing responsibilities) may contribute to underscreening or under recognition of social isolation and loneliness rather than a lack of measurement tools or knowledge about the importance of these problems (Galvez-Hernandez et al., 2022). Efforts should be made to address these barriers through alternative models of primary care delivery.

Recommendation #5 - Screening tools

When screening patients/clients, HCSSPs should use evidence-based screening tools to identify patients/clients who are socially isolated and/or lonely, to assess the severity of the problem, and to use in routine follow-up to determine whether the patient's/client's social situation has changed and whether interventions are effective.

GRADE: Evidence: Moderate; Strength: Strong

Because of the impact that being socially disconnected can have on a patient's/client's health and well-being, it is important for clinicians to regularly measure a patient's/client's social situation. Our hope is that clinicians will routinely consider the possibility that their patient/client is lonely or isolated. The use of screening tools (see below) can help indicate the severity of the problem. Routine follow-up and measurement over time can help to determine whether the problem is chronic or transient and whether interventions are working to improve a patient's/client's social connection and reduce their social isolation and loneliness. It is important for a clinician to use validated and reliable tools and not to assume that someone is or is not lonely or socially isolated (see Perissinotto et al., 2019).

HCSSPs need to consider both social isolation and loneliness in their patients/clients because social isolation and loneliness are related, but distinct. Loneliness can be experienced even in the context of being surrounded by people or having a large network of family and friends. Conversely, someone with few social relationships may not be lonely if they feel satisfied with their relationships.

Due to the stigma associated with loneliness, some patients/clients may be less open to discussing loneliness or being labeled as 'lonely' (e.g., Galvez-Hernandez et al., 2022). And some socially isolated individuals may not perceive their social isolation as a problem, particularly if they are not also feeling lonely (Newall & Menec, 2019a). Nonetheless, regularly checking in about social factors using screening tools is important and may be an opportunity to discuss the importance of social connection to health, and to provide information on available services so that patients/clients have the choice to use them.

Screening Tools

Screening tools have been tested extensively for use in a research context; but there has been less research on the use of screening tools in a clinical setting. However, screening and routine assessment with measurement scales is still recommended as this provides a reliable and valid way to assess a person's social situation. Currently, the limited research suggests that patients/clients are not typically screened for social isolation or loneliness before being referred to interventions which may lead to patient/client confusion about the reason for referral or to interventions that do not meet the patient's/client's needs (Galvez-Hernandez et al., 2022). The US Institute of Medicine Committee recommended the use of the Berkman-Syme index (structural social isolation index) in electronic medical records (Institute of Medicine, 2014). Recently, Wong et al. (2022) provided practical recommendations in using the De Jong Gierveld Loneliness Scale to assess loneliness in long-term care settings. Research to develop and test tools in clinical settings is on-going (e.g., Galvez-Hernandez et al., 2022; Newall, Menec, & Rose, 2022; Perissinotto et al., 2019). Here we review some promising screening tools that clinicians can use. Because most screening tools measure either social isolation or loneliness (not both), we discuss them separately.

Measuring Loneliness

Loneliness measures typically tap into:

- Emotional loneliness (e.g., lack of emotional closeness)
- Social loneliness (e.g., perceived lack of people around)

In their 2015 report, the UK Campaign to End Loneliness described common loneliness screening tools. Here we highlight four (see Table 2). The first is a single question from the CES-D depression scale. A benefit of a single-item measure is that it is short and direct. However, due to potential stigma, some patients/clients may not feel as comfortable discussing their loneliness. Depending on the situation and rapport with the patient/client, HCSSPs may want to consider using scales that measure loneliness more indirectly. The three-item UCLA loneliness scale (Hughes et al., 2004) and the six-item De Jong Gierveld Loneliness Scale (De Jong Gierveld & Van Tilburg, 2006) have both been used extensively in research with older adults (Table 2).

Measuring Social Isolation

Social isolation tools typically tap into structural and/or functional features of relationships:

- Low social contact
- Low social participation (e.g., number of social activities)
- Living alone
- Low emotional support (e.g., confidant)
- Low tangible support (e.g., emergency contact)

In their 2023 report, Newall & Menec highlighted common measures of social isolation. Here we highlight three (see Table 2 below), including Targeting Isolation's CARED tool which was developed for health and social service professionals to quickly determine if a person is socially isolated/lonely and should be referred to services. The Lubben Social Isolation Scale (Lubben et al., 2006) and the Berkman-Syme (1979) type structural social isolation scales (e.g., Menec et al., 2019; Newall & Menec, 2019b; Steptoe et al., 2013) have been used extensively in the research literature (Table 2).

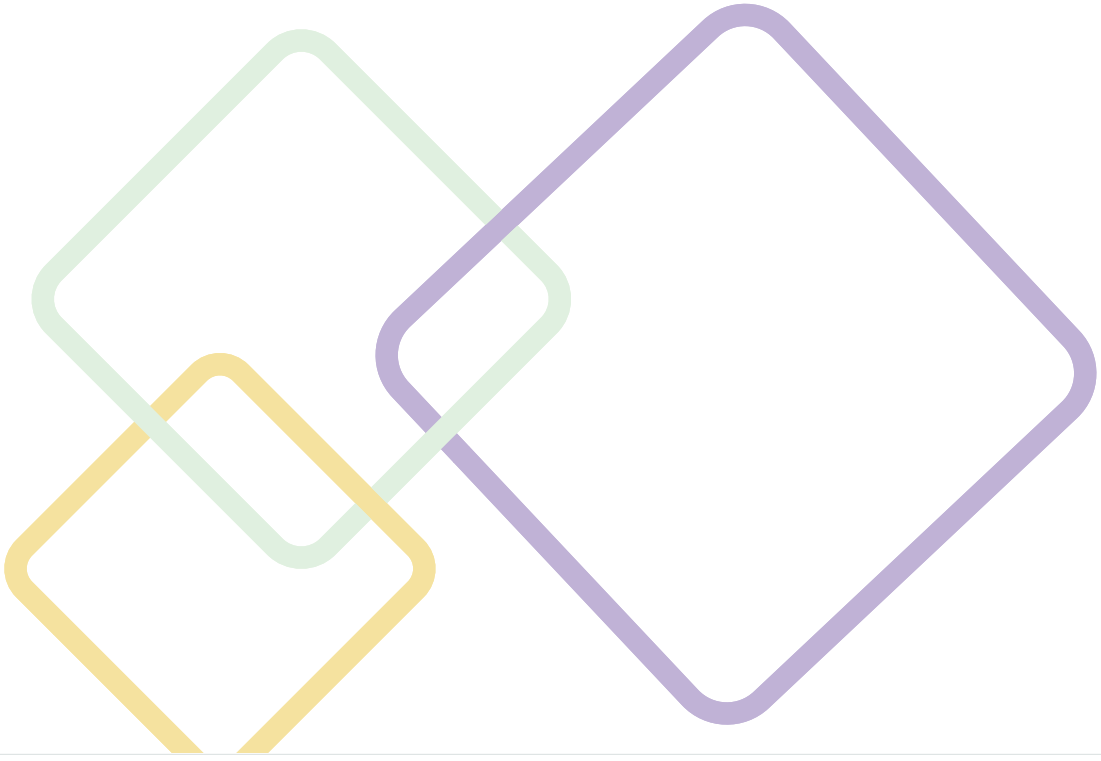


Table 2. Summary of Loneliness and Social Isolation Measurement Tools

Scale	Question(s)	Response Options	Scoring
Single-Item Loneliness (Radloff, 1977)	During the past week, how often have you felt lonely?	*Rarely or none of the time (e.g., less than 1 day)* *Sometimes or a little of the time (e.g., 1-2 days)* *Often or a moderate amount of time (e.g., 3-4 days)* *Almost all of the time (e.g., 5-7 days)*	Not lonely = rarely/none Lonely = sometimes or greater
UCLA Loneliness Scale (Hughes et al., 2004)	How often do you feel that you lack companionship? How often do you feel left out? How often do you feel isolated from others?	*Hardly ever = 1* *Some of the time = 2* *Often = 3*	Total scores can range from 1-9. Higher scores = higher loneliness. Scores between 6-9 typically classified as lonely.
UK Campaign to End Loneliness Scale (UK Campaign to End Loneliness, 2015)	I am content with my friendships and relationships I have enough people I feel comfortable asking for help at any time My relationships are as satisfying as I would want them to be	*Strongly disagree = 4* *Disagree = 3* *Neutral = 2* *Agree = 1* *Strongly agree = 0*	Total scores range from 0-12. Scores of 10-12 indicating most intense level of loneliness.
De Jong-Gierveld Loneliness Scale (De Jong Gierveld and Van Tilburg, 2006)	Do you experience a general sense of emptiness? Yes = 1; No = 0 Do you miss having people around? Yes = 1; No = 0 Do you often feel rejected? Yes = 1; No = 0 *Are there plenty of people that you can rely on when you have problems? Yes = 0*; No = 1 *Are there many people that you trust completely? Yes = 0*; No = 1 *Are there enough people that you feel close to? Yes = 0*; No = 1	*Yes = 1* *No = 0* ** indicates reverse coded so that* *Yes = 0* *No = 1*	Total scores range from 0-6. Higher scores = higher loneliness. Scores of 5-6 typically classified as "lonely."

Scale	Question(s)	Response Options	Scoring
CARED **Social Isolation and Loneliness Referral Tool** (Newall & Menec, 2023)	C = Connection Is the person lonely? A = Activities Do they participate in few social activities? (less than 2/month; and does not work) R = Relationships Do they rarely see their relatives, friends, neighbours, etc.? (less than 1/month) E = Emergency contact Do they lack an emergency contact? D = Dwelling Do they live alone and/or feel unsafe in their dwelling?	*Yes = 1* *No = 0*	Total scores range from 0-5. Higher scores = higher social isolation and loneliness. 0 = not at risk 1-2 = lower risk but check in again 3-5 = socially isolated
Lubben Social Isolation Scale (Lubben et al., 2006)	How many relatives (including partner) do you see or hear from at least once a month? How many relatives (including partner) do you feel close to, such that you could call on them for help? How many relatives (including partner) do you feel at ease with that you can talk to about private matters? How many friends do you see or hear from at least once a month? How many friends do you feel close to, such that you could call on them for help? How many friends do you feel at ease with that you can talk to about private matters?	*None = 0* *One = 1* *Two = 2* *Three or four = 3* *Five through eight = 4* *Nine or more = 5*	Total scores range from 0-30. Higher scores = lower social isolation. Scores between 0-11 typically classified as socially isolated.
Structural Social Isolation Scale (Menec et al., 2019; Newall and Menec 2019b; Steptoe et al., 2013)	Five indicators: Not living with others Less than monthly contact with children Less than monthly contact with relatives Less than monthly contact with friends or neighbours Does not work and participates in less than 2 social activities per month	*Yes = 1* *No = 0*	Scores can range from 0-5. Higher scores = higher social isolation. Scores of 3-5 typically scored as socially isolated.

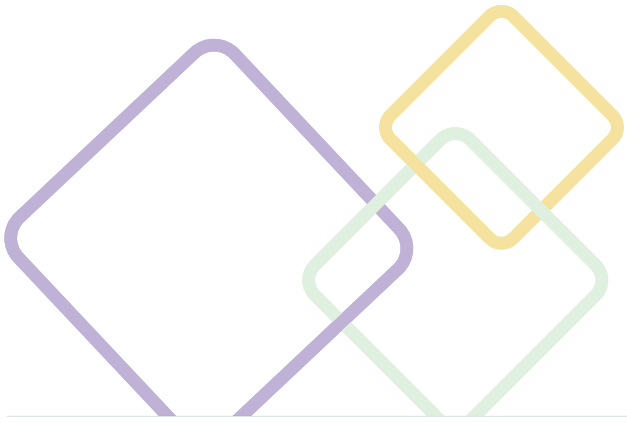
Selecting an Appropriate Screening Tool

Different measures are designed to assess different elements of social (dis)connection. At this juncture, there is not one recommended tool for clinical use. The CARED tool is the only measure which assesses both loneliness and social isolation. Importantly, selecting a tool can depend on which features are expected to change over time with interventions (e.g., increasing social activities, developing an emergency plan, reducing loneliness). Discussing these expectations with your patient/client can help guide interventions.

Stigma

Barreto et al. (2022) in their review of stigma associated with loneliness note that people who feel lonely are often perceived to be socially inept, poorly adjusted, unlikeable and generally incompetent. They also suggest that feelings of loneliness can be internalized and reflected on in similarly negative ways. Both internal and external negative attitudes and assumptions about people who are lonely can have a major impact on that person's quality of life and can leave a person feeling shame and embarrassment. This can both prevent people from getting help and prevent clinicians from recognizing that help is needed. Because of this, conversations about feelings of loneliness and experiences of social isolation must employ a non-judgmental and non-ageist approach that highlights the experiences and values of the individual. Stigma and stereotyping can be seen in action when assumptions are made, whether consciously or not, about the level of care that an older person is entitled to, the value of an older life, or the reasons that a person is living life the way that they are. Stigma can be societal or self-imposed. It is at play when symptoms of loneliness and/or isolation are assumed to be nothing more than symptoms of getting old.

HCSSPs must challenge themselves and each other to overcome assumptions and stereotypes to ensure that they are providing the best possible care for their patients/clients. Stigma can be reduced by choosing words carefully, and being open, willing and able to initiate sometimes difficult conversations about loneliness and other sometimes uncomfortable topics with older patients/clients. The stigma of loneliness is problematic because it can (1) worsen the experience of being lonely and (2) make it harder to reach out to seek help, or to reconnect (Barreto et al., 2022).



Recommendation #6 – Health Records

When social isolation and loneliness is identified in older adults, it should be documented in the health record like other medical conditions and risk factors. Efforts should be made to collect data on social isolation and loneliness as important social determinants of health. Loneliness and social isolation may be considered "psychosocial vital signs" given their impact on health.

Consensus

When identified, social isolation and loneliness in older adults should be documented in a central location within the health record like other medical conditions and risk factors. Social isolation and loneliness in older adults may be considered "psychosocial vital signs" given their impact on health. There is increasing recognition of the importance of documenting non-medical factors that influence health outcomes (social determinants of health) in the patient/client record. The social determinants of health include social support in addition to income, early childhood development, education, employment, housing (World Health Organization, 2003). Social isolation is a potentially modifiable social determinant of health. In 2014, the Institute of Medicine (IOM) convened a multidisciplinary team to establish an evidence-based consensus on a psychosocial "vital sign" for inclusion in Electronic Health Records (EHR). The IOM identified "social connections and social isolation" as a crucial domain for inclusion, along with other sociodemographic, psychosocial and health behaviours such as race and ethnicity, education, depression, physical activity, tobacco use, food and housing insecurity (Institute of Medicine, 2014). The NASEM report (2020) on social isolation and loneliness in older adults also endorsed the recommendation of previous National Academies reports that social isolation should be included in the EHR.

Despite the fact that social isolation and loneliness are important determinants of health, they are rarely recorded in the EHR in a standard location or coded in a consistent way. Identification within the EHR can highlight these conditions as risk factors for poor health, support coordinated action to improve patient/client and individual health (Matthews et al., 2016), identify health inequities (Upstream Lab) and can stimulate the development and evaluation of new programs and research. HCSSPs should have one standard location to document social isolation and loneliness, much like they do with other medical conditions or common risk factors such as smoking or alcohol (i.e., the cumulative patient/client profile in a family medicine medical record). Despite the interest in capturing social determinants of health in electronic health records, such information is typically contained in unstructured clinical notes. Future strategies might involve identifying individuals at risk using machine-learning natural language processing algorithms that autonomously explore social isolation or loneliness keywords in electronic health records (Galvez-Hernadez et al., 2022; Zhu et al., 2019).

Recommendation #7 – Assessment

A thorough clinical assessment with a patient/client who is socially isolated and/or lonely should aim to explore the possible causes and identify any underlying health conditions that may be contributing factors. Other causes that may be contributing should also be identified adopting a biopsychosocial approach. A comprehensive assessment can guide the development of an appropriate management plan. The assessment may vary according to the health care and social service professional's scope of practice.

Key components in the assessment may include:

a. Medical history
b. Social history
c. Mental health
d. Cognition
e. Screening for substance use
f. Environment and finances
g. Recent life events
h. Lifestyle factors
i. Insight and motivation for change

Consensus

The following provides further detail regarding each of the elements of assessment:

a. Medical history
This should include ongoing illnesses that may be impacting the person's ability to communicate, travel and function independently. Problems with hearing or vision should be identified. Chronic health conditions may impact a person's ability to socialize or engage in activities.

b. Social history
A social history should be taken to understand the patient's/client's cultural background, previous social exclusion and social support network, including family, friends, and community involvement. It would also include an understanding of the person's hobbies and interests.

c. Mental health
This would include an assessment of current symptoms of anxiety, depression or psychosis. It is also important to obtain a past history of mood, anxiety or other mental disorders. If the person is currently depressed, a suicide risk assessment should be included. It is also advisable to consider the person's personality style. Some individuals may be very introverted and have a lifelong tendency to avoid intimate social relationships or have other personality traits that can impact their ability to have meaningful satisfying relationships.

d. Cognition
Evaluate the person's cognitive functioning and the impact of any impairment. This could include activities of daily living, as well as the ability to initiate social interactions, plan and problem-solve.

e. Screening for substance use
Substance use disorders and misuse can contribute to loneliness and social isolation.

f. Environment and finances
It is important to understand the person's living situation, including their access to transportation and the physical accessibility of their home. HCSSPs should assess the ability of the patient/client to afford basic necessities.

g. Recent life events
Significant life changes, e.g., the loss of family members or friends, retirement or recent moves should be evaluated.

h. Lifestyle factors
Lifestyle including lack of physical activity/exercise, poor diet and sleep can also contribute to loneliness and social isolation.

i. Insight and motivation to change
It is important to understand the degree to which the person sees their isolation and/or loneliness as a problem. It is also important to discuss options for intervention with the person and to assess whether they are motivated to follow the recommendations.

As outlined above, many factors can contribute to social isolation and loneliness. We therefore recommend a comprehensive assessment when possible, recognizing that scope of practice is wide-ranging.

The National Academies of Sciences, Engineering, and Medicine (2020) report on opportunities for the health care system to improve social isolation and loneliness among older adults recommends:

"For older adults who are currently socially isolated or lonely, health care providers should attempt to determine the underlying causes and use evidence-based practices tailored to address those causes (e.g., hearing loss, mobility limitations)."

The NASEM report also notes that more research related to assessment is needed to evaluate the ethical implications and unintended consequences of assessments as well as to determine specific implementation parameters, including:

- who should receive the assessment;
- who should conduct the assessment;
- the ideal frequency of assessment for different subpopulations; and
- the appropriate interventions, referrals, and follow-up care.

Interventions

The Interventions section begins with a description of a recommended overarching approach. It highlights the need to take an individualized approach, with shared decision-making, recognizing the diversity within older adult populations. We also emphasize the need to treat any underlying medical or mental health conditions that may be contributing to social isolation and loneliness. We then make recommendations regarding a variety of potential interventions that the clinician should consider.

Recommendation #8 - Intervention: an overall approach

HCSSPs should apply several principles to help older patients/clients who are socially isolated and/or lonely including:

a. **Ensure initially or concurrently that treatment is provided for any underlying medical or mental health conditions identified in their assessment;**

b. **Take an individualized approach, with shared decision-making;**

c. **Identify individuals' interests to determine interventions that may be the best fit, while appraising the individual and environmental resources available; and**

d. **Recognize the diversity within older adult populations and together with their patient/client consider the incorporation of their culture and lived experience.**

HCSSPs should consider the following possible interventions for older adults: social prescribing, social activity, physical activity, psychological therapies, animal assisted therapies and animal ownership, leisure skill development and leisure activities, and technology. Pharmacological therapy is not recommended except for treatment of an underlying disorder. It should be noted that there is some overlap between these intervention categories.

Consensus

A variety of interventions for social isolation and loneliness have been studied at multiple levels of health care. This includes interventions that are implemented in a group or individual setting, as well as interventions applied to community settings and public health systems (Elder & Retrum, 2012; NASEM, 2020). Given the heterogeneous nature of social isolation and loneliness, the overall level of evidence remains low, but management and intervention are essential.

As such, it is imperative that HCSSPs explore the individual, social and systemic factors that contribute to loneliness and social isolation in their management and interventions. These are described in the Risk Factors and Assessment sections, but in summary, may include the following:

- Individual factors: concurrent mental or physical comorbidity, sedentary lifestyle, mobility impairments, sensory deficits
- Social factors: social networks, living setting, income
- Systemic/structural factors: availability of local services, including language, gender and cultural concordance, access to transportation; systematic inequities for disadvantaged populations (Indigenous, racialized, 2SLGBTQIA+, low income, functional disability).

Interventions based on the findings of the assessment have been listed in Table 3. Despite the absence of studies assessing the outcomes of many of these specific approaches in reducing loneliness and social isolation, the potential impact on quality of life and opportunity for social engagement cannot be understated (Freedman & Nicolle, 2020).

Several resources have been developed that can be used to assess contributing factors and management strategies, such as the CARED (Connections, Activities, Relationships, Emergency contact, Dwelling) tool which can assist in determining the need for referral (Targeting Isolation, 2023).

One critical issue is that of motivation to be socially connected and prevent loneliness (Kimberlee, 2016). Despite the best efforts to assist patients/clients in identifying potential opportunities to combat isolation and loneliness, unless they are motivated to make changes, outcomes may not be optimal. There are strategies that can assist patients/clients in setting their own goals, which ideally are SMART (Specific, Measurable, Achievable, Realistic and Time Related) goals. The Fountain of Health program provides tools to help clinicians and their patients/clients make positive lifestyle changes (*www.fountainofhealth.ca*).

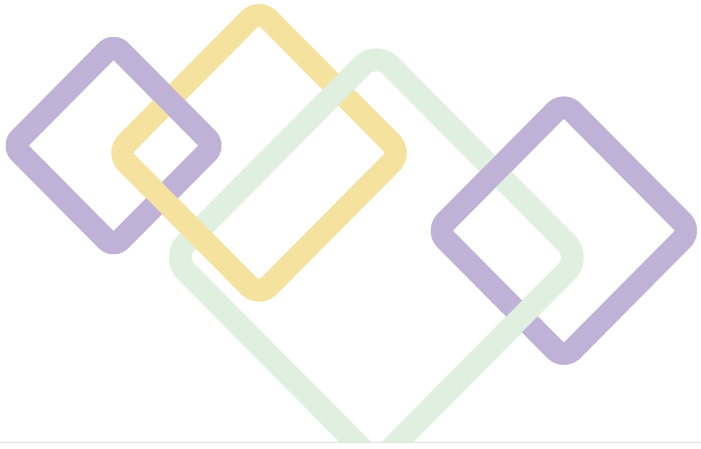


Table 3. Possible Interventions Based on Findings of the Clinical Assessment for Social Isolation and Loneliness

Assessment Component	Identified Conditions	Intervention Approach
Medical history	Sensory or communication impairment	Visual and hearing assessment by a registered health care provider as required (i.e., optometrist, ophthalmologist, audiologist, etc.) • Voice amplifying devices (i.e., hearing aid or Pocket Talker) • Visual interventions (eyeglasses, surgery, etc.) Speech and language assessment to identify different communication strategies
	Chronic health conditions or mobility impairment	Management of chronic medical conditions Mobility devices (i.e., referral to OT or PT for gait aid)
	Cognitive impairment	Referral to local resources as indicated
Social history and lifestyle	Social networks and hobbies	Social prescribing Leisure skill development Interventions based on interest
	Income/food insecurity	Free and/or low-cost local resources Tax and/or government benefits
	Physical activity/exercise	Encourage physical activity
	Transportation and environmental barriers	Affordable transportation options Environmental accessibility (e.g., situations of handicap)
Mental health	Psychiatric condition (e.g., mood disorder)	Treat underlying psychiatric condition Cognitive behavioural interventions or other psychological therapy as indicated
	Recent significant life events	Management of bereavement, grief, and adjustment disorder Cognitive behavioural interventions as indicated

Recommendation #9 - Social prescribing

a. Social prescribing should be considered to manage or alleviate social isolation and loneliness. This can include, for instance, connecting individual clients or patients/clients with suitable organizations, programming or community resources that provide opportunities for social interaction and/or self-care. Social prescribing may also address the social determinants of health which are often key to improving health outcomes that may be impacted by social isolation or loneliness.

b. HCSSPs should consider a stepped-care approach to social prescribing, starting with the least intensive interventions, like other mental health interventions. Regular review through a stepped-care approach can help determine whether other interventions are necessary, or whether recipients have been able to build or expand their capacity.

c. Link workers or system navigators can play an important role in assessing an individual's needs and connecting them with suitable organizations to build or foster greater social connection and reduce loneliness. In this way, they may support clinicians who may not have the same knowledge of resources.

d. Health and social service organizations should consider developing social prescribing strategies or teams, including designating a core team of staff to support implementing the strategy.

e. Similarly, community organizations should consider developing relationships or partnerships with clinical organizations to share relevant social prescribing resources.

GRADE: Evidence: Moderate; Strength: Strong

To help address social isolation and loneliness among older adults, HCSSPs may consider social prescribing: connecting patients/clients with suitable organizations, resources or community activities. These can include arts or recreational activities, physical activities, or social interaction activities, either for individuals or groups. In essence, providers provide patients/clients with a 'prescription' to connect with a group or resource, or to undertake a specific activity, with the goal of building or fostering greater social connections or reducing loneliness (Alliance for Healthier Communities, 2019). Pescheny et al. (2018) outline six models of social prescribing based on the type of staff involved in the program. A stepped-care approach also facilitates assessing patient/client resilience, allowing for changes in interventions (Care Services Improvement Partnership; Richards et al., 2012).

There is evidence to support social prescribing as part of a *multi-modal intervention* that combines psychological interventions with community-based strategies to manage social isolation and loneliness (Coughtrey et al., 2020). There is also evidence that social prescribing may help to support health issues related to social determinants of health (through food security, housing, poverty-reduction and public health programming) (Sabey et al., 2022). There is evidence to support the use of *link workers or system navigators* in assessing individuals and providing connections to suitable organizations or community supports, and that providers, such as physicians, should connect patients/clients with link workers for specific social prescribing interventions (Bild & Panchana, 2022). This may also require additional financial and human resources, or reorganizing workplaces, staff responsibilities etc. HCSSPs may consider reviewing the Centre for Effective Practice (2023) framework for incorporating social prescribing into their practice.

Recommendation #10 - Social activity

HCSSPs should support, encourage and empower individuals to engage at their optimal level of activity.

GRADE: Evidence: Moderate; Strength: Strong

Characteristics of effective services and interventions involving social activities include fostering empowerment of older adults, preserving their autonomy, supporting the development of significant relationships and activities, being personalized and lasting at least six months (Raymond et al., 2013). HCSSPs should explore which social activities their patient/client has done previously, is doing or could be doing according to personal and environmental resources and their interests.

According to the systematic review of Manjunath and colleagues (2021), studies of the highest quality of group and person-centered interventions to reduce social isolation have found that social isolation experienced by older adults decreased after the intervention, and this effect continued in follow-up studies. Volunteering-based interventions also seem to alleviate isolation; however, more follow-up studies are needed to determine long-term efficacy. Based on the systematic review of Poscia and collaborators (2018), new technologies represent a promising tool for tackling social isolation and loneliness among the older individuals along with community-engaged arts, which brought positive results especially among sensory-impaired populations. Intergenerational programs have been utilized with promising outcomes for older adults, but more research is needed to understand optimal approaches (Galbraith et al., 2015; Whear et al., 2023).

A synthesis of the literature by Salway et al. (2020) supports that befriending initiatives have led to improvements in dimensions of loneliness, increased self-worth among befrienders, and decreased negative ties and interactions (with family members or professionals). As for increasing contact with others, more evidence was found in support of social facilitation interventions which strengthen relationships between peers compared with befriending interventions, which focus on actively making new friends. The former category involves facilitating interaction between people of the network, already known, whereas the latter focuses on actively making new friendships. The stronger evidence for social facilitation found in this review suggests that providing a means for isolated or lonely people to interact with their existing social circles may be more beneficial than making new friends. However, as there were few studies on befriending interventions identified, these findings should be interpreted with caution.

There is a limited number of studies on effects, including cost-effectiveness and implementation (execution, professional practice including tasks, roles, and skills) of interventions involving social activities, limiting the knowledge on practicality (required resources, modifications in response to resource constraints), acceptability (facilitators, barriers and practitioners' recommendations), and feasibility (how/when and with whom). To our knowledge, no study discussed harms from social activity, but these adverse outcomes might be low when activities are adapted to the participant and supervised by a professional.

Recommendation #11 – Physical activity

HCSSPs should encourage their patients/clients to engage in group and/or individual physical activity as a means to reduce social isolation and loneliness and to improve their overall health. There is insufficient data to recommend a specific form of physical activity. HCSSPs are encouraged to have conversations with their patients/clients regarding opportunities for physical activity and active lifestyles.

GRADE: Evidence: Moderate; Strength: Strong

Shvedko and colleagues (2018) included 38 studies in their systematic review, and 23 randomized control trials in their meta-analysis of physical activity interventions in community dwelling older adults, examining outcomes of social isolation, loneliness, and social support. Participants to these interventions were compared to a physically inactive group or usual care. Participants' mean age was 51-82, primarily composed of women (67%). Approximately half of the studies had a social interaction component, fourteen used aerobic exercise training, six included resistance training, and others contained components of both (e.g., Tai Chi). Interventions ranged from six weeks to one year, with the majority having a duration of 12 weeks and conducted in a group format. The average frequency was three times per week. While no significant change was found for social support or networks, a small positive effect was observed on social functioning (SMD = 0.30 [95% CI 0.12-0.49], substantial heterogeneity). Meta-analysis of results on loneliness and social isolation was not performed. Sub-group analysis showed a small benefit in social interaction in group but not in individual settings of physical activity (SMD = 0.34 [95% CI 0.10 to 0.59]) (Shvedko et al., 2018) and may underline more importance for group settings.

Several other reviews of varying methodology have discussed the role of physical activity (Freedman & Nicolle, 2020; Hoang et al., 2022; Masi et al., 2011). Hoang and colleagues reported a small effect size for community-based studies conducted on loneliness, social support and social isolation, limited by the number of studies that could be included in the meta-analysis. While the effect size was moderate in long-term care (-0.53 [95% CI, -0.86 to -0.20]), these interventions were multi-modal, and the specific role of exercise/physical activity could not be separated. As such, more research is recommended in long-term care.

It is noted that evidence is strongest for older adults living in the community, and more limited in long-term care settings. While we cannot recommend a specific form of physical activity for social isolation and loneliness, we highlight available Canadian and World Health Organization recommendations on physical activity for older adults for general health and wellbeing (Canadian Society for Exercise Physiology, 2020; World Health Organization, 2022). CSEP recommend a minimum of 150 minutes of moderate-vigorous aerobic physical activity per week, and muscle strengthening at least twice per week, whereas the WHO recommends multicomponent physical activity three or more days per week (Canadian Society for Exercise Physiology, 2020; World Health Organization, 2022). The absence of studies on implementation limits the strength of the recommendation, and little is known about required resources, format, dose, cost effectiveness, acceptability, and feasibility. To our knowledge, no study discussed harms from physical activity, but this might be low in settings where activities can be adapted to the participant and supervised by a professional.

Recommendation #12 - Psychological therapies

Psychological therapies should be considered for some older adults experiencing social isolation and/or loneliness. Psychological therapies include, but are not limited to, cognitive behavioural therapy, social cognitive therapy, reminiscence therapy and mindfulness-based stress reduction. There is greater available evidence for psychological therapies in reducing loneliness compared to social isolation.

GRADE: Evidence: Moderate; Strength: Strong

Five reviews were identified, ranging from narrative review to meta-analysis and meta-synthesis on psychological therapies to reduce loneliness and social isolation in older adults. A review by Coughtrey et al., which included 22 studies, suggested that the strongest evidence was for cognitive behavioural interventions to target different ways of coping (Coughtrey et al., n.d.). All types of studies were included, and almost all interventions were conducted in a group setting. Coughtrey et al. also synthesized cost-effectiveness, recommending the importance of measuring such outcomes in future studies (Coughtrey et al., n.d.). Two reviews examined the use of remotely delivered interventions, one a rapid review of reviews, and the other a narrative review (Boulton et al., 2020; Gorenko et al., 2021). Gorenko et al.'s narrative review specifically considered the use of remotely delivered interventions in the context of COVID-19. Only two studies of psychological therapies (specifically CBT) were included in Gorenko et al.'s study, showing benefit in long-term care. Psychological therapies (reminiscence therapy and CBT/psychotherapy) showed substantial heterogeneity both in community and long-term care settings (Hoang et al., 2022).

Three reviews of interventions to reduce loneliness for participants of all ages were identified (Hickin et al., 2021; Masi et al., 2011; Veronese et al., 2021). Twenty-eight studies were identified in Hickin et al., which found a small-moderate effect size (ES = 0.43 [95% CI 0.18-0.68]). Whether interventions were CBT-based or not CBT-based did not significantly influence the outcome of loneliness ($p = 0.60$). Two studies of mindfulness-based stress reduction were meta-analyzed by Veronese et al., which found a very large effect size (ES = -6.03 [95% CI -9.33 to -2.73]). Masi et al. included studies of social support and social cognitive training, finding small-to-moderate effect sizes across pre-post to randomized controlled studies. Thus, we emphasize that the evidence for psychological interventions to reduce loneliness is stronger than that for social isolation.

There remains a paucity of data on implementation studies. While potentially resource intensive, there are important benefits beyond loneliness and social isolation, including the management of mood symptoms and coping strategies that have important implications on health. Therapies other than CBT such as Interpersonal Therapy (IPT), which has a focus on role transitions, and those mentioned above can be considered, although most evidence was for CBT in group settings. Finally, the duration of typical psychological intervention studies was limited to several weeks to months, and the effects following the intervention period are unknown (Hickin et al., 2021; Hoang et al., 2022). While there is a potential for virtually delivered platforms for psychological therapy, the importance of language, equitable access to technology, and technological literacy cannot be understated.

Recommendation #13 - Animal-assisted therapies and animal ownership

Animal-assisted interventions and pet ownership may be helpful to some individuals although the evidence for this intervention is limited.

GRADE: Evidence: Low; Strength: Strong

We use contemporary definitions of animal-assisted interventions (AAIs), which include all interventions of human-animal interactions (Matchock, 2015). Animal-assisted therapy is defined as the use of animals to "improve physical, social, emotional, or cognitive functioning" and is typically structured (e.g., trained animal handler and clear goals) (American Psychological Association, 2018). Unstructured activities, typically defined as animal-assisted activities, include pet visitation. There is significant heterogeneity in this type of intervention, and we recognize the lack of consensus on the types of animal interventions and use animal-assisted interventions to broadly encompass all forms (Bert et al., 2016). Reviews of animal-assisted interventions have shown improvements in loneliness, social behaviours or social interactions (Abbott et al., 2019; Abdi et al., 2018; Hoang et al., 2022; Gee and Mueller, 2019). However, there are only a small number of randomized studies, with an overall high risk of bias. Human-animal interactions may also include pet ownership and other forms of human-animal companionship, and although recognized epidemiologically, such studies are limited (Gee & Mueller, 2019; Hui Gan et al., 2020; Kretzler et al., 2022). There is also a high variability in studies of pet ownership, which is subject to the methodological limitations of observational studies.

We summarize recent reviews of animal-assisted interventions on loneliness and social isolation below. Hoang et al. (2022) showed a large effect size in long-term care (ES = -1.05 [95% CI, -2.93 to 0.84; $I2 = 95\%$; $p<0.001$]), which included primarily living animals. In a systematic review by Gee and Mueller, the authors report that most of the 32 studies of AAIs reported positive effects on loneliness, social behaviors, or social interactions. One review of animal companionship included 24 studies of participants of all age groups (Kretzler et al., 2022). There was large heterogeneity in the study outcomes, ranging from increased loneliness, no significant difference, to decreased loneliness. One study showed

an association of any current or past pet ownership with decreased social isolation (Kretzler et al., 2022). One review of "robopets" by Abbott et al. (2019) showed reductions in loneliness and improved social interactions in long-term care.

Recommendations for future research include exploring older adults' points of view and experiences of human-animal interactions, conducting studies that are supported by theoretical frameworks, and conducting more controlled trials with older adults, including those living at home and in residential settings (Hughes et al., 2020; Gee and Mueller, 2019; Chur-Hansen et al., 2010). Finally, rigorous research exploring the conditions under which humans and animals benefit or do not benefit from interaction would help improve the well-being of both parties in health care contexts.

Recommendation #14 –Leisure skill development and leisure activities

HCSSPs are encouraged to discuss leisure-skill development and activities as an opportunity for older adults to learn new skills and engage in the local community. These activities and skills may include leisure education, art therapy, bibliotherapy, horticulture and nature-related interventions and music therapy, amongst others.

GRADE: Evidence: Low; Strength: Weak

One systematic review specifically assessed interventions for leisure engagement, to which six studies were included. The interventions included leisure education, self-management of chronic diseases with an occupational therapist, and assistive devices (Smallfield and Molitor, 2018). Outcomes included activity frequency, participation, and quality of life improved, but loneliness outcomes were specifically not reported. This review was intended to determine the effectiveness of occupational therapy to improve leisure engagement and social participation. Hoang and colleagues included music therapy in their review, showing no effect on social isolation ES = −0.11 (95% CI, −0.57 to 0.35)(Hoang et al., 2022). Technological interventions (e.g., computer training) are highly heterogeneous given the nature of technology-based interventions. One review by Chipps et al. did not conclusively support the role of computer and internet training in reducing loneliness (Chipps et al., 2017), whereas one review by Forsman et al. reported positive effects on social support (Forsman et al., 2018). This is further addressed in the Technology section.

Other forms of leisure activities were considered, such as bibliotherapy, art therapy, and horticulture and contact with nature. There are a small number of studies showing reduced loneliness in art engagement (Tymoszuk et al., 2020) and improved social connectedness following bibliotherapy (Ed & Fisher, 2022). One observational study by Hammoud et al. showed that contact with nature augments the association between social inclusivity and loneliness (Hammoud et al., 2021). A systematic review by Astell-Burt et al. included 22 studies of the effect of urban green space on loneliness in all populations, including older adults, with 67% of studies finding a reduction in loneliness with more green space exposure or green space experiences (Astell-Burt et al., 2022). Further studies are required to assess the role of leisure-skill development and engagement with leisure activities. This remains a highly heterogeneous management strategy with limited evidence. The goal of such interventions should include shared decision making and creating goals to help individuals identify and participate in activities that would be beneficial and meaningful to the individual. It is similarly imperative to form community educational initiatives that incorporate the needs of all individuals and not only target participation as an outcome.

Recommendation #15 – Technology

HCSSPs should intentionally engage with their patients/clients to further understand their access and/or use of technology in their daily lives and potential opportunities for using technology to reduce social isolation and loneliness. It is important to take into account the interest of the individual, their digital literacy, any sensory limitations and financial capacity to access the internet and digital devices.

GRADE: Evidence: Moderate; Strength: Strong

Prior to the pandemic, there was awareness of a growing digital divide (Tomer et al., 2020) for those who had access to the internet and devices in their home, knew how to use the tools, versus those who were not digitally included. The pandemic exacerbated this social context, when people were forced to be in their homes and all public health information was being shared digitally. There is a growing movement to include digital inclusion as a "super social determinant of health" (Sieck et al., 2021) as it impacts almost all the other determinants.

According to Davidson and Schimmele (2019), although Internet access has grown over the past decade, 22% of people 65 years of age and older are not digitally connected. These differences only increase when examining the issue by income groups, with 54% of older adults with incomes under $20,000 reporting Internet use, compared to 73% of older adults with incomes between $60,000-$79,000 (Davidson and Schimmele, 2019). Older adults in rural communities often have reduced access to reliable Internet service.

An increased proportion of older adults are using technologies and some educational or technical resources are available to support them. New technologies (e.g., applications, social robots) addressing social isolation and loneliness are rapidly developing. Although studies

evaluating the use of the Internet or social medias have reported mixed results, more studies have found that online interventions may increase connection and decrease isolation, but others have shown no association. Further research is needed on the impact of technology aiming at reducing social isolation and loneliness in older adults, especially on social robots and conversational agents. As part of the exploration of technology, it is important to also understand where there may be real and/or perceived barriers or concerns associated with technology including Internet fraud, bullying, etc. (Holgersson et al., 2021).

Clinician engagement with their patients/clients around technology will be influenced by their own familiarity with their own access to equipment and Internet, comfort and confidence in using technology as well as understanding regulatory issues such as ethical and legal considerations.

Recommendation #16 - Pharmacological therapy

HCSSPs should not use pharmacological agents as a treatment for social isolation and loneliness in older adults. Medication may be indicated if there is an underlying mental disorder or physical illness.

GRADE: Evidence: Low; Strength: Strong

Previous studies that have examined the possible role of pharmacological agents for social isolation or loneliness have primarily been conducted in animals or in humans experiencing a mental health condition. Studies that have been conducted in humans have important limitations (see below). The interventions have included: SSRI (fluoxetine), allopregnanolone (ALLO) and oxytocin. ALLO is a derivative of progesterone that is implicated in potentiating $GABA_A$ receptors and is thought to have a pharmacological role as an anxiolytic and antidepressant, with anti-stress effects (Diviccaro et al., 2022). The use of an adjunctive therapy was previously suggested by Cacioppo and colleagues, who hypothesize that these agents have potential therapeutic roles in loneliness and social isolation (Cacioppo et al., 2015). It should be noted that antidepressant medication can be very helpful for people who have an underlying depression or anxiety disorder.

SSRI and ALLO: A review of mouse studies with antidepressants (fluoxetine, paroxetine, and sertraline) and ALLO found that mice exhibited depressive and anxiety-like behaviours when reared in social isolation, demonstrated lower levels of ALLO with changes in neurobiological structures (Mayo-Wilson et al., 2014). The study of these agents in neuro-hormonal modulation is yet to be extensively studied in humans. Furthermore, the role of ALLO in neuropsychiatric disorders in humans has been limited to depression (Taheri Zadeh et al., 2021; Kanes et al., 2017).

Oxytocin: A review by Bartz et al. (2011) describes the role of oxytocin in improving social behaviours upon acute administration in humans. They also report that 21% of participants on oxytocin described anti-social effects. This review, in particular, emphasizes the importance of contextual and individual factors as modulators of the neural response to social stimuli (Brown et al., 2014).

There is a paucity of studies in humans, and it is unknown whether these therapies should be an adjunct to non-pharmacological therapy or be used as therapy at all. The use of all medications mentioned above, including oxytocin, can lead to adverse effects, and the durations of desired and adverse effects remain unknown. For the few studies that were completed in human participants, many were experiencing a mental health condition, and as such, the findings would not be generalizable to all older adults.

We do not discount the role of the biopsychosocial model in loneliness and social isolation and recommend further study to establish any potential efficacy of a pharmacological approach.

Recommendation #17 - Reassessment

HCSSPs should take an individualized approach to the follow-up of social isolation and loneliness. We recommend HCSSPs reassess intervention efficacy and adherence, with a preference towards short-term follow-up.

Consensus

The U.S. Surgeon General's Advisory on the Healing Effects of Social Connection and Community, published in 2023, recommends that health care workers in all levels of care actively assess patients'/clients' level of social connection and that public health professionals monitor social connection. Unfortunately, the frequency of assessment is unknown (U.S. Surgeon General's Office, 2023).

A limited number of studies have serially re-assessed participants following the completion of the intervention. Studies that repeated an assessment of social isolation and loneliness following intervention completion generally did so over months. As the sustainability of the effects of an intervention is uncertain, clinicians should reassess individuals to evaluate intervention efficacy and adherence. We recommend short-term follow-up, but the timing can be case-specific. The systemic, social and individual root causes of social isolation and loneliness vary by individual. These factors should be actively monitored throughout the course of the intervention, including after cessation and/or completion. It should be noted that no summarized report or guideline has identified an interval to reassess symptoms of loneliness and social isolation.

Special Populations of Older Adults

The Diversity of Older Adults Populations

There is growing recognition of the need for culturally relevant interventions that recognize the diversity of older adult populations. The comprehensive scoping review of the literature for these guidelines did not uncover any definitive evidence to suggest that one type of intervention is more effective for particular sex, gender, or cultural groups, or that there is a specific subtype of intervention that works better for a specific group/population. Several reviews noted the need to tailor interventions to sex, gender and cultural groups/populations (and the need to subsequently evaluate the effects of these interventions using appropriate gender and cultural-based analysis processes; see, for instance, Browne et al., 2021, Cornect-Benoit et al., 2020 and Dassieu et al., 2021) and that more research is needed.

These guidelines have been developed to situate individuals within their biological, psychological and social contexts. Two national surveys were carried out to also learn more about the diversity of clinical experiences of health and social service providers and the lived experience of older adults. Yet, given the still-emerging nature of clinical evidence on how best to fully address social isolation and loneliness, it is not always clear how specific recommendations can speak to the diversity of people experiencing social isolation and loneliness.

Nevertheless, there is growing recognition of the need for culturally relevant interventions that recognize the diversity of older adult populations. Indeed, this recognition forms one of the pillars of the National Institute on Ageing's approach to addressing social isolation and loneliness:

"Interventions should be designed to be socially and culturally appropriate and safe to meet the needs of specific populations, such as 2SLGBTQIA+ communities or racialized and ethno-cultural communities" (National Institute on Ageing, 2022: 44).

Some research has shown positive results from interventions to address social isolation among specific groups of older adults, including linguistic minorities (Nyqvist et al., 2021; Beogo et al., 2021), rural communities (Carver et al., 2018), immigrant communities (Dhillon & Humble, 2021; Salway et al., 2020) and 2SLGBTQIA+ communities (Yang, Chu and Salmon, 2023). Social isolation and loneliness in Indigenous, racialized, 2SLGBTQIA+ older adults could be specifically addressed through a process led by those communities (Persaud et al., 2023).

Some resources that provide additional information include:

- *Who's at Risk and What Can Be Done About It? A Review of the Literature on the Social Isolation of Different Groups of Seniors,* from the National Seniors Council (2016), which identifies risk factors among different groups of seniors, including immigrant seniors, 2SLGBTQ+ seniors, seniors living in remote or rural areas, and seniors with low income or who are living in poverty.
- *Social Isolation of Seniors: A Focus on Indigenous Seniors in Canada*, from Employment and Social Development Canada (2018a), which outlines risk factors, approaches to prevention, and strategies and tools to build engagement with Indigenous older adults.
- *Health in Focus: LGBT2SQ Seniors*, from Rainbow Health Ontario (2021), which outlines issues and information on physical and mental health for older 2SLGBTQ+ adults, including strategies for understanding and addressing social isolation and loneliness.
- *Social Isolation of Seniors: A Focus on New Immigrant and Refugee Seniors in Canada*, from Employment and Social Development Canada (2018b), which focuses specifically on strengthening social connections for newcomers.

Social Isolation and Loneliness Among Indigenous Older Adults

HCSSPs should be aware that Indigenous older adults may face higher risks of social isolation "due to factors such as racism, marginalized language, culture, poverty and historic negative experiences" (Employment and Social Services Canada, 2018a: 3). At the same time, given the diversity of Indigenous communities and cultures, the experiences of Indigenous older adults are heterogenous – requiring approaches that consider individual and cultural contexts.

While a number of factors influencing social isolation and loneliness in older adults have been identified (and are outlined in these guidelines), there are additional factors to consider for Indigenous older adults (specifically for social isolation). These include:

- Having social support (individual, family and community that provides practical help, positive interaction, emotional support, and friendship);
- Belonging to a community that promotes respect for the Indigenous way of life and cultural values as social norms;
- Belonging to a community that promotes respect for Indigenous seniors for their wisdom and knowledge (Employment and Social Services Canada, 2018a: 13).

For a more comprehensive discussion of protective factors, as well as tools and resources to develop appropriate and relevant ways to foster social connection among Indigenous older adults, consult Social Isolation of Seniors: A Focus on Indigenous Seniors in Canada (Employment and Social Services Canada, 2018a).

Residents of Long-Term Care Homes

Bethell et al. (2020) published a scoping review of strategies that can be employed in long-term care (LTC) homes to enhance social connection. Although they initially focused on issues related to the COVID-19 pandemic, their comprehensive review is equally useful post-pandemic. They identified 12 strategies listed in Table 4. The review included 72 observational and interventional studies. They highlighted the importance of basic care, which includes a focus on pain, sleep, hearing and vision. They noted the limitations of the current literature but emphasized that this does not diminish the imperative to address social connection in LTC homes.

People Living with Dementia

The number of older adults living with dementia is increasing and is expected to continue to increase (Canadian Institute for Health Information, n.d.). HCSSPs should be aware that older adults who are living with dementia may be at higher risk of experiencing social isolation and loneliness and the possible health consequences associated with this. There is also some evidence that loneliness may contribute to an increased risk of dementia (Sutin et al., 2020). While acknowledging the complexity of dementia and the need for further research into the links between dementia and social isolation and loneliness, it is important for HCSSPs to consider the influence and/or impact that dementia may have on the potential social isolation and loneliness of their patients/clients.

Table 4. Strategies with Some Evidence of a Positive Impact on Social Connection in Long Term Care Homes

Manage pain
Address vision and hearing loss
Sleep at night, not during day
Opportunities for creative expression
Exercise
Maintain religious and cultural practices
Garden, inside or outside
Visit with pets
Use technology to communicate
Laugh together
Reminisce about events, people and places
Address communication impairments

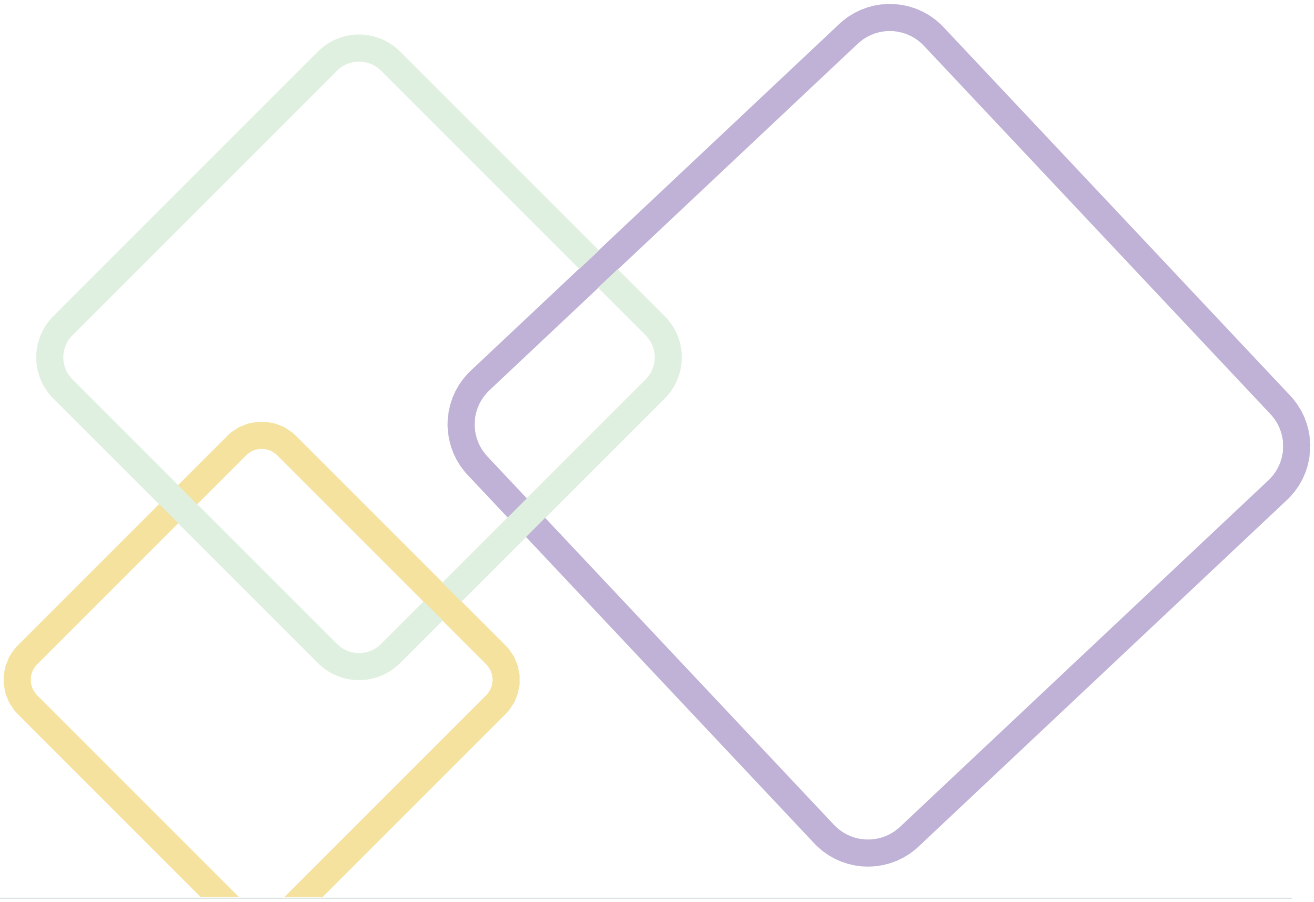
(Bethel et al., 2020)

Future Considerations

These clinical recommendations are most helpful when implemented within a strong relational context that includes open communication, trust, empathy, safety and support. Health care and social service professionals, and the systems they are working in, need to see themselves and be seen by their patients/clients as willing partners in the ageing journey. More can and should be offered by HCSSPs and their organizations to support older adults in preventing and/or managing the negative mental and physical health impacts of social isolation and loneliness. HCSSPs and their organizations need support to fulfill this role.

Our society is in the very early days of understanding the complexity of social isolation and loneliness in older adults. The recommendations in these guidelines have been developed through an examination of existing literature and evidence. However, there is a lack of literature on clinical practice in prevention, screening, assessment and intervention, particularly for older adults. These gaps in research and knowledge reflect many opportunities for future consideration by HCSSPs, their organizations, community-based senior services, the private sector and all levels of government, including:

- National recognition that social isolation and loneliness is a "geriatric" giant and because of its complexity, will require the collective attention of many, working together, to raise awareness and find solutions. We recognize that other similar initiatives are emerging globally, such as in the UK and the USA, and that we can collaborate and learn from each other.
- Focused research to help understand the unique considerations of both social isolation and loneliness and the implications of each on the physical and mental health of older adults.
- Given the significantly increased risk factors for older adults from racialized groups, Indigenous, 2SLGBTQIA+ communities, and diverse linguistic and cultural groups, further specific investment in supporting programs and research focused on these groups is required.
- Organizational policy, protocols and practices that empower and support HCSSPs so they can actively fulfill their role as health partners with their patients/clients who may be at risk or already experiencing the mental and/or physical health impacts of social isolation and loneliness.
- Longitudinal monitoring of social isolation and loneliness, as separate issues, in population surveys to evaluate trends and the impact of local, provincial and national interventions.



References

Abbott, R., Orr, N., McGill, P., Whear, R., Bethel, A., Garside, R., Stein, K., & Thompson-Coon, J. (2019). How do "robopets" impact the health and well-being of residents in care homes? A systematic review of qualitative and quantitative evidence. *International Journal of Older People Nursing,* 14(3). https://doi.org/10.1111/opn.12239

Abdi, J., Al-Hindawi, A., Ng, T., & Vizcaychipi, M. P. (2018). Scoping review on the use of socially assistive robot technology in elderly care. *BMJ Open*, 8(2). https://doi.org/10.1136/bmjopen-2017-018815

Adepoju, O. E., Chae, M., Woodard, L., Smith, K. L., Herrera, L., Han, D., et al. (2021). Correlates of social isolation among community-dwelling older adults during the COVID-19 pandemic. *Frontiers in Public Health*, 9, 702965. https://doi.org/10.3389/fpubh.2021.702965

Alliance for Healthier Communities. (2019). Rx: Community – *Social prescribing in Ontario, progress report*. https://www.allianceon.org/sites/default/files/documents/Rx-Community-Progress-Report-EN-June2019-web.pdf

American Psychological Association (2018). APA dictionary of psychology: Animal-assisted therapy. https://dictionary.apa.org/animal-assisted-therapy

Anderson, K. A., Lord, L. K., Hill, L. N., & McCune, S. (2015). Fostering the human-animal bond for older adults: Challenges and opportunities. *Activities, Adaptation & Aging,* 39(1), 32–42. https://doi.org/10.1080/01924788.2015.994447

Astell-Burt, T., Hartig, T., Putra, I. G. N. E., Walsan, R., Dendup, T., & Feng, X. (2022). Green space and loneliness: A systematic review with theoretical and methodological guidance for future research. *Science of The Total Environment*, 847, 157521. https://doi.org/10.1016/J.SCITOTENV.2022.157521

Banks, M. R., & Banks, W. A. (2002). The effects of animal-assisted therapy on loneliness in an elderly population in long-term care facilities. *The Journals of Gerontology. Series A, Biological Sciences and Medical Sciences,* 57(7). https://doi.org/10.1093/GERONA/57.7.M428

Banks, M. R., & Banks, W. A. (2005). The effects of group and individual animal-assisted therapy on loneliness in residents of long-term care facilities. *Journal of Gerontology,* 18(4), 396–408. https://doi.org/10.2752/089279305785593983

Banks, M. R., Willoughby, L. M., & Banks, W. A. (2008). Animal-assisted therapy and loneliness in nursing homes: Use of robotic versus living dogs. *Journal of the American Medical Directors Association*, 9(3), 173–177. https://doi.org/10.1016/j.jamda.2007.11.007

Barreto, M., van Breen, J., Victor, C., Hammond, C., Eccles, A., Richins, M. T., & Qualter, P. (2022). Exploring the nature and variation of the stigma associated with loneliness. *Journal of social and personal relationships,* 39(9), 2658–2679. https://doi.org/10.1177/02654075221087190

Bartz, J.A., Zaki, J., Bolger, N., Ochsner, K.N. (2011). Social effects of oxytocin in humans: Context and person matter. *Trends in Cognitive Sciences*, 15(7), 301–309. http://dx.doi.org/10.1016/j.tics.2011.05.002

Beogo, I., Ramdé, J., Nguemeleu Tchouaket, E., Sia, D., Bationo, N. J., Collin, S., Anne, A., & Gagnon, M. P. (2021). Co-Development of a web-based hub (eSocial-hub) to combat social isolation and loneliness in Francophone and Anglophone older people in the linguistic minority context (Quebec, Manitoba, and New Brunswick): Protocol for a mixed-method interventional study. *JMIR Research Protocols*, 10(9), e30802. https://doi.org/10.2196/30802

Berkman, L. F., & Syme, S. L. (1979). Social networks, host resistance, and mortality: a nine-year follow-up study of Alameda County residents. *American Journal of Epidemiology*, 109(2), 186–204. https://doi.org/10.1093/oxfordjournals.aje.a112674

Bert, F., Gualano, M. R., Camussi, E., Pieve, G., Voglino, G., & Siliquini, R. (2016). Animal assisted intervention: A systematic review of benefits and risks. *European Journal of Integrative Medicine*, 8(5), 695–706. https://doi.org/10.1016/j.eujim.2016.05.005

Bertotti, M., Frostick, C., Hutt, P., Sohanpal, R., & Carnes, D. (2018). A realist evaluation of social prescribing: an exploration into the context and mechanisms underpinning a pathway linking primary care with the voluntary sector. *Primary Health Care Research & Development*, 19(3), 232–245. https://doi.org/10.1017/S1463423617000706

Bethell, J., Aelick, K., Babineau, J., Bretzlaff, M., Edwards, C., Gibson, J. L., Hewitt Colborne, D., Iaboni, A., Lender, D., Schon, D., & McGilton, K. S. (2021). Social connection in Long-Term Care homes: A scoping review of published research on the mental health impacts and potential strategies during COVID-19. *Journal of the American Medical Directors Association*, 22(2), 228–237. https://doi.org/10.1016/j.jamda.2020.11.025

Bild, E., & Pachana, N. A. (2022). Social prescribing: A narrative review of how community engagement can improve wellbeing in later life. *Journal of Community & Applied Social Psychology*, 32(6), 1149-1215. https://doi.org/10.1002/casp.2631

Boulton, E., Kneale, D., Stansfield, C., Heron, P., Sutcliffe, K., Hayanga, B., Hall, A., Bower, P., Casey, D., Jefferson, L., Craig, D., Gilbody, S., Hanratty, B., McMillan, D., Thomas, J., & Todd, C. (2020). Rapid review of reviews: what remotely delivered interventions can reduce social isolation and loneliness among older adults? *OPFPRU EPPI-Centre York Befriending and Social Support in Isolation Report*. http://eppi.ioe.ac.uk/CMS/Portals/0/Rapid%20Review%20Remotely%20Delivered%20Interventions%20to%20Reduce%20Loneliness%20and%20S__.pdf

Bridgeable (2022). *Current State of Social Prescribing in Canada Summary Report*. https://www.bridgeable.com/wp-content/uploads/Bridgeable-CISP-Social-Prescribing-Phase-1-Summary-Report.pdf

Brown, E. S., Park, J., Marx, C. E., Hynan, L. S., Gardner, C., Davila, D., Nakamura, A., Sunderajan, P., Lo, A., & Holmes, T. (2014). A randomized, double-blind, placebo-controlled trial of pregnenolone for bipolar depression. *Neuropsychopharmacology : Official Publication of the American College of Neuropsychopharmacology*, 39(12), 2867–2873. https://doi.org/10.1038/npp.2014.138

Browne, J., Walker, T., Brown, A., Sherriff, S., Christidis, R., Egan, M., Versace, V., Allender, S., & Backholer, K. (2021). Systems thinking for Aboriginal Health: Understanding the value and acceptability of group model building approaches. *SSM - Population Health*, 15, 100874. https://doi.org/10.1016/j.ssmph.2021.100874

Burholt, V., Winter, B., Aartsen, M., Constantinou, C., Dahlberg, L., Feliciano, V., De Jong Gierveld, J., Van Regenmortel, S., Waldegrave, C., & Working Group on Exclusion from Social Relations, part of the COST-financed Research Network 'Reducing Old-Age Exclusion: Collaborations in Research and Policy' (ROSENet). (2019). A critical review and development of a conceptual model of exclusion from social relations for older people. *European Journal of Ageing*, 17(1), 3–19. https://doi.org/10.1007/s10433-019-00506-0

Cacioppo, S., Grippo, A. J., London, S., Goossens, L., & Cacioppo, J. T. (2015). Loneliness: clinical import and interventions. *Perspectives on Psychological Science: A Journal of the Association for Psychological Science*, 10(2), 238–249. https://doi.org/10.1177/1745691615570616

Campaign to End Loneliness. (n.d.). *Facts and statistics about loneliness.* https://www.campaigntoendloneliness.org/facts-and-statistics

Campaign to End Loneliness. (2015). *Measuring your impact on loneliness in later life.* https://www.campaigntoendloneliness.org/wp-content/uploads/Loneliness-Measurement-Guidance1.pdf

Canadian Coalition for Seniors' Mental Health. (n.d.). *CCSMH areas of focus - guidelines.* https://ccsmh.ca/areas-of-focus

Canadian Institute for Health Information. (n.d.). *Dementia in Canada: Summary.* https://www.cihi.ca/en/dementia-in-canada/dementia-in-canada-summary

Canadian Society for Exercise Physiology. (2020). *Canadian 24-hour movement guidelines for Adults 65+.* https://csep.ca/guidelines.

Care Services Improvement Partnership. (n.d.). *Social prescribing for mental health – a guide to commissioning and delivery.* https://citizen-network.org/uploads/attachment/339/social-prescribing-for-mental-health.pdf

Carver, L. F., Beamish, R., Phillips, S. P., & Villeneuve, M. (2018). A scoping review: Social participation as a cornerstone of successful aging in place among rural older adults. *Geriatrics (Basel, Switzerland)*, 3(4), 75. https://doi.org/10.3390/geriatrics3040075

Centre for Effective Practice. (2023). *Social prescribing: A resource for health professionals*. https://tools.cep.health/tool/social-prescribing/#assess-and-understand-the-social-factors-impacting-health

Chipps, J., Jarvis, M. A., & Ramlall, S. (2017). The effectiveness of e-Interventions on reducing social isolation in older persons: A systematic review of systematic reviews. *Journal of Telemedicine and Telecare, 23*(10), 817–827. https://doi.org/10.1177/1357633X17733773

Choi, E. Y., Farina, M. P., Wu, Q., & Ailshire, J. (2021). COVID-19 social distancing measures and loneliness among older adults. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences,* 77(7), e167–e178. https://doi.org/10.1093/geronb/gbab009

Chur-Hansen, A., Stern, C., & Winefield, H. (2010). Gaps in the evidence about companion animals and human health: Some suggestions for progress. *International Journal of Evidence-Based Health care*, 8(3), 140–146. https://doi.org/10.1111/j.1744-1609.2010.00176.x

Cihan, F. & Gökgöz Durmaz, F. (2021). Evaluation of COVID-19 phobia and the feeling of loneliness in the geriatric age group. *International Journal of Clinical Practice,* 75(6), e14089. https://doi.org/10.1111/ijcp.14089

Cooper, M., Avery, L., Scott, J., Ashley, K., Jordan, C., Errington, L. & Flynn, D. (2022). Effectiveness and active ingredients of social prescribing interventions targeting mental health: a systematic review. *BMJ Open*. http://dx.doi.org/10.1136/bmjopen-2021-060214

Cornect-Benoit, A., Pitawanakwat, K., Walker, J., Manitowabi, D., & Jacklin, K. (2020). Nurturing meaningful intergenerational social engagements to support healthy brain aging for Anishinaabe older adults: Nakaazang Wenjishing naagdawendiwin, nji gechipiitzijig Anishnaabek. *Canadian Journal on Aging / La Revue canadienne du vieillissement*, 39(2), 263-283. https://doi.org/10.1017/s0714980819000527

Costa, A., Sousa, C. J., Seabra, P. R. C., Virgolino, A., Santos, O., Lopes, J., & Alarcão, V. (2021). Effectiveness of social prescribing programs in the primary health-care context: a systematic literature review. *Sustainability,* 13(5), 2731. https://www.mdpi.com/2071-1050/13/5/2731

Costco, T. D., Fortuna, K., Wister, A., Riadi, I., Wagner, K., & Sixsmith, A. (2021). COVID-19, social isolation, and mental health among older adults: A digital Catch-22. *Journal of Medical Internet Research,* 23(5), e21864. https://doi.org/10.2196/21864

Coughtrey, A., Birken, M., Steare, T., Bennett, S., Johnson, S., Pitman, A., & Shafran, R. (2019). *Initial evidence review - strategies for encouraging psychological and emotional resilience in response to loneliness.* https://www.ucl.ac.uk/psychiatry/sites/psychiatry/files/evidence-synthesis-for-psychology-of-loneliness-report.pdf

Courtin, E. & Knapp, M. (2015). Social isolation, loneliness and health in old age: a scoping review. *Health and Social Care in the Community,* 25(3), 799-812. https://doi.org/10.1111/hsc.12311

Dassieu, L., Heino, A., Develay, É., Kaboré, J. L., Pagé, M. G., Hudspith, M., Moor, G., & Choinière, M. (2021). Conversations about opioids: Impact of the opioid overdose epidemic on social interactions for people who live with chronic pain. *Qualitative Health Research,* 31(9), 1657–1669. https://doi.org/10.1177/10497323211003063

Davidson, J. and Schimmele, C. (2019). *Evolving Internet use among Canadian seniors.* Statistics Canada. https://www150.statcan.gc.ca/n1/pub/11f0019m/11f0019m2019015-eng.htm

D'cruz, M., & Banerjee, D. (2020). 'An invisible human rights crisis': The marginalization of older adults during the COVID-19 pandemic - An advocacy review. *Psychiatry Research*, 292, 113369. https://doi.org/10.1016/j.psychres.2020.113369

De Jong Gierveld, J., Keating, N., & Fast, J. (2015). Determinants of loneliness among older adults in Canada. *Canadian Journal on Aging*, 34(2), 125–136. https://doi.org/10.1017/S0714980815000070

De Jong Gierveld & Van Tilburg (2006). A six-item scale for overall, emotional, and social loneliness. *Research on Aging*, 28, 582-598. https://psycnet.apa.org/doi/10.1177/0164027506289723

Dhillon, S., & Humble, Á. M. (2021). The sociocultural relationships of older immigrant Punjabi women living in Nova Scotia: Implications for well-being. *Journal of Women & Aging,* 33(4), 442–454. https://doi.org/10.1080/08952841.2020.1845563

Diviccaro, S., Cioffi, L., Falvo, E., Giatti, S., & Melcangi, R. C. (2022). Allopregnanolone: An overview on its synthesis and effects. *Journal of Neuroendocrinology*, 34(2), e12996. https://doi.org/10.1111/jne.12996

Donovan, N. J., & Blazer, D. (2020). Social isolation and loneliness in older adults: review and commentary of a national academies report. *The American Journal of Geriatric Psychiatry,* 28(12), 1233-1244. https://doi.org/10.1016/j.jagp.2020.08.005

Elder, K. and Retrum, J. (2012). *Framework for isolation in adults over 50*. American Association of Retired Persons Foundation. https://www.aarp.org/content/dam/aarp/aarp_foundation/2012_PDFs/AARP-Foundation-Isolation-Framework-Report.pdf

Emerson, K. G. (2020). Coping with being cooped up: Social distancing during COVID-19 among 60+ in the United States. *Revista Panamericana de Salud Publica / Pan American Journal of Public Health*, 44, e81. https://doi.org/10.26633/RPSP.2020.81

Employment and Social Development Canada. (2018a). *Social isolation of seniors: A focus on Indigenous seniors in Canada*. https://www.canada.ca/en/employment-social-development/corporate/seniors/forum/social-isolation-indigenous.html

Employment and Social Development Canada. (2018b). *Social isolation of seniors: A focus on new immigrant and refugee seniors in Canada.* https://www.canada.ca/en/employment-social-development/corporate/seniors/forum/social-isolation-immigrant-refugee.html

Fingerman, K. L., Ng, Y. T., Zhang, S., Britt, K., Colera, G., Birditt, K. S., & Charles, S. T. (2021). Living alone during COVID-19: Social contact and emotional well-being among older adults. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences,* 76(3), e116–e121. https://doi.org/10.1093/geronb/gbaa200

Fisher, R. E. (2022). *A qualitative study of senior adults' perceptions of connectedness after bibliotherapy.* [Doctoral dissertation, Southeastern University]. https://firescholars.seu.edu/coe/131/

Forsman, A. K., Nordmyr, J., Matosevic, T., Park, A., Wahlbeck, K., & McDaid, D. (2018). Promoting mental wellbeing among older people: Technology-based interventions. *Health Promotion International,* 33(6), 1042–1054. https://doi.org/10.1093/heapro/dax047

Fortier, J. (2016). *Grille d'analyse du partenariat*. Institut sur le vieillissement et la participation sociale des aînés. Université Laval. https://www.ivpsa.ulaval.ca/sites/ivpsa.ulaval.ca/files/uploads/grille_analyse_du_partenariat_02-2-2017.pdf

Freedman, A., & Nicolle, J. (2020). Social isolation and loneliness: the new geriatric giants: Approach for primary care. *Canadian Family Physician / Le Médecin de famille canadien,* 66(3), 176–182. http://www.ncbi.nlm.nih.gov/pmc/articles/pmc8302356/

Gaeta, L., & Brydges, C. R. (2021). Coronavirus-related anxiety, social isolation, and loneliness in older adults in northern California during the stay-at-home order. *Journal of Aging & Social Policy,* 33(4-5), 320–331. https://doi.org/10.1080/08959420.2020.1824541

Galbraith, B., Larkin, H., Moorhouse, A., & Oomen, T. (2015). Intergenerational programs for persons with dementia: A scoping review. *J Gerontol Soc Work*, 58(4):357-78. https://doi.org/10.1080/01634372.20 15.1008166

Galvez-Hernandez, P., González-de Paz, L., & Muntaner, C. (2022.) Primary care-based interventions addressing social isolation and loneliness in older people: a scoping review. *BMJ Open*, 12(2). https://doi.org/10.1136/bmjopen-2021-057729

Gee, N. R., & Mueller, M. K. (2019). A systematic review of research on pet ownership and animal interactions among older adults. *Anthrozoos,* 32(2), 183–207. https://doi.org/10.1080/08927936.2019.1569903

GEO Nova Scotia. (2023). *Annual report to community: Reflections, learning and evaluation 2022-2023*. https://geonovascotia.ca/learning-evaluation

Georgeou, N., Schismenos, S., Wali, N., Mackay, K., & Moraitakis, E. (2023). A scoping review of aging experiences among culturally and linguistically diverse people in Australia: Toward better aging policy and cultural well-being for migrant and refugee adults. *The Gerontologist,* 63(1), 182–199. https://doi.org/10.1093/geront/gnab191

Gorenko, J. A., Moran, C., Flynn, M., Dobson, K., & Konnert, C. (2021). Social isolation and psychological distress among older adults related to COVID-19: A narrative review of remotely-delivered interventions and recommendations. *Journal of Applied Gerontology,* 40(1), 3–13. https://doi.org/10.1177/0733464820958550

Guyatt, G. H., Oxman, A. D., Vist, G. E., Kunz, R., Falck-Ytter, Y., Alonso-Coello, P., & Schünemann, H. J. (2008). GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. *Bmj,* 336(7650), 924-926. https://doi.org/10.1136/bmj.39489.470347.AD

Hammoud, R., Tognin, S., Bakolis, I., Ivanova, D., Fitzpatrick, N., Burgess, L., Smythe, M., Gibbons, J., Davidson, N., & Mechelli, A. (2021). Lonely in a crowd: investigating the association between overcrowding and loneliness using smartphone technologies. *Scientific Reports*, 11(1), 1–11. https://doi.org/10.1038/s41598-021-03398-2

Hawkley, L. C., & Cacioppo, J. T. (2010). Loneliness matters: a theoretical and empirical review of consequences and mechanisms. *Annals of Behavioral Medicine: A Publication of the Society of Behavioral Medicine,* 40(2), 218–227. https://doi.org/10.1007/s12160-010-9210-8

Hickin, N., Käll, A., Shafran, R., Sutcliffe, S., Manzotti, G., & Langan, D. (2021). The effectiveness of psychological interventions for loneliness: A systematic review and meta-analysis. *Clinical Psychology Review*, 88(April). https://doi.org/10.1016/j.cpr.2021.102066

Hoang, P., King, J. A., Moore, S., Moore, K., Reich, K., Sidhu, H., Tan, C. V., Whaley, C., & McMillan, J. (2022). Interventions associated with reduced loneliness and social isolation in older adults: A systematic review and meta-analysis. *JAMA Network Open,* 5(10), e2236676–e2236676. https://doi.org/10.1001/JAMANETWORKOPEN.2022.36676

Holgersson, J., Kävrestad, J., & Nohlberg, M. (2021). Cybersecurity and Digital Exclusion of Seniors: What Do They Fear? *International Symposium on Human Aspects of Information Security and Assurance* (pp. 12-21). Cham: Springer International Publishing.

Holt-Lunstad, J. (2021). Loneliness and social isolation as risk factors: The power of social connection in prevention. *American Journal of Lifestyle Medicine*, 15(5), 567-573. https://doi.org/10.1177/15598276211009454

Holt-Lunstad, J., & Perissinotto, C. P. M. M., Dr. (2023). Social isolation and loneliness as medical issues. *New England Journal of Medicine*, (388), 193-195. https://www.nejm.org/doi/full/10.1056/NEJMp2208029

Hughes, A. M., Braun, L., Putnam, A., Martinez, D., & Fine, A. (2021). Advancing human–animal interaction to counter social isolation and loneliness in the time of COVID-19: A model for an interdisciplinary public health consortium. *Animals*, 11(8), 2325. https://doi.org/10.3390/ani11082325

Hughes, M. E., Waite, L. J., Hawkley, L. C. and Cacioppo, J. T. (2004). A short scale for measuring loneliness in large surveys: Results from two population-based studies. *Research on Ageing*, 26(6), 655-672. https://doi.org/10.1177/0164027504268574

Hui Gan, G. Z., Hill, A.-M., Yeung, P., Keesing, S., & Netto, J. A. (2020). Pet ownership and its influence on mental health in older adults. *Aging & Mental Health*, 24(10), 1605–1612. https://doi.org/10.1080/13607863.2019.1633620

Ibarra, F., Baez, M., Cernuzzi, L., & Casati, F. (2020). A systematic review on technology-supported interventions to improve old-age social wellbeing: Loneliness, social isolation, and connectedness. *Journal of Healthcare Engineering*, 2020, 2036842. https://doi.org/10.1155/2020/2036842

Ikeuchi, T., Taniguchi, Y., Abe, T., Seino, S., Shimada, C., Kitamura, A., & Shinkai, S. (2021). Association between experience of pet ownership and psychological health among socially isolated and non-isolated older adults. *Animals,* 11(3), 595. https://doi.org/10.3390/ani11030595

Institute of Medicine. Committee on the Recommended Social and Behavioral Domains and Measures for Electronic Health Records; Board on Population Health and Public Health Practice. (2014). *Capturing social and behavioral domains in electronic health records: Phase 1*. National Academies Press. https://www.ncbi.nlm.nih.gov/books/NBK195994/

Johansson, M., Ahlström, G., & Jönsson, A.-C. (2014). Living with companion animals after stroke: Experiences of older people in community and primary care nursing. *British Journal of Community Nursing*, 19(12), 578–584. https://doi.org/10.12968/bjcn.2014.19.12.578

Kadowaki, L., & Wister, A. (2023). Older adults and social isolation and loneliness during the COVID-19 pandemic: An integrated review of patterns, effects, and interventions. *Canadian Journal on Aging/La revue canadienne du vieillissement*, 42(2), 199–216. https://doi.org/10.1017/S0714980822000459

Kanes, S., Colquhoun, H., Gunduz-Bruce, H., Raines, S., Arnold, R., Schacterle, A., Doherty, J., Epperson, C.N., Deligiannidis, K.M., Riesenberg, R., Hoffman, E., Rubinow, D., Jonas, J., Paul, S., & Meltzer-Brody, S. (2017). Brexanolone (SAGE-547 injection) in post-partum depression: a randomised controlled trial. *Lancet,* 390(10093), 480–489. https://doi.org/10.1016/S0140-6736(17)31264-3

Kimberlee, R. (2016). What is the value of social prescribing? *Advances in Social Sciences Research Journal,* 3(3), 29-35. https://doi.org/10.14738/assrj.33.1889

Kirkland, S. A., Griffith, L. E., Oz, U. E., Thompson, M., Wister, A., Kadowaki, L., Basta, N. E., McMillan, J., Wolfson, C., Raina, P., & Canadian Longitudinal Study on Aging (CLSA) Team (2023). Increased prevalence of loneliness and associated risk factors during the COVID-19 pandemic: findings from the Canadian Longitudinal Study on Aging (CLSA). *BMC Public Health*, 23(1), 872. https://doi.org/10.1186/s12889-023-15807-4

Kivi, M., Hansson, I., & Bjälkebring, P. (2021). Up and about: Older adults' well-being during the COVID-19 pandemic in a Swedish longitudinal study. *The Journals of Gerontology: Series B*, 76(2), e4-e9. https://doi.org/10.1093/geronb/gbaa084

Kneale, D., Henley, J., Thomas, J., & French, R. (2021). Inequalities in older LGBT people's health and care needs in the United Kingdom: a systematic scoping review. *Ageing and Society*, 41(3), 493–515. https://doi.org/10.1017/S0144686X19001326

Kretzler, B., König, H. H., & Hajek, A. (2022). Pet ownership, loneliness, and social isolation: a systematic review. *Social Psychiatry and Psychiatric Epidemiology*, 57(10), 1935. https://doi.org/10.1007/S00127-022-02332-9

Leathers, S. J., Spielfogel, J. E., Blakey, J., Christian, E., & Atkins, M. S. (2016). The effect of a change agent on use of evidence-based mental health practices. *Administration and Policy in Mental Health*, 43(5), 768–782 https://doi.org/10.1007/s10488-015-0694-1

Lepore, J. (2020, April 6). The history of loneliness. *The New Yorker.* https://www.newyorker.com/magazine/2020/04/06/the-history-of-loneliness

Levasseur, M., Cohen, A. A., Dubois, M. F., Généreux, M., Richard, L., Therrien, F. H., & Payette, H. (2015). Environmental factors associated with social participation of older adults living in metropolitan, urban, and rural areas: The NuAge study. *American Journal of Public Health,* 105(8), 1718–1725. https://doi.org/10.2105/AJPH.2014.302415

Levasseur, M., Roy, M., Michallet, B., St-Hilaire, F., Maltais, D., & Généreux, M. (2017). Associations between resilience, community belonging, and social participation among community-dwelling older adults: Results from the Eastern Townships Population Health Survey. *Archives of Physical Medicine and Rehabilitation,* 98(12), 2422–2432. https://doi.org/10.1016/j.apmr.2017.03.025

Li, L., Wister, A., & Mitchell, B. (2020). Social isolation among spousal and adult-child caregivers: Findings from the Canadian Longitudinal Study on Aging. *Journals of Gerontology, Series B*, 76(7), 1415-1429. https://doi.org/10.1093/geronb/gbaa197

Li, W., Yin, H., Song, Y., Tu, W., Wang, L., Liang, Y., Bai, Y., & Xu, G. (2023). Evaluating the risk of social isolation in older people: AHP-fuzzy comprehensive evaluation. *Risk Management and Healthcare Policy,* 16, 79–92. https://doi.org/10.2147/RMHP.S383031

Losada-Baltar, A., Martínez-Huertas, J. Á., Jiménez-Gonzalo, L., Pedroso-Chaparro, M. D. S., Gallego-Alberto, L., Fernandes-Pires, J., & Márquez-González, M. (2022). Longitudinal correlates of loneliness and psychological distress during the lockdown situation due to COVID-19: Effects of age and self-perceptions of aging. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences,* 77(4), 652–660. https://doi.org/10.1093/geronb/gbab012

Lubben, J., Blozik, E., Gillman, G., Iliffe, S., von Rentln Kruse, W., Beck, J. C., & Stuck, A. E. (2006). Performance of an abbreviated version of the Lubben Social Network Scale among three European community-dwelling older adult populations. *Gerontologist*, 46, 503-513. https://doi.org/10.1093/geront/46.4.503

Manjunath, J., Manoj, N., & Alchalabi, T. (2021). Interventions against social isolation of older adults: A systematic review of existing literature and interventions. *Geriatrics (Basel, Switzerland)*, 6(3), 82. https://doi.org/10.3390/geriatrics6030082

Masi, C. M., Chen, H. Y., Hawkley, L. C., & Cacioppo, J. T. (2011). A meta-analysis of interventions to reduce loneliness. *Personality and Social Psychology Review,* 15(3), 219–266. https://doi.org/10.1177/1088868310377394

Matchock, R. L. (2015). Pet ownership and physical health. *Current Opinion in Psychiatry*, 28(5), 386-392. https://doi.org/10.1097/yco.0000000000000183

Matthews, K. A., Adler, N. E., Forrest, C. B., & Stead, W. W. (2016). Collecting psychosocial "vital signs" in electronic health records: Why now? What are they? What's new for psychology? *American Psychologist*, 71(6), 497-504. https://doi.org/10.1037/a0040317

Mauvais-Jarvis, F. (2020). Aging, male sex, obesity, and metabolic inflammation create the perfect storm for COVID-19. *Diabetes*, 69(9), 1857–1863. https://doi.org/10.2337/dbi19-0023

Mayo-Wilson, E., Dias, S., Mavranezouli, I., Kew, K., Clark, D. M., Ades, A. E., & Pilling, S. (2014). Psychological and pharmacological interventions for social anxiety disorder in adults: a systematic review and network meta-analysis. *The Lancet. Psychiatry,* 1(5), 368–376. https://doi.org/10.1016/S2215-0366(14)70329-3

Menec, V. H., Newall, N. E., Mackenzie, C. S., Shooshtari, S., & Nowicki, S. (2019). Examining individual and geographic factors associated with social isolation and loneliness using Canadian Longitudinal Study on Aging (CLSA) data. *PloS One,* 14(2), e0211143. https://doi.org/10.1371/journal.pone.0211143

Mitra, A.R., Fergusson, N.A., Lloyd-Smith, E., Wormsbecker, A., Foster, D., Karpov, A., Crowe, S., Haljan, G., Chittock, D.R., Kanji, H.D., Sekhon, M.S., & Griesdale, D. (2020). Baseline characteristics and outcomes of patients with COVID-19 admitted to intensive care units in Vancouver, Canada: a case series. *Canadian Medical Association Journal*, 192(26), E694–E701. https://doi.org/10.1503/cmaj.200794

National Academies of Science, Engineering and Medicine (2020). *Social isolation and loneliness in older adults - opportunities for the health care system.* https://nap.nationalacademies.org/catalog/25663/social-isolation-and-loneliness-in-older-adults-opportunities-for-the health care system

National Institute on Ageing. (2020). *Pandemic perspectives on ageing in Canada in light of COVID-19: Findings from a National Institute on Ageing/TELUS Health National Survey*. https://static1.squarespace.com/static/5c2fa7b03917eed9b5a436d8/t/5f85fe24729f041f154f5668/1602616868871/PandemicPerspectives+oct13.pdf

National Institute on Ageing. (2022). *Understanding social isolation and loneliness among older Canadians and how to address it.* https://static1.squarespace.com/static/5c2fa7b03917eed9b5a436d8/t/637628e67465424 1f5624512/1668688106493/Social+Isolation+Report+-+FINAL2.pdf

National Seniors Council. (2014). *Report on the social isolation of seniors.* Government of Canada. https://www.canada.ca/en/national-seniors-council/programs/publications-reports/2014/social-isolation-seniors.html

National Seniors Council. (2014). *Scoping review of the literature: Social isolation of seniors, 2013-2014.* Minister of Human Resources and Skills Development, and the Minister of the State (Seniors). https://www.canada.ca/en/national-seniors-council/programs/publications-reports/2014/scoping-social-isolation.html

National Seniors Council. (2017). *Who's at risk and what can be done about It? A review of the literature on the social isolation of different groups of seniors.* Government of Canada. https://www.canada.ca/en/national-seniors-council/programs/publications-reports/2017/review-social-isolation-seniors.html

Newall, N., & Menec, V. (2019a). Loneliness and social isolation of older adults. Why it is important to examine these social aspects together. *Journal of Social and Emotional Relationships,* 36(3), 925–939. https://doi.org/10.1177/0265407517749045

Newall, N., & Menec, V. (2019b). A comparison of different definitions of social isolation using Canadian Longitudinal Study on Aging (CLSA) data. *Ageing & Society*, 40(12), 2671-2694. https://doi.org/10.1017/S0144686X19000801

Newall, N. & Menec. V. (2023). *Targeting isolation.* https://www.targetingisolation.com

Newall, N., Menec, V., & Rose, A. (2022). *Developing a community connector program to reach socially isolated older adults: First steps* [presentation]. Canadian Association on Gerontology Annual Meeting.

Nyqvist, F., Häkkinen, E., Renaud, A., Bouchard, L., & Prys, C. (2021). Social exclusion among official language minority older adults: A rapid review of the literature in Canada, Finland and Wales. *Journal of Cross-cultural Gerontology*, 36(3), 285–307. https://doi.org/10.1007/s10823-021-09433-z

Parlapani, E., Holeva, V., Nikopoulou, V. A., Sereslis, K., Athanasiadou, M., Godosidis, A., Stephanou, T., & Diakogiannis, I. (2020). Intolerance of uncertainty and loneliness in older adults during the COVID-19 pandemic. *Frontiers in Psychiatry*, 11, 842. https://doi.org/10.3389/fpsyt.2020.00842

Perissinotto, C., Holt-Lunstad, J., Periyakoil, V. S., & Covinsky, K. (2019). A practical approach to assessing and mitigating loneliness and isolation in older adults. *JAGS*, 67, 657-662. https://doi.org/10.1111/jgs.15746

Perlman, D., & Peplau, L.A. (1998). Loneliness research: Basic concepts and findings. In: Sarason B.R. (ed). *Social support: Theory, research and applications.* 24th ed. Springer.

Persaud, N., Sabir, A., Woods, H., Sayani, A., Agarwal, A., Chowdhury, M., de Leon-Demare, K., Ibezi, S., Hameed Jan, S., Katz, A., LaFortune, F., Lewis, M., McFarlane, T., Oberai, A., Oladele, Y., Onyekwelu, O., Peters, L., Wong, P., Lofters, A. (2023). Preventive care recommendations to promote health equity. *Canadian Medical Association Journal*, 195(37), E1250-E1273. https://doi.org/10.1503/cmaj.230237

Pescheny, J. V., Pappas, Y. & Randhawa, G. (2018). Facilitators and barriers of implementing and delivering social prescribing services: A systematic review. *BMC Health Services Research* 18(1), 86. https://doi.org/10.1186/s12913-018-2893-4

Polenick, C. A., Perbix, E. A., Salwi, S. M., Maust, D. T., Birditt, K. S., & Brooks, J. M. (2021). Loneliness during the COVID-19 pandemic among older adults with chronic conditions. *Journal of Applied Gerontology*, 40(8), 804–813. https://doi.org/10.1177/0733464821996527

Poscia, A., Stojanovic, J., La Milia, D. I., Duplaga, M., Grysztar, M., Moscato, U., Onder, G., Collamati, A., Ricciardi, W., & Magnavita, N. (2018). Interventions targeting loneliness and social isolation among the older people: An update systematic review. *Experimental Gerontology,* 102, 133–144. https://doi.org/10.1016/j.exger.2017.11.017

Putnam, R.D. (2001). *Bowling alone: The collapse and revival of American community.* Simon and Schuster.

Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385–401. https://doi.org/10.1177/014662167700100306

Rainbow Health Ontario. (2021). *Health in focus: LBGT2SQ Seniors.* https://www.rainbowhealthontario.ca/wp-content/uploads/2021/03/Health-in-focus_LGBT2SQ-Seniors.pdf

Raymond, E., Sévigny, A., Tourigny, A., Vézina, A., Verreault, R. & Guilbert, A.C. (2013). On the track of evaluated programmes targeting the social participation of seniors: a typology proposal. *Ageing and Society*, 33(2), 267-296. http://dx.doi.org/10.1017/S0144686X11001152

Richards, D. et al. (2012). Delivering stepped care: An analysis of implementation in routine practice. *Implementation Science,* 7(3). https://doi.org/10.1186/1748-5908-7-3

Robb, C. E., de Jager, C. A., Ahmadi-Abhari, S., Giannakopoulou, P., Udeh-Momoh, C., McKeand, J., Price, G., Car, J., Majeed, A., Ward, H., & Middleton, L. (2020). Associations of social isolation with anxiety and depression during the early COVID-19 pandemic: A survey of older adults in London, UK. *Frontiers in Psychiatry,* 11, 591120. https://doi.org/10.3389/fpsyt.2020.591120

Sabey, A., Seers, H., Chatterjee, H.J., & Polley, M. (2022). *How can social prescribing support older people in poverty? A rapid scoping review of interventions.* National Academy for Social Prescribing. https://socialprescribingacademy.org.uk/media/ttvbo20q/nasp-evidence-review-older-people.pdf

Salway, S., Such, E., Preston, L., Booth, A., Zubair, M., Victor, C., & Raghavan, R. (2020). Reducing loneliness among migrant and ethnic minority people: a participatory evidence synthesis. *Public Health Research*, 8(10). https://doi.org/10.3310/phr08100

Shvedko, A., Whittaker, A. C., Thompson, J. L., & Greig, C. A. (2018). Physical activity interventions for treatment of social isolation, loneliness or low social support in older adults: A systematic review and meta-analysis of randomized controlled trials. *Psychology of Sport and Exercise,* 34, 128–137. https://doi.org/10.1016/j.psychsport.2017.10.003

Sieck, C.J., Sheon, A., Ancker, J.S., Castek, J., Callahan, B., & Siefer, A. (2020). Digital inclusion as a social determinant of health. *NPJ Digital Medicine*, 4(1). https://doi.org/10.1038/s41746-021-00413-8

Smallfield, S., & Lucas Molitor, W. (2018). Occupational therapy interventions supporting social participation and leisure engagement for community-dwelling older adults: A systematic review. *American Journal of Occupational Therapy,* 72(4), 204190020p1–7204190020p8. https://doi.org/10.5014/ajot.2018.030627

Smith, T. B., Workman, C., Andrews, C., Barton, B., Cook, M., Layton, R., Morrey, A., Petersen, D., & Holt-Lunstad, J. (2021). Effects of psychosocial support interventions on survival in inpatient and outpatient health care settings: A meta-analysis of 106 randomized controlled trials. *PLoS Medicine,* 18(5), e1003595. https://doi.org/10.1371/journal.pmed.1003595

Stanley, I. H., Conwell, Y., Bowen, C., & Van Orden, K. A. (2014). Pet ownership may attenuate loneliness among older adult primary care patients who live alone. *Aging & Mental Health,* 18(3), 394–399. https://doi.org/10.1080/13607863.2013.837147

Steptoe, A., Shankar, A., Demakakos, P., & Wardle, J. (2013). Social isolation, loneliness, and all-cause mortality in older men and women. *PNAS*, 110, 5797–5801. https://doi.org/10.1073/pnas.1219686110

Stolz, E., Mayerl, H., & Freidl, W. (2021). The impact of COVID-19 restriction measures on loneliness among older adults in Austria. *European Journal of Public Health*, 31(1), 44–49. https://doi.org/10.1093/eurpub/ckaa238

Strutt, P. A., Johnco, C. J., Chen, J., Muir, C., Maurice, O., Dawes, P., Siette, J., Botelho Dias, C., Hillebrandt, H., & Wuthrich, V. M. (2021). Stress and coping in older Australians during COVID-19: Health, service utilization, grandparenting, and technology use. *Clinical Gerontologist*, 45(1), 106–119. https://doi.org/10.1080/07317115.2021.1884158

Sutin, A., Stephan, Y., Luchetti, M., & Terracciano, A. (2020). Loneliness and risk of dementia. *The Journals of Gerontology: Series B*, 75(7), 1414–1422. https://doi.org/10.1093/geronb/gby112

Taheri Zadeh, Z., Rahmani, S., Alidadi, F., Joushi, S., & Esmaeilpour, K. (2021). Depression, anxiety and other cognitive consequences of social isolation: Drug and non-drug treatments. *International Journal of Clinical Practice*, 75(12), e14949. https://doi.org/10.1111/ijcp.14949

Targeting Isolation (2023). CARED Conversation Starters. https://www.targetingisolation.com/post/cared-conversation-starters

Thompson, C. & Halcomb, E. (2023) The contribution of primary care practitioners to interventions reducing loneliness and social isolation in older people – An integrative review. *Scandinavia Journal of Caring Sciences*, 37(1), 1-17. https://doi.org/10.1111/scs.13151

Tomer, A., Fishbane, L., Siefer, A., & Callahan, B. (2020). *Digital prosperity: How broadband can deliver health and equity to all communities.* Metropolitan Infrastructure Initiative: Brookings Institution. https://www.brookings.edu/wp-content/uploads/2020/02/20200227_BrookingsMetro_Digital-Prosperity-Report-final.pdf

Toohey, A. M., Hewson, J. A., Adams, C. L., & Rock, M. J. (2018). Pets, social participation, and aging-in-place: Findings from the Canadian Longitudinal Study on Aging. *Canadian Journal on Aging,* 37(2), 200–217. https://doi.org/10.1017/s0714980818000107

Tymoszuk, U., Perkins, R., Fancourt, D., & Williamon, A. (2020). Cross-sectional and longitudinal associations between receptive arts engagement and loneliness among older adults. *Social Psychiatry and Psychiatric Epidemiology,* 55(7), 891–900. https://doi.org/10.1007/s00127-019-01764-0

U.S. Surgeon General's Office. Office of the U.S. Surgeon General; Washington, DC: 2023. *Our epidemic of loneliness and isolation: The U.S. Surgeon General's advisory on the healing effects of social connection and community*. https://www.hhs.gov/sites/default/files/surgeon-general-social-connection-advisory.pdf

Upstream Lab. (no date.) *Screening for poverty and related social determinants and intervening to improve knowledge of and links to resources (SPARK) Study - findings*. https://docs.google.com/document/d/1uEGP6g7aQdMb26IluJ6ZbkeT7dSFC7BYzm1T0F1dRu0/edit

van Tilburg, T. G., Steinmetz, S., Stolte, E., van der Roest, H., & de Vries, D. H. (2021). Loneliness and mental health during the COVID-19 pandemic: A study among Dutch older adults. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences,* 76(7), e249–e255. https://doi.org/10.1093/geronb/gbaa111

Veazie, S., Gilbert, J., Winchell, K., Paynter, R., & Guise, J. M. (2019). *Addressing social isolation to improve the health of older adults: A rapid review.* Agency for Healthcare Research and Quality. http://www.ncbi.nlm.nih.gov/books/nbk537909/

Veronese, N., Galvano, D., D'Antiga, F., Vecchiato, C., Furegon, E., Allocco, R., Smith, L., Gelmini, G., Gareri, P., Solmi, M., Yang, L., Trabucchi, M., De Leo, D., & Demurtas, J. (2021). Interventions for reducing loneliness: An umbrella review of intervention studies. *Health and Social Care in the Community*, 29(5), e89–e96. https://doi.org/10.1111/hsc.13248

Whear, R., Campbell, F., Rogers, M., Sutton, A., Robinson-Carter, E., Sharpe, R., Cohen, S., Fergy, R., Garside, R., Kneale, D., Melendez-Torres, G.J., & Thompson-Coon, J. (2023). What is the effect of intergenerational activities on the wellbeing and mental health of older people?: A systematic review. *Campbell Syst Rev.* 3;19(4):e1355. https://doi.org/10.1002/cl2.1355

Wister, A. V., & Kadowaki, L. for the Federal/Provincial/Territorial (FPT) Forum of Ministers Responsible for Seniors. (2021). *Social isolation among older adults during the pandemic.* Employment and Social Development Canada. https://www.canada.ca/content/dam/canada/employment-social-development/corporate/seniors/forum/covid-19-social-isolation/covid-19-social-isolation-en.pdf

Wong, K., Smith, C., To-Miles, F., Dunn, S., Gregorio, M., Wong, L., Huynh, P., & Hung, L. (2022). Timely considerations of using the De Jong Gierveld Loneliness Scale with older adults living in long-term care homes: A critical reflection. *Journal of Long-Term Care*, 163–172. https://doi.org/10.31389/jltc.141

World Health Organization. (2003). *Social determinants of health: The solid facts.* https://iris.who.int/bitstream/handle/10665/108082/e59555.pdf?sequence=1

World Health Organization. (2022). *Physical activity*. https://www.who.int/news-room/fact-sheets/detail/physical-activity

Worsley, A. (2018). The history of loneliness. *The Conversation.* https://theconversation.com/a-history-of-loneliness-91542

Wu, B. (2020). Social isolation and loneliness among older adults in the context of COVID-19: A global challenge. *Glob Health Res Policy,* 5. https://doi.org/10.1186/s41256-020-00154-3

Yang, J., Chu, Y., & Salmon, M. (2023). Predicting perceived isolation among midlife and older LGBT adults: The role of welcoming aging service providers. *The Gerontologist*, 58, (5), 904-912. https://doi.org/10.1093/geront/gnx092

Zhu, V.J., Lenert, L.A., Bunnell, B.E., Obeid, J., Jefferson, M., & Halbert, C. (2019). Automatically identifying social isolation from clinical narratives for patients with prostate cancer. *BMC Medical Informatics and Decision Making*, 43(19). https://doi.org/10.1186/s12911-019-0795-y

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