McMaster University

McMaster HEALTH FORUM

SHARING HEALTH INFORMATION WITH OLDER ADULTS THROUGH ONLINE RESOURCES IN CANADA

EVIDENCE >> INSIGHT >> ACTION

McMaster Health Forum

For concerned citizens and influential thinkers and doers, the McMaster Health Forum strives to be a leading hub for improving health outcomes through collective problem solving. Operating at regional/provincial levels and at national levels, the Forum harnesses information, convenes stakeholders and prepares action-oriented leaders to meet pressing health issues creatively. The Forum acts as an agent of change by empowering stakeholders to set agendas, take well-considered actions, and communicate the rationale for actions effectively.

About citizen panels

A citizen panel is an innovative way to seek public input on high-priority issues. Each panel brings together 10-14 citizens from all walks of life. Panel members share their ideas and experiences on an issue, and learn from research evidence and from the views of others. The discussions of a citizen panel can reveal new understandings about an issue and spark insights about how it should be addressed.

About this brief

This brief was produced by the McMaster Health Forum to serve as the basis for discussions by a citizen panel on how to share health information with older adults through online resources. This brief includes information on this topic, including what is known about:

- the underlying problem;
- three possible options to address the problem; and
- potential barriers and facilitators to implement these options.

This brief does not contain recommendations, which would have required the authors to make judgments based on their personal values and preferences.

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Key messages

What's the problem?

Sharing health information with older adults through online resources is challenging because:

- many older adults don't know how to look for good health information online, some don't use the internet at all, and others rely on friends or family members for online access;
- online resources vary in terms of quality, ease-of-use, and how up-to-date and comprehensive they are, which means that older adults can be misled by the information presented online;
- older adults have complex care needs, making their information needs similarly complex; and
- few programs exist to support older adults' use of online resources, and health system arrangements (e.g. how healthcare professionals are trained) complicate things further.

What do we know about three options for addressing the problem?

- **Option 1:** Developing an online one-stop shop for timely access to the best available health information
  - No directly relevant research evidence was found to support option 1, although some evidence supports the use of the internet to provide healthcare programs

- **Option 2:** Delivering community outreach programs to improve older adults' e-health and digital literacy
  - No evidence was found to support option 2 although some research suggests that it is important to consider which are the most appropriate approaches for delivering outreach programs (e.g. face-to-face workshop vs. other means)

- **Option 3:** Introducing training for healthcare providers to ensure they can support their patients' use of online resources for health information
  - Little evidence was found to support option 3, although some research suggests that continuing medical education can improve practice and change behaviour, and that patient navigators can be helpful additions to a care team (and thus could take on additional patient support roles related to online resource use)

What implementation considerations need to be kept in mind?

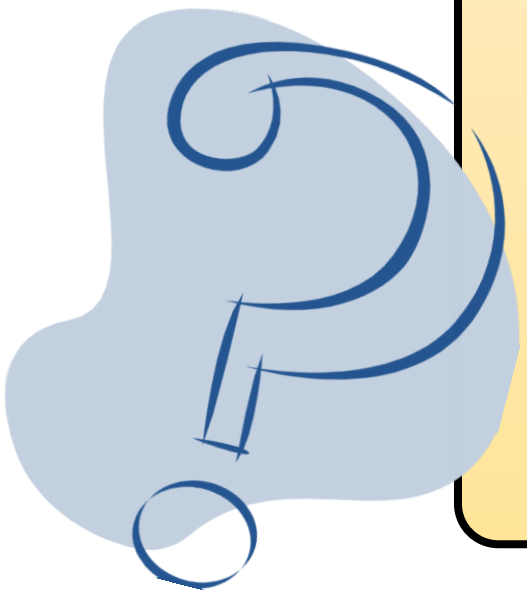
- Barriers to implementing these options might include challenges in changing the online habits of older adults, and the behaviours of healthcare providers, as well as a lack of organizational and financial capacity to pursue these new strategies in Canada
- Facilitators to implementing these options might include increasing use of the internet for health information, patients' interest in and providers' capacity to deliver adult learning courses, and healthcare providers' openness to enabling their patients to make decisions about care

Questions for the citizen panel

>> We want to hear your views about the problem, three options for addressing it, and how we can move forward.

This brief was prepared to stimulate discussion during the citizen panel. The views, experiences and knowledge of citizens can make a significant contribution in finding viable solutions to the problem.

More specifically, the panel will provide an opportunity to explore the questions outlined in Box 1. Although we will be looking for common ground during these discussions, the goal of the panel is not to reach consensus, but to gather a range of perspectives on this topic.



Box 1: Questions for the citizen panel

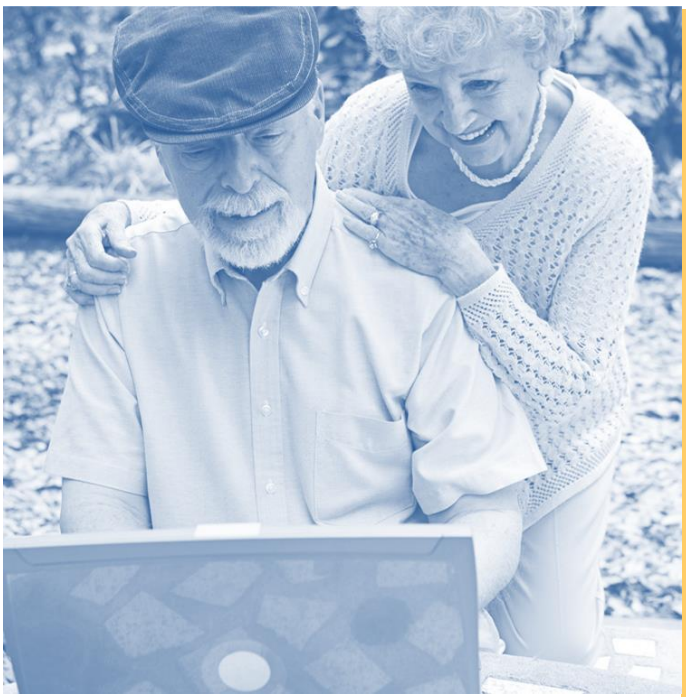
What are the most important challenges facing older adults (and their informal/family caregivers) when using online resources to find health information?

What are your views about the three proposed options?

>> Option 1: developing an online one-stop shop for older adults and their informal/family caregivers that provides timely access to the best available health information;

>> Option 2: developing and implementing community outreach programs that aim to improve older adults' (and their informal/family caregivers') e-health and digital literacy; and

>> Option 3: developing and implementing healthcare provider training programs that ensure providers are equipped with the skills and knowledge to be able to support their patients' use of online resources.



Internet use is increasing among older adults, as is the use of online resources to access health information. However, there are many online resources to choose from, and there can be variations in their quality, ease of use, and whether they are up-to-date and comprehensive.

The context: Why is it important to consider how health information is shared with older adults through online resources?

>> As the number of older adults who use the internet for health information grows, it becomes increasingly important to ensure they have easy access to the best available information.

The internet is increasingly becoming one of the primary resources for citizens looking for information about their health, about the health of their communities, and about their health system more broadly.

According to the 2012 Canadian Internet Use Survey, 83% of Canadian households have access to the internet at home. At the same time, there has been an increase in the number of devices used to access the internet (e.g., personal smartphones like a BlackBerry, tablets like an iPad, laptops and desktop computers), and in the number of people using high-speed cable connections instead of telephone dial-up connections, enhancing speedy and reliable access to

the full range of online resources.(2) Internet use is growing among all Canadians, with a 12% increase in the number of people reporting using it 'at least once a day' from 2005 until 2009, and a 3% increase over this same time period among those who are 65 years of age or older (from 63% to 66%).(2;3) Among adults who were aged 55 to 65 at the time this survey was conducted (many of whom are now in the older adults category themselves), the number increased by 10% (from 59% to 69%). And these numbers are already well out of date.

While the most popular reason for using the internet at home continues to be checking email (reported by 93% of those surveyed), the proportion of Canadians reporting that they use the internet to search for medical or health-related information increased from 58% to 70% between 2005 and 2009.(4;5) The results of an earlier survey from 2007 were similar, suggesting that at least two-thirds of all Canadian internet users consult the web to find information about their health.(6;7) This same survey also found that, while younger generations (i.e. those under 45 years of age) often use social networking sites to socialize with peers, older adults tend to use these avenues to obtain and share different types of information.(7) Some of these usage statistics are summarized below in Table 1.

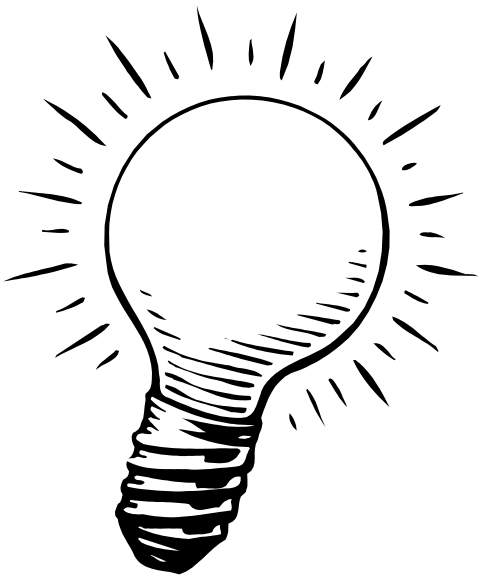


Table 1. An overview of internet use in Canada, 2005-2009

Internet behaviour	Year reported		
	2005	2007	2009
Percentage of all Canadians using the internet at least once a day	64	68	75
Percentage of Canadians aged 55-64 using the internet at least once a day	59	62	69
Percentage of Canadians aged 65 and older using the internet at least once a day	63	64	66
Percentage of Canadians searching for medical or health-related information at home	58	59	70
Percentage of Canadians accessing the internet using a telephone connection	44	39	33
Percentage of Canadians accessing the internet using a cable line	50	53	53

* Source: Statistics Canada, Canadian Internet Use Survey: Individual and household internet use (**link**), accessed 2014-09-29

Overall, these numbers paint a clear picture of the rise in internet use among older adults (and the population as a whole), and of the increasing use of the internet to find health information. Given these trends, we expect the percentages to be much higher today. These shifts are happening alongside changes in the relationship between patients, their doctors and other healthcare providers. In particular, patients are now encouraged to become actively engaged in their care by participating in self-managing their conditions when possible, in decisions about their treatment, and in decisions about where and how they receive care.(8-10)

Recent research evidence suggests that patient involvement in decision-making may lead to improved health outcomes and reduce health disparities,(11) and that sharing health information through new technologies such as the internet can support improvements in shared decision-making (i.e. by empowering patients with better access to health information that they can then use to inform conversations they have with health professionals about their care).(12) In addition to these measurable outcomes, this type of engagement has also been argued to be a patient right, regardless of any potential health benefits. In particular, many organizations are advocating that, as active participants in their own care, patients have the right to: 1) be well informed; 2) access consumer education; 3) participate in decision-making affecting their health; 4) be respected as individuals with a major responsibility for their own healthcare; and 5) have equal access to healthcare regardless of economic status, sex, age, creed,

ethnic origin and location.(13) As patients become more involved in healthcare, it is increasingly important that the best available health information is widely accessible and shared in ways that are easy-to-use, given both the potential benefits of doing so, and the fact that it may be viewed by some as a right.

There are thousands (if not millions) of websites and other online resources that can be used to access health information, and health information is increasingly moving to online-only formats.(14) Some examples of available online resources that have been designed to provide health information to citizens, including older adults are:

- Cochrane summaries site, which provides summaries of evidence for citizens

  >> summaries.cochrane.org
- Evidently Cochrane

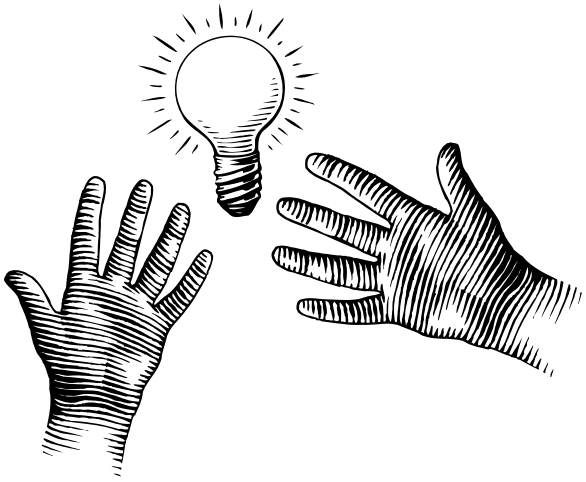
  >> www.evidentlycochrane.net
- Mayo Clinic

  >> www.mayoclinic.org
- McMaster Optimal Aging Portal

  >> www.mcmasteroptimalaging.org
- NHS Choices

  >> www.nhs.uk
- WebMD (including WebMD mobile)

  >> www.webmd.com



Some popular websites may be based on no, or biased, scientific research. Furthermore, some sites can be owned by for-profit firms whose purpose is to make money from the site's users, or have a mix of both a profit objective and a public good objective.(15) The many types of online resources and websites can make weeding out the good from the bad, as well determining the intentions of those presenting the information, even more challenging.

Glossary

Digital literacy

The ability to access and use digital media software and hardware (e.g. personal smartphones, tablets, laptops and desktop computers), to understand digital media content, and to post new content with digital technology (e.g., posting messages or questions, pictures and videos) (1)

Health information

Research evidence about clinical programs, services and drugs, about public health and about health systems, and non-research based information on these same topics (e.g. the opinions of experts in the field, or the experiences of patients)

Health/e-health literacy

An individual's ability to search for, successfully access, comprehend, and appraise desired health information from electronic sources, and to then use such information to attempt to address a particular health problem

Informal/family caregivers

A family member, spouse or friend that provides any type of physical and/or emotional care to an ill or disabled loved one at home

Older adults

Adults that are 50 years of age or older

One-stop shop

An online resource that has the full range of relevant information, including research evidence, about a particular topic (e.g. health) in one place

Online resources

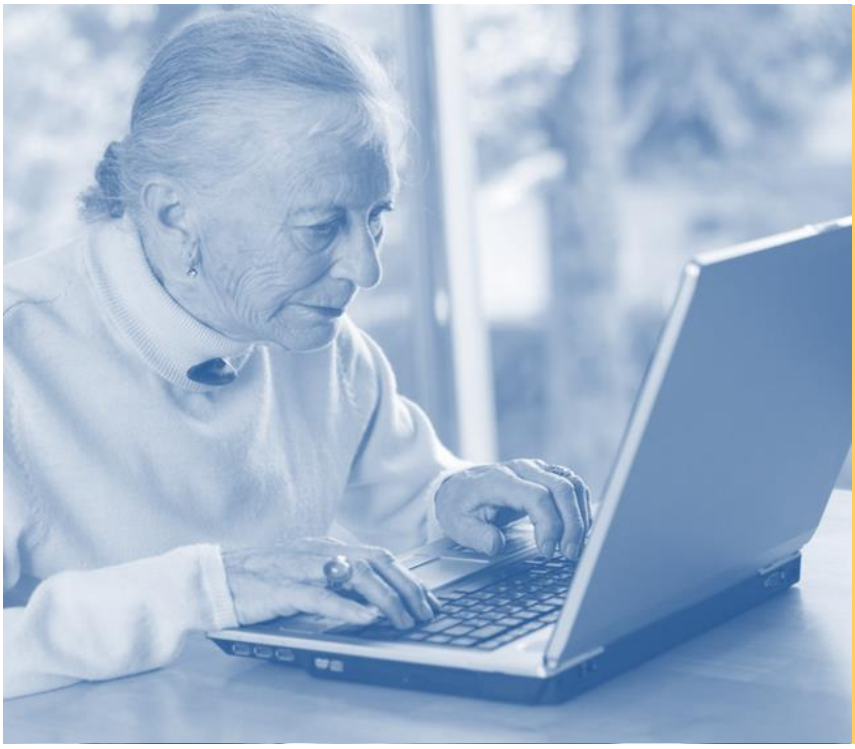
Websites that are intended to provide users with a source of information

Optimal aging

Ensuring that we remain healthy, active and engaged for as long as possible as we age, while managing any existing health conditions

There have been debates in recent years about how to encourage the public to use recognized and reliable specialized sites to search for health information,(16) but there are no clear answers about how to achieve this. This is particularly challenging given that members of the public rarely double-check the sources they are consulting for health information, and often rely on sensational advertisements and celebrity endorsements to make decisions.(13) In addition, we still know little about the best way to share health information, specifically with older adults (and their informal/family caregivers) through online resources.

This brief was prepared to support the discussions of a citizen panel about sharing health information with older adults through online resources in Canada. The input from the citizen panel will be widely shared in order to inform the efforts of policymakers, managers and professional leaders who make decisions about our health system. In the following sections of the brief, we explore why it is challenging to share online health information with older adults. We then explore three options (among many) that could be used to improve the sharing of health information through online resources. We conclude with a discussion about the potential barriers and facilitators for moving forward.



Most programs, and the health system as a whole, are not designed to support older adults' use of online health information.

The problem: Why is sharing health information with older adults through online resources challenging?

>> The internet can be a very useful way to share health information with older adults, however, many don't know how and where to look for the highest quality and most trustworthy sources.

Some older adults don't use the internet, and some rely on others to find health information online

While there is an increase in the number of older adults using the internet, as well as an increase in the number using it to search for health information, it is still clear from available data in Canada that not all older adults are online.(2;3) This means that older adults who are internet users have access to information that is not available to non-users. This creates a challenge in ensuring equal access to the same resources for all Canadians, and means that certain groups of older adults may be harder to reach in attempts to share the best available health information, particularly as many organizations (including government) move to online-only formats for sharing information.(14)

Some older adults may rely on their family members and friends to obtain health information online for them, which could partially overcome this challenge. However, this relationship could also create challenges in ensuring that efforts to share health information are targeted correctly at those who will actually be doing searches for the information online - the individual using the information themselves, and those searching on behalf of someone else.

A great variety of online resources provide health information

Despite the existence of specialized health websites like those listed earlier in this brief, the majority of people (77%) using the internet to access health information begin with search engines (e.g. Google and Yahoo), while far fewer (13%) begin with looking at a site that specializes in health information, such as WebMD.(17) While using search engines like Google is easy and convenient, relying solely on them to find health information may lead individuals to sources of information that vary in a number of ways. First, some online resources are of higher 'quality' than others,(18) and the extent to which they present unbiased information about health issues, including the underlying causes of different diseases and the best available treatments, can vary. For example, an online resource may be funded by a company that is trying to sell something (like a prescription drug), and it may not always be clear if its aim is to provide information as a service (i.e. for free) or commercially (i.e. as a way to make money from users of the online resource). On the whole, this increases the risk to those using the internet for health information of being misled by lower-quality sites, which could lead to poor (and even harmful) judgments about their health and healthcare.

Second, some online resources are easier to use than others, given that the targeted audiences can range from the general public to clinicians and experts.(18) For example, the Cochrane

Library, while serving as an important source of high-quality research evidence about the benefits of particular treatment options (including those that would be beneficial for older adults), was set up as a resource for health professionals and researchers - not the general public. While recent work has begun to make the information more 'user-friendly' in the Cochrane Library (e.g. through the Cochrane Consumer Network, **consumers.cochrane.org**), the skills required to find, understand and use the information in this online resource have created a barrier in the past.

Third, some online resources are kept up-to-date with the most recent information about health topics, while others are rarely updated. This can be a problem because what is understood and recommended as 'best practice' for treating particular health conditions may change over time as new research is conducted and new findings emerge. This poses a risk to those consulting outdated sources of information, as they may be learning about treatments that are no longer considered to be beneficial (and may even have been found to cause harm).

Fourth, some online resources provide access to the full range of research evidence and information about a particular health topic, while others present only a small selection of the available information. An online resource with only select information about a health issue (e.g., only presenting reports and studies from a single organization) carries the risk that important relevant information will be overlooked. It also means that users will be unable to determine how the selected health information presented fits into the context of everything that an individual may need to know in order to make a good decision about his or her health.

Older adults face particular challenges in using online resources

In addition to the above, there may also be challenges due to the characteristics of older adults. Specifically, individuals may lack 'digital literacy' and the skills to use the internet to find the best sources of health information. This is especially true for older generations as the internet is a relatively recent addition to the world of technology. Additionally, those from lower-income groups (which tend to include seniors, recent immigrants who don't speak English or French as a first language, First Nations communities and persons with activity limitations) tend to have less access to online resources.(2;14;19-21) This challenge is complicated by the fact that older adults can have difficulties understanding health information.(22)

Additionally, engaging with online resources requires older adults to: have an understanding about how to use a personal computer or personal mobile device (including applications that are run on these devices);(14) have an understanding about how to effectively use the internet to 'surf the web';(14;20;23) and possess a working knowledge of the language associated with

the internet, as well as the language associated with the technologies used to provide access to the internet (i.e. personal smartphones, tablets, laptops and desktop computers).(24) Also, many online resources for health information are not 'senior-friendly' given the complexity of the language used, and their failure to account for factors such as education and age-related physical barriers (e.g. declining eye-sight) in their design, layout and general presentation of content.(24)

Older adults also increasingly have complex care needs

As the population ages and the number of people living with chronic diseases increases, more older adults than ever find themselves living with a complex mix of chronic health problems. This can make everything from managing diet to making sure the right prescription drugs are taken at the right time of day seem like an overwhelming task. Additionally, many online resources focus on a single condition (e.g., arthritis or diabetes) and do not provide health information in the context of someone who must deal with and make decisions about multiple chronic health conditions (e.g., what to do when you have arthritis, diabetes *and* high blood pressure). This makes it challenging to search for the best available health information given the many often interrelated healthcare needs of older adults with multiple chronic health conditions.

Existing programs and services don't support older adults in finding and using online resources

Despite the many examples of online resources for older adults looking for health information,(22) there are few supports or programs available in Canada to ensure older adults (and their informal/family caregivers) know about:

- which of the available online resources can be trusted to provide the highest-quality and most trustworthy health information (particularly those that present this information for use by the general public);
- the types of health information that are contained in the range of online resources currently available; and
- the ways in which existing online resources can be used in order to quickly access the best available health information.

Health system arrangements complicate matters further

Improving health information sharing is also challenging due to the current design of the health system. The challenges lie in how care is delivered, how it is paid for, and how the provision of health information is regulated across the country.

How care is delivered

The care provided to older adults, many with a complex mix of chronic health conditions managed with assistance from their family doctor, doesn't usually include supports to equip them with the ability to find and use the best available health information from the many online resources available. Furthermore, family doctors and other healthcare professionals aren't expected to support and educate their patients in the use of online resources to find information relevant to their healthcare needs. Nevertheless, patients are shifting from passive recipients of care to active participants in improving their health, which makes access to good health information important.(8;10)

How care is paid for

Payments to health organizations and providers aiming to enhance the use of the internet to improve care have focused solely on ensuring increased use of electronic medical records by healthcare professionals in their clinical settings. There are no dedicated funds to develop and support the use of a 'one-stop shop' for patients to find and use the best available health information, or to integrate such a one-stop shop into an electronic medical record that patients themselves can access (sometimes called a personal health record).

How the provision of health information is regulated

The internet remains fragmented, with little integration to enable efficient one-stop shopping for the best available health information. Governments at all levels in Canada have done little to support or coordinate the integration of a range of services into online formats (including services related to health),(25) despite the movement of many sources of health information into online-only formats.(22) Initiatives such as **www.healthycanadians.gc.ca** and the Public Health Agency of Canada's seniors website (**http://www.phac-aspc.gc.ca/seniors-aines/index-eng.php**) have been established to provide the public with information about health, although they do not systematically and transparently provide one-stop shopping for the full range of the best available health information.

Furthermore, there is no regulation in place to ensure online resources are of high quality and can be trusted as legitimate sources of information about patient health, community health and the health system, leaving citizens to determine this on their own. This contrasts with the approach taken by Health Canada to regulate (and prohibit) direct-to-consumer advertising of prescription drugs in Canada, given the potential harms to patients.(26)

Finally, healthcare professional training and licensing (e.g. the regulations that determine who is able to practice as a healthcare professional in Canadian provinces and territories), as well as programs that ensure existing health professionals' training is up to date do not include elements focused on how to support patients' use of online resources to find and use health information. This suggests that front-line practitioners (e.g. doctors and nurses), may not be equipped to help their patients navigate the complex terrain of the internet for the best available health information to support optimal aging.

Glossary (continued)

Blog
A website that provides posts containing information or details of discussions, usually focused on a specific topic, with the most recent post presented at the top of the web page

Community outreach programs
Programs delivered by health professionals in the communities where people live and work, rather than in healthcare settings such as primary care clinics and hospitals

Patient navigator
A healthcare professional, usually a nurse or social worker trained to help navigate the health system on behalf of, or in cooperation with, a patient

Social media
Internet-based applications that build on advances in technology that allow users to generate and create web content, and that allow for the exchange of this user-generated content (e.g., Facebook)

Systematic review
A summary of studies addressing a clearly formulated research question that uses systematic and explicit methods to identify, select and appraise research studies and to synthesize data from the included studies

User-friendly summary
An easy-to-read summary of a systematic review prepared for a lay-audience that highlights the objectives of the review, the research question asked and the main findings

We have chosen three options (among many) for which we are seeking public input.

Options: How can we address the problem?

>> To promote discussion about the pros and cons of potential solutions, we have selected three options for improving the sharing of health information with older adults through online resources.

Many options could be selected as a starting point for discussion. We have selected three options (among many) for which we are seeking public input. They were developed with input from a range of key informants as a response to the problems highlighted above, and include:

1. developing an online one-stop shop for older adults and their informal/family caregivers that provides timely access to the best available health information;
2. developing and implementing community outreach programs that aim to improve older adults' (and their informal/family caregivers') e-health and digital literacy; and
3. developing and implementing healthcare provider training programs that ensure providers are equipped with the skills and knowledge to be able to support their patients' use of online resources.

The three options do not have to be considered separately. They could be pursued together or in sequence. New options could also emerge during the discussions. In the following sections, we examine what is known about the pros and cons for each option, by summarizing the findings of systematic reviews of the research literature.

Not all systematic reviews are of high quality. We present the findings from systematic reviews along with an appraisal of the quality of each review.

- High-quality reviews: conclusions drawn from these reviews can be applied with a high degree of confidence.
- Medium-quality reviews: conclusions drawn from these reviews can be applied with a medium degree of confidence.
- Low-quality reviews: conclusions drawn from these reviews can be applied with a low degree of confidence.

Option 1 – Developing an online one-stop shop for older adults and their informal/family caregivers that provides timely access to the best available health information

The first option aims to improve access to the best available health information by housing a comprehensive collection of this information in a single website - or one-stop shop. This would enable older adults and their informal/family caregivers to save time by only having to search one source for the health information that is most relevant to them.

The overall goal of option 1 is to establish a comprehensive online searchable site that brings together the best available health information for older adults, as determined by recognized experts in the field. The resource would allow older adults to find answers to their clinical questions (i.e. questions about 'my health,' which are likely of most interest to those searching for health information), their public health questions (i.e. questions about 'my community's health') and their health system questions (i.e. questions about how to 'improve what my health system can do for me'). The answers could be presented in any of three forms.

- One form is short, easy-to-read documents (i.e. user-friendly summaries) of scientific evidence from high-quality sources that address clinical, public health and health system questions, and contain messages that are ready to be acted on. The summaries would focus on the best available health-related research with implications for how to stay healthy, active and engaged, and how to manage health conditions as we grow older.

- A second form is assessments of existing 'consumer-friendly' and high-quality online resources (e.g. blogs, podcasts, videos and information sheets) that are free to access, not funded by a company trying to sell something (like a drug company, a technology/medical device company, or a natural/herbal remedy company), and that include messages you can act on related to optimal aging. The list of online resources that don't meet these standards would be included so users can make informed comparisons.
- A third form is blog posts written by experts that present easy-to-understand information on some of the most recent and best evidence on specific topics. The authors would explain how the research was conducted, whether the science was done well or poorly, and provide the 'bottom-line' messages based on the best available or strongest scientific evidence cited in the blog. The authors would also say whether they have confidence in the scientific evidence, whether it is weak or uncertain, and what this might mean for the subject of the blog post. Users would also be given the opportunity to log in and comment on the blog and to share it using a variety of social media.

No compelling research evidence directly relevant to option 1 was identified when preparing this brief, although some evidence was found that supported the use of the internet as a way to deliver healthcare programs. Details are provided in the summary table below.

Option 2 – Developing and implementing community outreach programs that aim to improve older adults' (and their informal/family caregivers') e-health and digital literacy

The second option we considered aims to improve older adults' and their informal/family caregivers' knowledge about the 'hardware' needed to access health information through online resources (i.e. personal smartphones, tablets, laptops and desktop computers), the programs used on the hardware (i.e. windows, iOS, Android, and web browsers such as Google Chrome), the terms and language associated with these technologies, and the skills to use them. The option also aims to improve knowledge about the best sources to consider, as well as the skills to find and use them for searches about health information.

Community outreach can take many forms, and we have chosen two approaches for which we seek input: face-to-face workshops (which could be held at local community centres or public libraries and facilitated by local seniors), and online workshops/webinars that are free, open to

the public and delivered in an online forum. These programs would be flexible, responsive to local needs, and aim to ensure older adults (and their informal/family caregivers) can:

- engage with online resources using a personal smartphone, tablet, laptop or desktop computer, and navigate the internet in search of health information;
- develop a working knowledge of the language associated with the internet (i.e., digital literacy), as well as the language associated with the technologies and devices developed to provide access to the internet; and
- have a firm understanding of the range of online resources that are currently available and the types of information contained in these resources, and have the skills necessary to consult the best and most trustworthy of these resources to access health information relevant to their own lives.

As with option 1, no compelling research evidence that was directly relevant to option 2 was found when preparing this brief. However, the research evidence identified suggests that it is likely important to think about which settings are appropriate for delivering face-to-face workshops, and which delivery approaches are appropriate for both face-to-face and online workshops. Full details can be found in the summary table below.

Option 3 – Developing and implementing healthcare provider training programs that ensure providers are equipped with the skills and knowledge to be able to support their patients' use of online resources

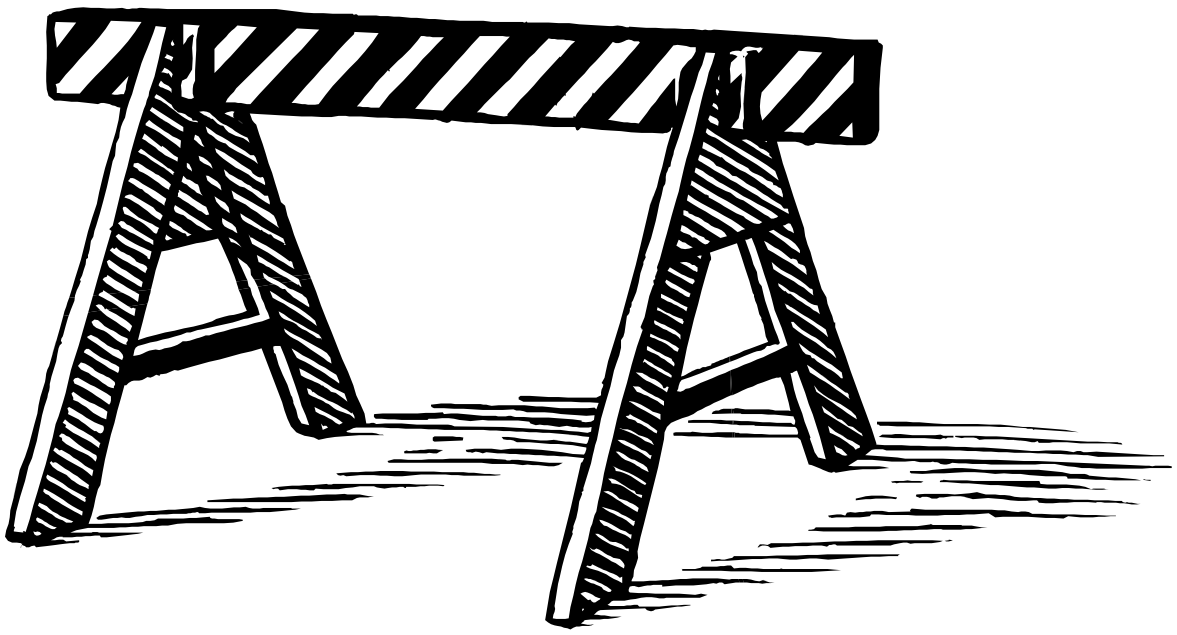
The third option aims to change the way health professionals provide care, so that additional attention is given to having conversations with their older patients about the use of the highest-quality and most trustworthy online resources for health information. This could include one, all or a mix of the components discussed below.

The first and second components would focus on training healthcare professionals so that they have the knowledge about the best available sources of online health information, and the skills to support and train their older patients to use these resources to find health information (as a complement to the care already provided). The first component would focus on developing modules within existing health professional training programs (e.g. in medical schools and nursing schools) to equip *future* health professionals with the necessary knowledge and skills. In

contrast, the second component would entail developing continuing medical education courses to equip *current* healthcare providers with the same knowledge and skills.

The third component of this option would focus on training 'patient navigators' so that they are able to assist and support older adults (and their informal/family caregivers) to find and use the best available health information. This option would entail expanding the role of existing patient navigators (who support older adults' navigation through the healthcare system as part of several new primary care arrangements in Canada) to include supporting older adults' navigation of the internet to ensure they are able to find and use the best available health information. Adopting this approach may reduce the need to train other healthcare professionals that work with patient navigators (e.g., nurses and physicians), as described in the first and second components above.

Overall, there was little research evidence found to support option 3 when preparing this brief. Some evidence was found to support the benefits of continuing medical education programs, and some evidence was found to support patient navigators (although not directly relevant to supporting the use of online resources, and of lower quality). Full details can be found in the summary table (see page 19).



Option 1 – Developing an online one-stop shop for older adults and their informal/family caregivers that provides timely access to the best available health information

What is known about option 1

No research evidence identified was a 'perfect match', although the following findings from medium-quality reviews suggest the internet is a promising way to share health information.

- Chronic disease self-help programs delivered online may improve patients' symptoms, with moderate improvements in distress associated with chronic disease.(27)
- Mental health programs delivered online to older adults have been found to reduce loneliness,(28) while support provided online to informal/family caregivers was found to improve caregiver confidence and reduce depression.(29)
- Online social support groups and communities that encourage interaction and sharing (which would be included in the blog posts described) are not associated with any negative impacts.(30)

Option 2 – Developing and implementing community outreach programs that aim to improve older adults' (and their informal/family caregivers') e-health and digital literacy

What is known about option 2

No research evidence identified was a 'perfect match', although the following findings from two medium-quality reviews suggests that it is important to consider *where* and *how* community outreach programs are delivered.

- Programs delivered in primary-care settings are more effective at improving health literacy than those delivered in community-care settings for smoking, whereas programs delivered in community care settings are more effective for diet and physical activity.(31)
- Customized and patient-specific approaches (including individualized counselling, self-monitoring and reminders) improved cardiovascular disease patients' understanding of their condition.(32)

Option 3 – Developing and implementing healthcare provider training programs that ensure providers are equipped with the skills and knowledge to be able to support their patients' use of online resources

What is known about option 3

No research evidence was found related to the first component of option 3 (integrating new curriculum into existing health professional training programs related to the use of online resources). Two systematic reviews were found that addressed the second component (continuing education training for existing professionals).

- One high-quality review found that educational meetings and workshops within continuing medical education programs can improve professional practice.(33)
- One medium-quality review found that continuing medical education programs may be effective at establishing new knowledge, attitudes, skills and treatment behaviours among health professionals.(34)

While not a 'perfect match' for the final component, one low-quality review was found that suggested patient navigators can improve some elements of cancer care,(35) although no evidence was found relating to whether they can support the use of online resources effectively.

Implementation considerations

It is important to consider what barriers we may face if we implement the proposed options. These barriers may affect different groups (for example, patients/individuals and healthcare providers), different health organizations or the health system. While some barriers could be overcome, others could be so substantial that they force us to re-evaluate whether we should pursue that option.

The implementation of each of the three options could also be influenced by the ability to take advantage of potential facilitators related to different groups, different health organizations or the health system. A facilitator can facilitate the implementation of an option, and possibly overcome some of the potential barriers identified.

Option 1 – Developing an online one-stop shop for older adults and their informal/family caregivers that provides timely access to the best available health information

Barriers	Facilitators

• Patient/individual
  ○ Older adults may already have an online source they perceive as being 'trustworthy', making a switch to a new resource unlikely
  ○ Older adults may not be aware of a newly available one-stop shop, and may prefer to use general search engines (e.g., Google)
  ○ Older adults may not use the internet to search for health information, which could create a larger divide between internet users and non-users
• Provider
  ○ Providers may feel threatened by an alternative source of information that may challenge or conflict with their own advice
• Organization
  ○ None identified
• System
  ○ None identified
	• Patient/individual
	  ○ Many older adults are already utilizing the internet to search for health information
	• Provider
	  ○ Providers are increasingly aware of their patients' access to and use of online resources to access health information, and in many cases are supportive of patients who are knowledgeable and 'actively engaged' in their care
	• Organization
	  ○ None identified
	• System
	  ○ None identified

Option 2 – Developing and implementing community outreach programs that aim to improve older adults' (and their informal/family caregivers') e-health and digital literacy

Barriers	Facilitators

• Patient/individual
  ○ Older adults who are 'self-learners' may not perceive the need for formalized training in using online resources to find health information
  ○ Some older adults may not have access to the internet or know how to engage with online resources, making the feasibility of an online webinar approach limited
• Provider
  ○ Existing providers and/or community organizations may not have the capacity to deliver programs that aim to improve e-health and digital literacy
• Organization
  ○ Additional funding and human resources are required for organizations to implement a new type of program focused on supporting the use of online resources, and e-health and digital literacy
• System
  ○ There may be a lack of funding to develop and implement a new program
	• Patient/individual
	  ○ Many older adults are interested in engaging in adult education programs focused on a range of topics
	• Provider
	  ○ Many providers have experience with and capacity to educate patients on a number of topics
	• Organization
	  ○ The infrastructure for providing adult learning and education is established in many organizations across Canada
	• System
	  ○ None identified

Option 3 – Developing and implementing healthcare provider training programs that ensure providers are equipped with the skills and knowledge to be able to support their patients' use of online resources

Barriers	Facilitators

• Patient/individual
  ○ None identified
• Provider
  ○ Providers may resist changes to their practice that promote patients' use of alternative sources of information about optimal aging, and that could potentially challenge or conflict with their own advice
  ○ Providers may resist changes if not accompanied by appropriate adjustments to compensation
• Organization
  ○ Organizations that provide training to healthcare providers may resist the introduction of a new program without additional funding to support it
• System
  ○ Given the diverse and decentralized nature of healthcare-provider training programs, it may be difficult for policymakers to establish curriculum standards across disciplines and institutions
  ○ There may be challenges determining which healthcare providers are best suited to delivering these programs, and in which sectors (e.g., primary care, long-term care, public health)
  ○ Integrating a new curriculum in established training programs may pose significant challenges
	• Patient/individual
	  ○ None identified
	• Provider
	  ○ Providers may welcome the opportunity to further facilitate their patients' engagement in their healthcare decisions
	• Organization
	  ○ Many organizations already provide continuing medical education programs to encourage changes in the way providers practice , and are increasingly incorporating a more diverse range of health professionals into practice settings
	• System
	  ○ There is already a shift in Canada towards multidisciplinary care, which may create opportunities for new types of providers to act as patient navigators for online resources

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Conflict of interest

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Merit review

The citizen brief was reviewed by a small number of citizens, other stakeholders, policymakers and researchers in order to ensure its relevance and rigour.

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