A Dementia STRATEGY FOR CANADA

Together We Achieve

2025 ANNUAL REPORT

June 2025

Public Health Agency of Canada
Agence de la santé publique du Canada

Canada

TO PROMOTE AND PROTECT THE HEALTH OF CANADIANS THROUGH LEADERSHIP, PARTNERSHIP, INNOVATION AND ACTION IN PUBLIC HEALTH.
—Public Health Agency of Canada

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To obtain additional information, please contact:

Public Health Agency of Canada
Toll free: 1-866-225-0709
TTY: 1-800-465-7735
E-mail: **phacdementiapolicyaspcpolitiquessurlademence@phac-aspc.gc.ca**

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The Honourable Marjorie Michel
Minister of Health

Minister's message

I am pleased to share this report on the national dementia strategy with Canadians, which highlights the results of key dementia-focused investments by the Government of Canada. Since the strategy's release in 2019, more than $400 million has been invested through the Public Health Agency of Canada (PHAC) and the Canadian Institutes of Health Research (CIHR). These investments support the implementation of the strategy and have helped us move closer to its ambitious aspirations.

Federal investments have advanced dementia research, improved data about dementia in Canada and raised awareness about dementia risk and dementia-inclusive communities. They have improved access to high-quality guidance and supported efforts to enhance the wellbeing of those living with dementia and dementia caregivers.

To date, 86 projects have been undertaken as a result of dementia funding provided by PHAC to partners across Canada. These projects have produced a wide range of resources to advance risk reduction and to support people living with dementia and dementia caregivers. They have helped people living with dementia stay engaged in their communities, promoted the adoption of person-centred care, delivered improved tools to paid and unpaid dementia care providers, and encouraged Canadians to take steps to reduce dementia risk. Several projects have focused on populations at

higher risk of developing dementia or facing barriers to equitable care. They engaged these populations to develop culturally appropriate and culturally safe resources. Collectively, PHAC-funded projects reached individuals more than 236 million times, sharing information, knowledge and resources that continue to be publicly available.

Through CIHR, research investments are improving our understanding of dementia risk factors and effective ways to reduce risk. They are also providing more options for therapies that manage and slow the progression of symptoms, and support the quality of life of those living with dementia and dementia caregivers.

Since the strategy's release, the Government has funded Canada's first national, multi-year dementia public education campaign, reaching millions of individuals. The campaign has delivered clear and effective messages on reducing dementia risk, supporting positive interactions with people living with dementia and challenging stereotypes that contribute to stigma. Resources from that campaign are available through an **online toolkit** for others to continue sharing key messages and information.

As with previous reports, the 2025 report includes data points related to the strategy's objectives which have been tracked over time, providing insight into the state of dementia in Canada. It also shares key findings from PHAC's public opinion research projects. These results suggest that Canadians are increasingly aware that dementia risk can be reduced and more are intentionally taking steps to reduce their risk. At the same time, continued efforts to deepen public understanding of risk reduction and to support healthier environments are needed. The data also show that negative stereotypes about the abilities of people living with dementia remain common in Canada, implying that there is a lack of understanding that symptoms often vary across individuals.

Looking ahead, the challenge of providing quality dementia care will continue as the number of those living with dementia in Canada is expected to increase in tandem with our growing and aging population. As provinces and territories play a central role in providing health care in Canada, they are an important part of the implementation of Canada's national dementia strategy. Many other organizations also play a role. The federal government will continue to collaborate with these partners to advance the strategy's objectives. Together, we can build communities that are more inclusive of those living with dementia, strengthen resources for those providing care, and make meaningful progress that improves quality of life for people living with dementia and those who support them.

While there is still much more work to be done to achieve our ambitious vision, each year has marked continued progress in implementing the national dementia strategy. My sincere thanks to all who have contributed along the way.

Introduction

The 2025 report to Parliament continues to gauge progress toward **the national dementia strategy's** ambitious aspirations by drawing on public health data and public opinion research results related to preventing dementia, advancing therapies, and improving the quality of life of people living with dementia and dementia caregivers.[1,2] It also shares an overview of the reach and results of dementia initiatives at the Public Health Agency of Canada (PHAC) and the Canadian Institutes of Health Research (CIHR) since the release of the strategy in 2019.

Data points on prevention have been updated and expanded to align with the 2024 Lancet Commission on Dementia **findings**, which have added two risk factors. While some risk **trends** show improvement in Canada, others have remained stable or worsened. Data points related to dementia research investment and activity show a steady increase over the longer term. Data points related to quality of life also show improvement. However, a much higher percentage of dementia caregivers continue to experience distress compared to caregivers of those without dementia.

The report shares insights from public opinion research undertaken for PHAC since 2020, noting the nature and degree of change for repeated questions.[3] Results from this research show how Canadians' awareness, knowledge, and attitudes are changing over time. For example, more people now believe dementia has a major impact in Canada (43% in 2024 compared with 35% in 2020). At the same time, the number reporting that they know someone with dementia has remained constant at about three-quarters (74% in 2024 versus 75% in 2020).

Findings from recent research about the unique challenges faced by people living with dementia and dementia caregivers during climate-related events and the tools to support safety and quality of life during these events are also highlighted in this year's report. These events are becoming more common in Canada and can be especially difficult to navigate for those living with dementia.

> “Extreme weather events driven by climate change are increasingly becoming a part of our daily lives. Some populations, such as people living with dementia and dementia caregivers, are more vulnerable to the impacts of climate-related emergencies than others. They can face significant challenges during a climate-related event, particularly when an evacuation is required. We need to work together to ensure that the needs of those living with dementia and their caregivers are considered in all aspects of emergency planning to keep our communities strong, healthy and resilient.”
>
> **– Dr. Natasha Crowcroft, Acting Chief Public Health Officer of Canada**

This annual report shares information that was current as of June 2025.

Dementia is a term used to describe symptoms affecting brain function. It may be characterized by a decline in cognitive (thinking) abilities such as memory, planning, judgement, basic math skills, and awareness of person, place and time. Dementia can also affect language, mood and behaviour, and the ability to maintain activities of daily living. Dementia is not an inevitable part of aging.

Dementia is a chronic and progressive condition that may be caused by neurodegenerative diseases (affecting nerve cells in the brain), vascular diseases (affecting blood vessels like arteries and veins) or injuries. Types of dementia include vascular, Lewy body, frontotemporal, Alzheimer’s disease and mixed (a combination of more than one type). In rare instances, dementia may be linked to infectious diseases, such as Creutzfeldt-Jakob disease.

Figure 1: Overview of Canada's dementia strategy

A DEMENTIA STRATEGY FOR CANADA

Together We Aspire

Vision

A Canada in which all people living with dementia and caregivers are valued and supported, quality of life is optimized, and dementia is prevented, well understood, and effectively treated.

Principles

- Quality of life
- Diversity
- Human rights
- Evidence-informed
- Results-focused

National Objectives	Areas of Focus
Prevent dementia	1. Advance research to identify and assess modifiable risk and protective factors 2. Build the evidence base to inform and promote the adoption of effective interventions 3. Expand awareness of modifiable risk and protective factors and effective interventions 4. Support measures that increase the contribution of social and built environments to healthy living and adoption of healthy living behaviours
Advance therapies and find a cure	1. Establish and review strategic dementia research priorities for Canada 2. Increase dementia research 3. Develop innovative and effective therapeutic approaches 4. Engage people living with dementia and caregivers in the development of therapies 5. Increase adoption of research findings that support the strategy, including in clinical practice and through community supports
Improve the quality of life of people living with dementia and caregivers	1. Eliminate stigma and promote measures that create supportive and safe dementia-inclusive communities 2. Promote and enable early diagnosis to support planning and action that maximizes quality of life 3. Address the importance of access to quality care, from diagnosis through end of life 4. Build the capacity of care providers, including through improved access to and adoption of evidence-based and culturally appropriate guidelines for standards of care 5. Improve support for family/friend caregivers, including through access to resources and supports

Pillars

Collaboration • Research and innovation • Surveillance and data • Information resources • Skilled workforce

Reporting on the results of federal investments in dementia

Since the release of the national dementia strategy in 2019, the Government of Canada has invested more than $400 million to support progress on the strategy's objectives (see Figure 1). This investment includes almost $150 million from the Public Health Agency of Canada (PHAC) and more than $256 million through the Canadian Institutes of Health Research (CIHR).[4]

Dementia investments through the Public Health Agency of Canada

PHAC has the lead federal role in the implementation of the national dementia strategy. It manages the **Dementia Community Investment (DCI)**, and was responsible for managing the **Dementia Strategic Fund (DSF)** and the **Enhanced Dementia Surveillance Initiative (EDSI)** investments from 2019 to 2024. The DSF included funding for a national public education campaign and for public opinion research to improve our understanding of dementia in Canada. Beyond managing these investments, PHAC produces the annual reports to Parliament on the strategy and provides secretariat support for the Ministerial Advisory Board on Dementia. It also provided $31 million in funding since 2019 to the **Centre for Aging + Brain Health Innovation (CABHI)**, an organization that fosters collaboration on promising innovations in older adult care settings, academia, industry, and entrepreneurial ventures.

PHAC funds the **Canadian Dementia Learning and Resource Network** (CDLRN), led by Schlegel-University of Waterloo Research Institute on Aging. CDLRN is a knowledge hub and community of practice that facilitates information sharing, learning, collaboration, as well as synthesis and dissemination of best practices and project findings to support dementia activity across Canada.

> "With CDLRN we are not isolated in our projects, and learn from each other, taking what we learn, to build strength in our communities."
>
> **– Individual from a DCI-funded project**

Between 2020 and 2025, CDLRN hosted 30 workshops and training sessions and 6 webinars to promote DCI project innovations and share knowledge, reaching more than 5,000 individuals. There have been nearly 17,000 web interactions on the CDLRN website, which has more than 60 resources, including some available in both English and French.

Working with project partners to advance progress on the national dementia strategy

The 86 projects funded to date through the DCI, the DSF, and the EDSI have been designed to:

- increase awareness, including knowledge of risk factors and how to create dementia-inclusive communities (25 projects);
- improve access to high-quality dementia guidance (11 projects);[5]
- enhance provincial/territorial online dementia information resources (2 projects);
- improve understanding of the prevalence and effects of dementia on our communities (15 projects);
- improve the health and wellbeing of people living with dementia and dementia caregivers (30 projects);
- support the collaboration among funded projects to share findings and best practices across Canada (1 project); and
- update the World Health Organization risk reduction guidelines and support the implementation of the *Global Action Plan on the Public Health Response to Dementia*, including by assisting Member States to participate in the associated Global Dementia Observatory (2 projects).

FIGURE 2: Map of PHAC dementia project locations

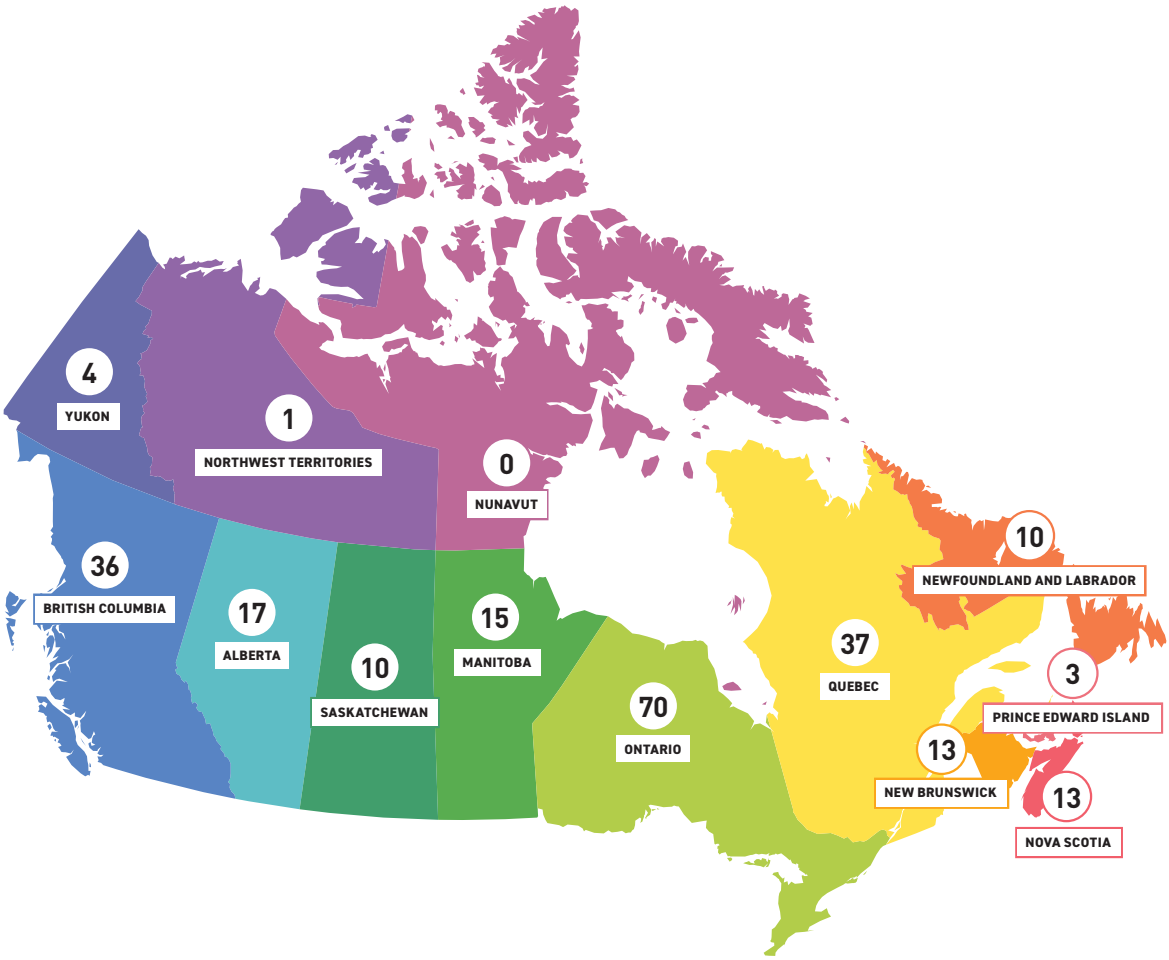


TABLE 1: Location of PHAC dementia projects

	Total projects funded	International projects	National projects	Provincial projects	Number of project sites
DCI	31	0	5	26	142
DSF	40	2	17	21	54
EDSI	15	0	5	10	33
Total	**86**	**2**	**27**	**57**	**229**

	NL	PEI	NS	NB	QC	ON	MB	SK	AB	BC	YT	NWT	NU
DCI	0	2	8	5	28	53	13	3	6	23	0	1	0
DSF	9	0	3	6	3	9	0	5	8	8	3	0	0
EDSI	1	1	2	2	6	8	2	2	3	5	1	0	0
Total	**10**	**3**	**13**	**13**	**37**	**70**	**15**	**10**	**17**	**36**	**4**	**1**	**0**

Gathering the results of Public Health Agency of Canada dementia projects

This section shares information about the reach of projects funded through the Public Health Agency of Canada's (PHAC) DCI and DSF and the **resources** they developed. This information is drawn from annual and final reports submitted by the organizations managing the projects.[6] Projects are required to report on, for example, the number of individuals reached directly; the number, types and reach of resources and other outputs produced; and the impact of their projects.

Project reach and resources

Projects reported on reach in two ways: the number of individuals reached directly and the number of times a resource the project produced reached individuals. Resource reach was measured, for example, through social media analytics or web access metrics. One individual may have accessed a resource multiple times.

Results shared for the reach of project resources include resources that can be accessed and used by others, such as videos and films, guidance documents, toolkits, academic publications, digital applications, podcasts, websites, training materials, factsheets and newsletters (see Table 2 on types of resources). Other project outputs such as advertisements and consultation activities are not included in the results on resource reach.

The project results in this report come from data available from 62 DCI and DSF projects as of June 30, 2025. Projects often finalize resources and other outputs near the end of their funding period; as a result, the reach numbers in this report should be considered preliminary. Reach is expected to grow, as many resources continue to be available to the public.

TABLE 2: Categories, number and reach of resources and other outputs from DCI and DSF projects[7]

Traditional media resources (e.g., magazines, newspapers, radio, TV, press releases)
210+ resources
161,399,000+ times accessed

Marketing and awareness campaign materials
40+ resources
60,844,000+ times accessed

Social media
1,690+ resources
10,190,000+ times accessed

Websites and webpages
180+ resources
1,442,000+ times accessed

Videos and films
450+ resources
1,203,000+ times viewed

Educational events (e.g., webinars, presentations, conferences and lectures)
950+ resources
142,000+ times accessed

Factsheets and newsletters
500+ resources
636,000+ times accessed

Podcasts and other audio resources
100+ resources
297,000+ times accessed

Academic publications (e.g., articles, literature reviews, and conference posters)
110+ resources
293,000+ times accessed

Posters and infographics
270+ resources
118,000+ times accessed

Toolkits, manuals, booklets, guidelines and best practices
250+ resources
88,000+ times accessed

Frequently asked questions documents, tip sheets, and pamphlets
130+ resources
57,000+ times accessed

Games and quizzes
7 resources
34,000+ times accessed

Training activities (e.g., e-learning modules and workshops)
400+ resources
28,000+ individuals reached

Digital applications
5 resources
28,000+ times accessed

Consultation and engagement with **7,000+ individuals**

Across 62 DCI and DSF projects,[8] more than 5,400 resources have been produced. Together, these projects directly reached at least 56 million individuals. When considering, for example, traditional media channels[9] and marketing campaigns, these projects reached Canadians at least 236 million times. Projects used a variety of channels, formats and languages to reach specific populations with tailored and culturally accessible content.[10]

The indicators used to demonstrate impact vary according to the focus of the project. For example, awareness-raising projects reported on gains in knowledge or skills related to the following:

- risk factors for dementia;
- dementia-inclusive communities;
- person-centred support, communication and care; and
- the abilities of people living with dementia, such as their potential to experience a good quality of life and to remain active in their community.

Some projects reported on changes in the views and behaviours of participants, such as:

- taking steps to reduce dementia risk;
- comfort levels interacting with or providing care to a person living with dementia;
- talking to a health professional about dementia or sharing a dementia diagnosis with family, friends, a neighbour or an employer; and
- taking steps to make their community more dementia-inclusive.

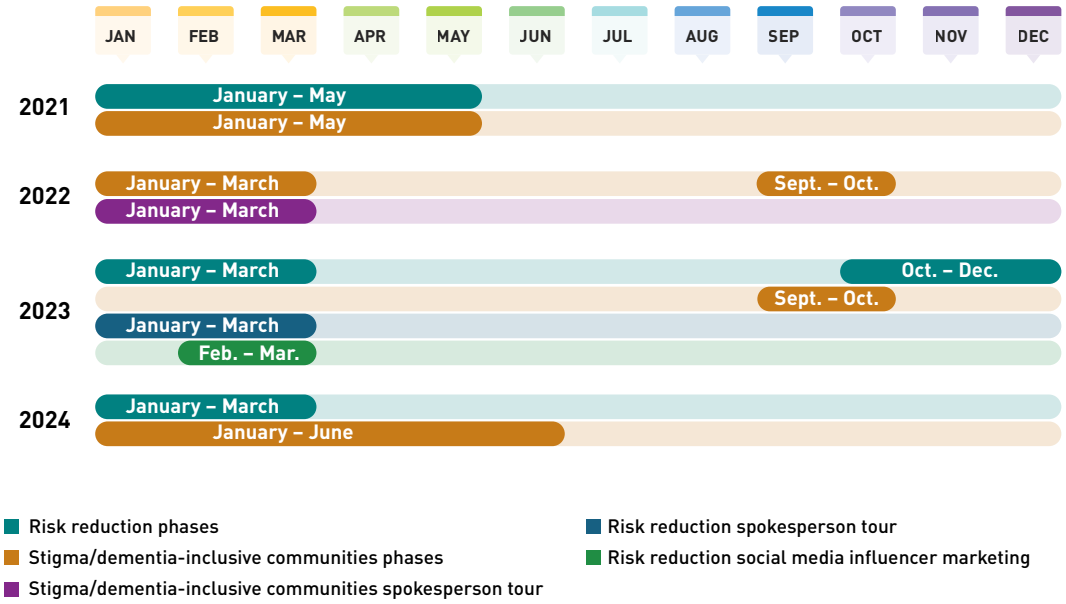
Projects that improved access to dementia guidance resources reported on whether participants expect these resources to improve dementia care and the quality of life of people living with dementia and dementia caregivers. They also reported on whether participants intend to use the resources and found them easy to adopt, and whether they would recommend them to others. When relevant, participants were asked whether the resources would help them feel better prepared to provide care to people living with dementia or those at higher risk of developing dementia. Some projects also reported on whether participants felt they had better access to the resources and training needed to deliver quality care and whether they felt better equipped to navigate the health care and other support systems.

A summary of these results can be found in the sections on **prevention** and **quality of life** below.

Raising awareness through the national public education campaign on dementia

The Public Health Agency of Canada (PHAC) undertook a national public education campaign on dementia between 2021 and 2024 that complemented the efforts of Dementia Community Investment (DCI) and Dementia Strategic Fund (DSF) projects. The campaign's multiple phases focused on reducing stigma, including enabling communities to be more dementia-inclusive, and on reducing the risk of developing dementia.

FIGURE 3: Campaign timeline - National public education campaign on dementia



The campaign's strategy and messaging were informed by public opinion research results and consultation with experts. The use of multiple channels and formats helped to reach millions of people across Canada.

- Advertising on television, digital platforms, out-of-home[11] and print media generated **227.7 million impressions**.[12] Elements included five newly produced video ads, web banners, ads placed in public spaces such as transit stations and casual dining establishments, content integration into two television game shows (*Family Feud* and *Au Suivant*), search engine marketing,[13] and interactive quizzes.
- Two national public relations tours took place – one on reducing stigma and the other on dementia risk reduction – each with two spokespersons (one Anglophone and one Francophone). Their interviews with media resulted in **288 media placements**[14] and generated approximately **35.2 million impressions**.
- PHAC worked with six social media influencers to promote dementia risk reduction content on their channels, resulting in **182,000 impressions and more than 7,000 engagements**.[15]
- Media organizations were provided with sixteen articles, one radio spot, and three videos to share key messages. Their use of this material resulted in a potential audience reach of **over 40.5 million**, based on the media organizations using this material.
- A dementia risk reduction poster was developed and shared through an email network of Indigenous communities across the country, **reaching approximately 21,000 subscribers**.

The messages shared through this campaign encouraged people to visit the Government of Canada dementia website (**Canada.ca/dementia**) for more information. While the campaign was active, there were **over 1.1 million visits to Government of Canada webpages** related to dementia. This number was a significant increase compared with periods when the campaign was not active. For example, from

September 18, 2023 to March 31, 2024, average daily visits increased by over sevenfold to 479,500 visits to the website, compared with the pre-campaign period that year.

The Canada.ca/dementia website has been expanded significantly since 2019. It now includes information on symptoms and treatment, how to reduce risk, tips on how to help reduce stigma and create more dementia-inclusive communities, and examples of activities that support the implementation of the national dementia strategy.

Videos, social media images and online quizzes that were developed for the campaign continue to be available for use through the **Dementia Awareness Resources Toolkit**.

Strengthening dementia data through public opinion research

Eleven public opinion research projects to build knowledge about dementia in Canada and inform priority-setting have been completed for PHAC. Topics include risk reduction, dementia-inclusive communities, reducing stigma, quality of life for people living with dementia and dementia caregivers, dementia guidance, and the needs of people living with dementia and caregivers during climate-related emergencies.

Enhancing public health surveillance data on dementia

Through the Public Health Agency of Canada (PHAC)'s Enhanced Dementia Surveillance Initiative (EDSI), 15 projects have strengthened the surveillance and data pillar of the national dementia strategy. Project findings are better informing future public health actions across settings and sectors. Provincial and territorial governments, federal and national organizations as well as universities across Canada contributed data to this work.

These projects developed new methods and uncovered insights while engaging Canadians living with dementia and caregivers, when possible. They focused on three priority data gaps: dementia progression and outcomes; specific populations and risk factors; and dementia caregivers. Some projects covered more than one of these gaps.

More than 20 resources from these EDSI projects have been released to date. These resources have inspired further work such as analyzing whether other health conditions occur **before or after dementia**. With this information, care providers can better understand the timing of other chronic conditions to more appropriately inform management practices.

Results from the EDSI have been shared in many settings, including national and international conferences (such as the **Alzheimer Association International Conference**). Further, through a knowledge mobilization pilot, project resources have been shared electronically with more than 260 dementia stakeholders across Canada from academia, non-governmental organizations and government. These stakeholders also received a survey to help PHAC better understand surveillance priorities and needs. Survey results will be shared next year in the Report to Parliament and will inform future work and surveillance products. Although EDSI project funding has ended, knowledge mobilization efforts are ongoing, and associated results will continue to be used and analyzed. Some projects are expected to release additional findings.

From 2019 to March 2025, PHAC funded the Centre for Aging + Brain Health Innovation (CABHI). During this time, 156 projects, including 145 focused on dementia, were supported through funding of approximately $17 million.[16] Matching funding was secured from other sources, which doubled the project funding to over $34 million, amplifying their impact. As of April 2025, federal funding for CABHI transitioned to Innovation, Science and Economic Development Canada.

Dementia investments through the Canadian Institutes of Health Research

Research and innovation is an essential enabling pillar of the national dementia strategy. As the federal lead for dementia research, the **Canadian Institutes of Health Research (CIHR)** supports this pillar through investments that advance all three strategy objectives: prevent dementia, advance therapies and find a cure, and improve the quality of life for both people living with dementia and dementia caregivers.

Since 2019, CIHR has invested more than $256 million in dementia-related research. These investments have expanded the scale and scope of research through the development and sharing of new knowledge, including through more than 1,500 peer-reviewed publications generated from projects funded in the last five years.[17] The majority of these resources were articles (approximately three-quarters), followed by publications, preprints, and chapters. These materials have achieved significant reach with at least 25,200 citations, 2,600 news mentions, 20 policy mentions, 40 patent mentions, and 5 clinical guidelines mentions.[18]

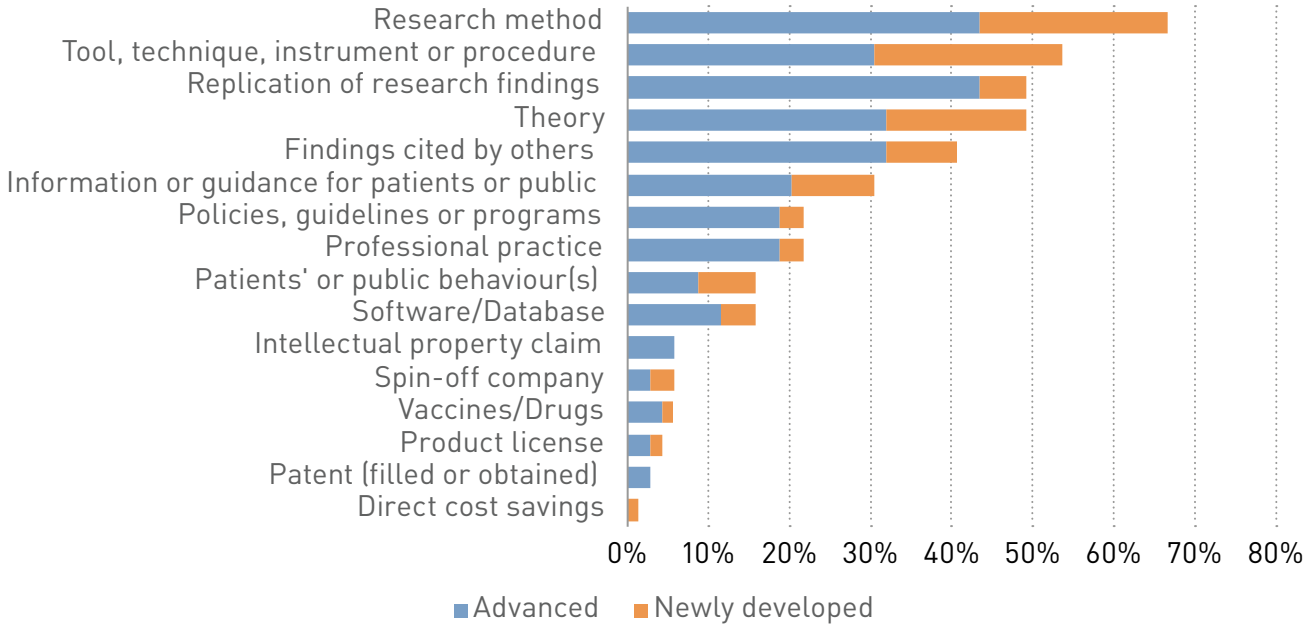
As an example of the impact of CIHR's dementia investment, the nominated principal investigators[19] of completed CIHR grants reported results including:

- creating new health knowledge;
- translating knowledge from the research setting into real-world applications;
- improving health for Canadians;
- creating more effective health services and products; and
- strengthening the Canadian health care system.[20]

They also reported achieving a range of important research outcomes including advanced or newly developed:

- research methods, tools, and instruments;
- guidance for patients and the public; and
- policies, guidelines and programs.[21]

FIGURE 4: Anticipated project outcomes (self-reported by nominated principal investigators of completed CIHR-funded dementia-related grants in 2019–2020 to 2023–2024)



Progress on the dementia strategy's national objectives

Implementation of the strategy is a shared effort across all levels of government in Canada as well as many non-governmental organizations. While there are many activities taking place across the country, this report highlights actions supported by federal funding through the Public Health Agency of Canada (PHAC) and the Canadian Institutes of Health Research (CIHR) to advance elements of the strategy that fall within these two organizations' mandates.

Strategy objective: Preventing dementia through risk reduction

Data point trends in this report related to dementia risk reduction show advances as well as areas requiring continued effort. New data point sources are included to align with the updated 2024 dementia risk findings from the **Lancet Commission**. These new sources relate to traumatic brain injury, high LDL cholesterol, air pollution, depression, lower reading literacy levels, uncorrected vision problems, and untreated hearing loss.

Many organizations are actively working on dementia risk reduction, contributing to progress toward the dementia strategy's "prevent dementia" objective. The highlights below illustrate how the results of PHAC and CIHR investments have supported progress toward the strategy's aspirations for risk reduction. These aspirations include:

- having a complete understanding of the risk and protective factors linked to dementia, their impacts and interactions;
- ensuring effective prevention resources and interventions are available and supported by a strong evidence base;

- increasing awareness among people living in Canada of actions that prevent dementia; and
- ensuring that Canadians have access to built and social environments that support their ability to pursue healthy living in ways that may reduce their risk of developing dementia.

Trends for risk reduction show both progress and areas for greater effort

Surveillance data continue to indicate a decline in the rate of newly diagnosed cases of dementia in Canada. This decline may be linked to improvements in risk and protective factors including management of chronic conditions such as hypertension, cholesterol and diabetes. The number of new cases has declined from **1,507 new cases** in 2012–2013 to **1,411 new cases** in 2022–2023 (per 100,000 Canadians aged 65 and older, age-standardized).[22]

Trends related to the prevalence of dementia risk factors that are moving in a better direction include more people in Canada with higher levels of education, which is a protective factor, and a reduced number who report smoking. Risk factors that have remained at relatively stable levels in recent years include the frequency of heavy alcohol use, diabetes, hypertension, traumatic brain injury (measured as head injuries or concussions) among individuals and high LDL cholesterol. Trends for obesity, lack of physical activity, social isolation, depression, reading literacy levels, and uncorrected vision problems have gotten worse.

Air pollution is another risk factor for dementia. One type of air pollution, fine particulate matter, is associated with increased risk in both indoor and outdoor settings. Those with some pre-existing conditions, such as cardiovascular disease, are expected to be affected more than others. Every 1 µg/m^3 increase in PM 2.5 is associated with increased dementia risk. While Canada's number has dropped since 2001, it remains above the World Health Organization global air quality guidelines, which recommend a mean annual fine particulate matter (PM 2.5) concentration of less than 5 µg/m^3.[23]

There is sufficient evidence to link untreated hearing loss to the risk of developing dementia. Risk increases as the severity of the hearing loss increases. There is a lack of recent measured data on the number of individuals in Canada with hearing loss. However, among 8.2 million adults in Canada aged 40–79 years with hearing loss between 2012 and 2015, the majority (77%, or 6.3 million) had unperceived hearing loss.[24] As unperceived hearing loss is more likely to go untreated, the Lancet recommendation to treat hearing loss reinforces the importance of detecting it, especially in more severe cases.

See **Appendix A** for further details on the level of risk factors in Canada, including a breakdown across provinces and territories.

A closer look at the 2024 Lancet risk reduction recommendations

In July 2024, the **Lancet Commission on dementia** released updated recommendations on dementia prevention. In addition to stronger evidence for the 12 modifiable risk factors identified in 2020, there is now sufficient evidence to support **two additions: untreated vision loss and high LDL cholesterol.** The Lancet Commission estimates that eliminating the 14 risk factors throughout life could prevent nearly half (45%) of dementia cases worldwide (see Table 3).

Treating vision loss in later life (after age 65) may avoid 2% of dementia cases worldwide. Research suggests that treating vision loss related to cataracts and diabetic retinopathy is linked to a lower risk of dementia. A common mechanism may be behind the association between vision loss and dementia, such as an underlying condition like diabetes or neurological processes affecting both the retina and brain.

Treating high LDL cholesterol in midlife could eliminate 7% of dementia cases. Studies suggest this link may be explained by the increased stroke risk and build-up of amyloid plaque and tau proteins among those with too much brain cholesterol. Further, some studies have identified high HDL (i.e., "good cholesterol") as a protective factor reducing dementia risk.

The Lancet report notes that new studies have reconfirmed the **role of education** in reducing dementia risk, with educational outcomes along with years of education showing protective effects. Recent studies across four continents found that both high school completion and greater complexity of work are associated with reduced dementia risk. Evidence also suggests that **cognitive stimulation** during midlife (ages 45 to 65) has beneficial effects on cognitive reserve (i.e., the brain's resilience to damage, which may reduce or avoid symptoms of dementia) even among those who received little education in early life. Educational outcomes (e.g., reading levels) appear linked to dementia risk, suggesting that educational attainment overall is more of a protective factor than years of education alone.

While reducing the risk of dementia by focusing on modifiable risk factors is possible at any stage of life, evidence suggests that action is likely to be most impactful at midlife (ages 45 to 65) for several of the factors. However, the timing, duration, and consistency of exposure to each risk factor may also influence the degree of risk. As a result, it remains a key message that it is never too early or too late to reduce dementia risk, and this is true regardless of genetics. In fact, research findings suggest risk reduction efforts are sometimes more effective among those with higher genetic risk.

Efforts such as staying physically active, being cognitively and socially engaged, maintaining a healthy body weight, reducing one's LDL cholesterol level, avoiding smoking, preventing or managing high blood pressure and diabetes, and treating depression, vision loss and hearing issues should be a priority throughout life.

Some risk factors, such as air pollution, are more difficult to reduce through individual action. As a result, the Lancet Commission recommends both individual lifestyle changes as well as broader public policy measures to achieve the full potential of a 45% reduction in dementia cases. Many of the risk factors are more common among individuals with lower socioeconomic status. Measures that reduce inequalities such as ensuring healthy living environments, equal access to quality education, the availability of reasonably-priced nutritious food, and safe working conditions can contribute to efficiently reducing dementia risk across an entire population.

TABLE 3: Relative increased risk associated with 14 potentially modifiable risk factors[25]

Age group	Risk factor	Relative increased chance of developing dementia compared to someone without this risk factor
Early life (under 45 years of age)	Lower levels of education	60%
Midlife (45 to 65 years old)	Diabetes	70%
	Traumatic brain injury	70%
	Hearing loss	40%
	High LDL cholesterol	30%
	Obesity	30%
	Smoking	30%
	Excessive alcohol consumption	20%
	Depression	20%
	Hypertension	20%
	Physical inactivity	20%
Later life (over 65 years of age)	Social isolation	60%
	Untreated vision loss	50%
	Air pollution	10%

Change over time in public opinion research results on risk reduction and prevention

Public opinion research on dementia undertaken for PHAC since 2020 has had a consistent focus on risk reduction.[26] Research topics have included understanding of risk factors, self-assessment of personal risk, steps being taken to reduce risk and sources of motivation to take those steps. Analysis of trends in public opinion research results below shows improvements in risk reduction knowledge since 2020, suggesting that PHAC's national dementia education campaign and funded risk reduction projects may have had a positive impact.

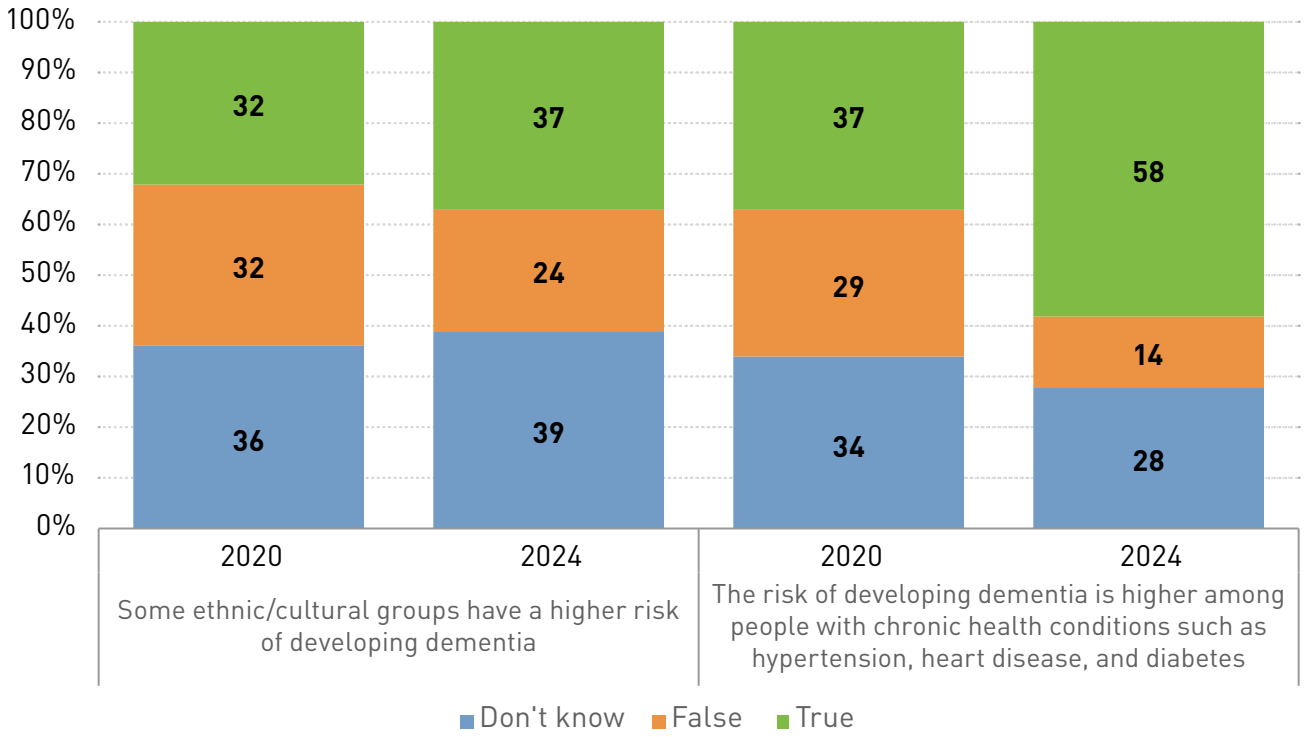
Risk reduction knowledge is improving

Knowledge among Canadians about some aspects of dementia risk appears to be improving. For example, awareness that it is true that dementia risk can be reduced has increased from 74% of respondents in 2020 to 85% in 2024. As well, respondents who responded "don't know / prefer not to answer" on whether risk can be reduced decreased from 15% in 2020 to 11% in 2024. Awareness of the evidence-based links between dementia and chronic health conditions such as high blood pressure and diabetes has also increased since 2020 (see Figure 5). Further, a higher proportion of respondents in 2024 correctly recognized that some ethnic and cultural groups are likely to be at higher risk of developing dementia.

Action to reduce risk is helpful even when an individual may have a higher genetic risk; however, more could be done to improve Canadians' knowledge in this area. Close to one-third of respondents

under 75 (33%) in 2024 identified genetics as a top-of-mind risk factor that might increase the likelihood of developing dementia (similar to 2022, at 34%). Further, 55% of respondents in 2024 believe that genetics are likely to increase their own personal risk.[27] However, research suggests that adopting healthy behaviours can counteract genetic risk among most individuals with a higher genetic risk. Other risk factors most commonly mentioned as top of mind include a lack of physical activity (27% in 2024) and lack of cognitive stimulation (24%).

FIGURE 5: Awareness of dementia risk related to chronic conditions and ethno-cultural background[28]

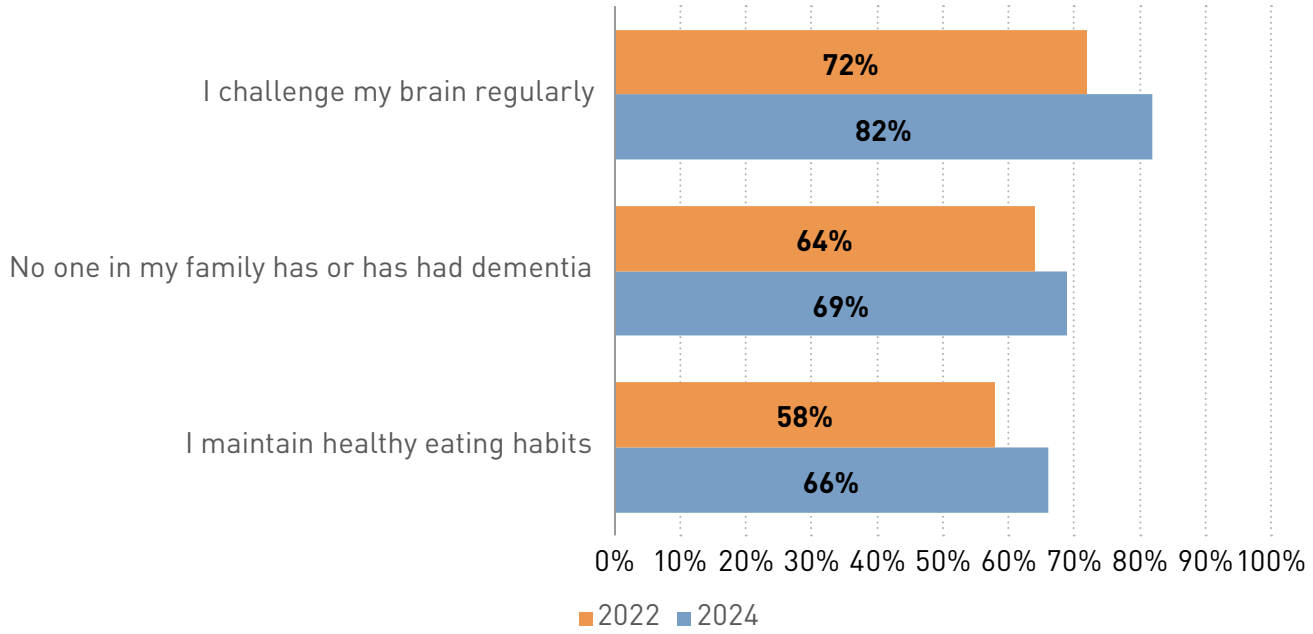


Trends in self-assessment of personal dementia risk remain relatively stable

Public opinion research has explored how Canadians assess their own risk for developing dementia and the reasons behind these perceptions. About two-thirds of respondents consistently rate their personal risk as low to moderate (68% in 2024 and 2022).[29] However, the proportion who perceive themselves as being at high risk increased in 2024 (21% versus 15% in 2022), with a corresponding drop in those who don't know their personal risk.

In 2024, common reasons for a perception of moderate to high personal risk included having family members with dementia (64%), not exercising as much as they should (45%), and having an ongoing health issue (38%), all up slightly since 2022.[30] While dementia is not an inevitable part of aging, some groups are more likely to believe that it is, including those identifying as: South Asian, Southeast Asian or Black; those under 35; and men.[31] Among the 31% who rated their own risk of dementia as low in 2024 (roughly the same as 2022), respondents most commonly said it was because they challenge their brain regularly, did not have family members who have or have had dementia, and they maintain healthy eating habits (see Figure 6).[32]

FIGURE 6: Most commonly reported reasons for **perceived lower personal risk** among those who think their risk is low[33]



Optimism is growing about the ability to reduce personal risk

When asked about their perceived ability to reduce personal risk, respondents were generally optimistic. Three-quarters believe they can reduce their own risk by a moderate to high extent (76% in 2024; up from 67% in 2022).[34] A high perceived ability to reduce personal risk was more common among respondents identifying as Black (38%), Hispanic (38%), and Southeast Asian (32%), and less common for members of the 2SLGBTQI+ community (19%).

More individuals are taking steps toward dementia risk reduction

Dementia risk reduction can have a positive impact at all stages of life, although some risk factors may be more important to address at midlife or later life. Public opinion research suggests more people now believe risk reduction efforts should begin before age 35 (24% in 2024 versus 13% in 2022), while 32% believe preventative actions should start at any age (compared with 25% in 2022). This suggests an accurate and growing understanding of the value of risk reduction action at any age as well as starting early in life.

There is an encouraging trend of more respondents taking intentional steps to reduce their dementia risk, rising to around one third (34%) in 2024 from 22% in 2020. However, more than half of respondents (57%) in 2024 felt they needed to do more to reduce their own risk, down just slightly from 2022. Among respondents under the age of 75 who reported taking steps to reduce their risk of developing dementia over the past year, a higher percentage reported in 2024 that they were engaged in challenging their brain to keep it active (80% versus 74% in 2022), eating healthy foods (74% versus 68%), being socially active (57% versus 41%), and monitoring/managing their chronic health conditions (56% versus 39%).

Moreover, research results suggest most individuals are taking action to reduce risk, even if unintentionally. In 2024, while more than half (60%) of respondents under 75 reported that they had **not** intentionally taken steps to reduce their dementia risk, almost all respondents (97%) had nonetheless engaged in activities linked to a reduced risk over the past year, nearly unchanged from 2022. Further, activities were reported more often than in 2022. The three activities with the greatest increase were: reducing or eliminating alcohol consumption (46% versus 34% in 2022); using safety equipment (e.g., helmets, headphones) to protect hearing and/or the brain (48% versus 35%); and being socially active (62% versus 44%). While men were more likely to say they were reducing or quitting smoking in 2024 (26% versus 19%), women tended to be more socially active (67% versus 57%).

Understanding motivations for taking steps toward dementia risk reduction

Public opinion research has deepened our understanding of what motivates those living in Canada to take intentional steps to reduce their risk of dementia. Over time, more respondents report motivation coming from knowing someone living with dementia (56% in 2024 versus 50% in 2022), being spurred by credible evidence (34% versus 28%), media sources (22% versus 15%) and advice from people close to them such as friends and family (20%, up from 14%). Women (61%) were more likely to report being motivated by having known someone living with dementia compared to men (51%). While only 9% of respondents were motivated by advertising to reduce their risk, this motivation was more frequent among those in Prince Edward Island (24%), Newfoundland and Labrador (16%),[35] the Yukon (23%),[36] Saskatchewan (17%), and rural areas (15%).

The greater number of respondents taking action to reduce their own risk may be linked to a growing awareness of dementia risk factors. There has been a notable drop in respondents who said not knowing enough about how to reduce risk was a reason for **not** feeling they would like to or need to do more to reduce their risk (17% in 2024 versus 33% in 2022). The most common reason in 2024 among those who said they do **not** feel that they need to do more was that they were already doing what they could and had a healthy lifestyle (55%) followed by not believing they were personally at high risk (29%).

New resources are supporting progress on dementia risk reduction

Resources and activities resulting from Public Health Agency of Canada (PHAC)-funded projects are moving Canada closer to the dementia strategy's aspirations regarding prevention. About a third of the 38 completed projects through PHAC's Dementia Strategic Fund (DSF) had a focus on prevention. Across these 13 projects, 1152 resources[37] have been created which have reached individuals more than 13 million times to date. These resources cover topics such as nutrition and brain health, physical activity and brain health, and cognitive stimulation.

The most common types of resources created by the 13 prevention projects fall within social media engagement and educational events. Multiple projects also created videos/films and websites/webpages.

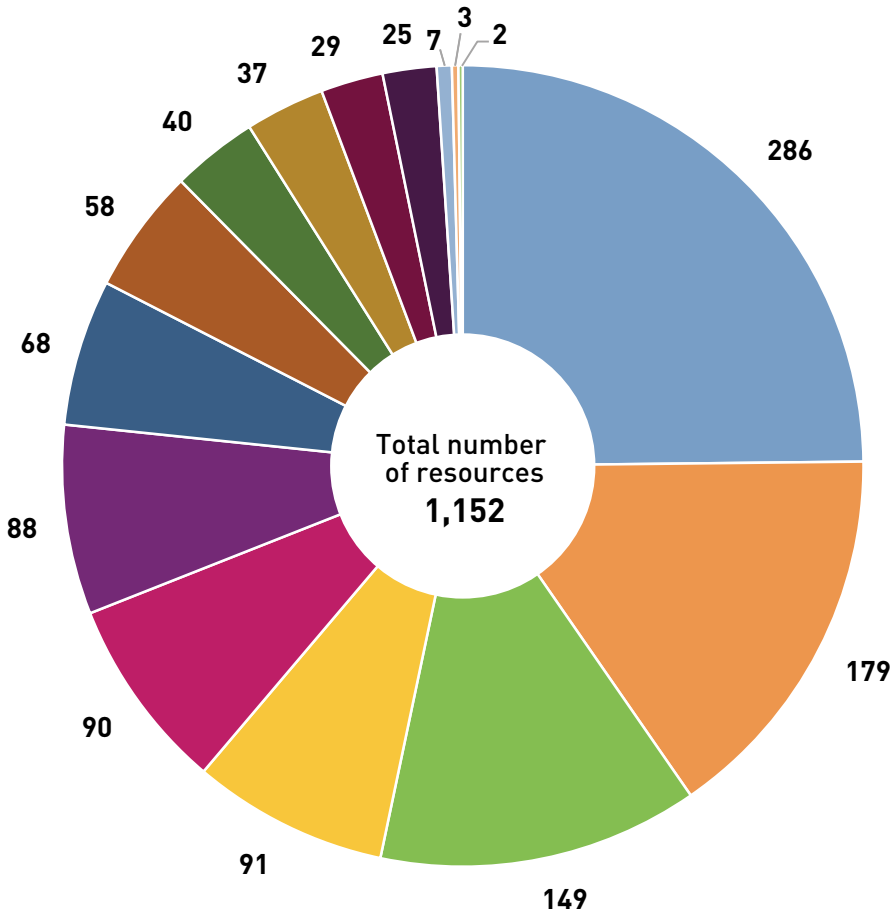
Several projects developed tailored resources for specific populations, including:

- ethno-cultural language minorities;
- Indigenous populations;
- official language minority communities;
- rural/remote communities; and
- women.

Projects often produced resources in multiple languages, depending on their target audiences. About two-thirds produced resources in both official languages (English and French). Almost one-quarter of projects produced resources in multiple other languages to improve access to dementia information. Examples include:

- culturally appropriate dementia resource guides, workshop videos and educational materials in Cantonese, Mandarin, Korean and Farsi;
- workshops in Japanese;
- a website and infographics in Traditional and Simplified Chinese; and
- more than 25 dementia care education sessions in Mandarin and Cantonese on radio and television.

FIGURE 7: Resources related to dementia prevention from DSF projects (projects = 13)[38]



- Social media posts
- Educational events (e.g., webinars, presentations, conferences, and lectures)
- Videos and films
- Formal training (e.g., e-learning modules, and workshops)
- Websites and webpages
- Traditional media (e.g., features in magazines, newspapers, radio, TV, and press releases)
- Posters and infographics
- Factsheets and newsletters
- Toolkits, manuals, booklets, guidelines, and best practices
- Podcasts and other audio resources
- Frequently asked questions documents, tip sheets, and pamphlets
- Academic publications (e.g., articles, literature reviews, and conference posters)
- Marketing and awareness campaigns
- Digital applications
- Games and quizzes

New Public Health Agency of Canada project resources on risk reduction have reached millions of individuals

The resources[39] and other outputs (i.e., consultations and engagements) produced by the 13 DSF projects focused on preventing dementia have reached individuals more than 169 million times. Traditional media was the most often used channel (see Figure 8).

FIGURE 8: Reported reach of DSF project resources focused on risk reduction[40]

142,522,000+	**Traditional media** impressions (e.g., features in magazines, newspapers, radio, TV, and press releases)	34,000+	Times **games and quizzes** were played or viewed
23,694,000+	**Marketing and awareness campaign** impressions	32,000+	Times **toolkits, manuals, booklets, guidelines and best practices** were accessed
971,000+	**Social media** impressions	28,000+	**Digital application** downloads or visits
735,000+	**Website** and webpage views	26,000+	**Educational event** attendees (e.g., webinars, presentations, conferences, and lectures)
370,000+	**Video and film** views	10,000+	Times **posters and infographics** were accessed
275,000+	Listens to **podcast and other audio resources**	10,000+	Times **formal training** (e.g., e-learning modules and workshops) was accessed
275,000+	Times **academic publications** (e.g., articles, literature reviews, conference posters) were accessed	7,000+	Times **frequently asked questions documents, tip sheets, and pamphlets** were accessed
215,000+	Times **factsheets and newsletters** were accessed	3,000+	Individuals **consulted and engaged**

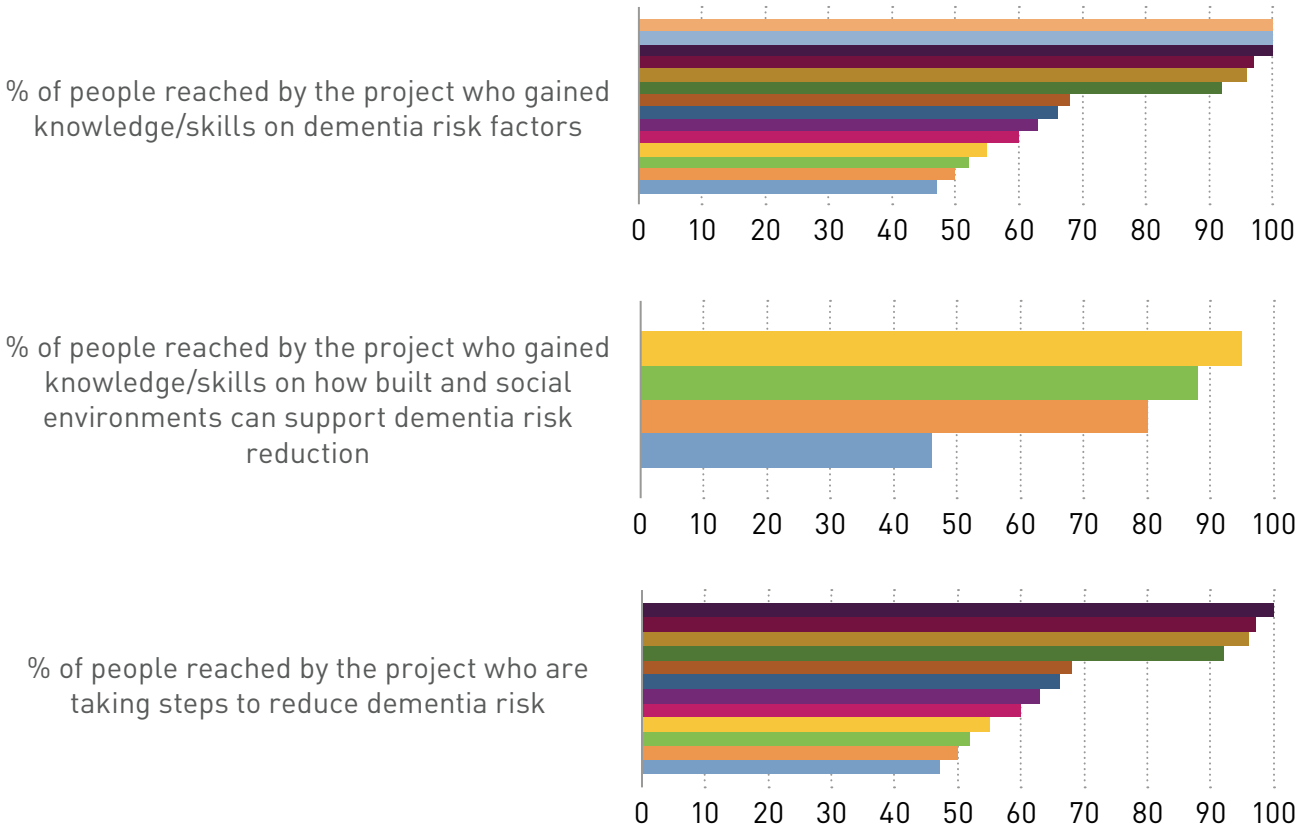
In addition to the DSF projects, more than half (11 of 21) of the resources resulting from PHAC's Enhanced Dementia Surveillance Initiative (EDSI) focused on prevention. Data generated through the EDSI projects can inform policies and programs which aim to reduce the risk of developing dementia or to delay its onset.

Assessing the impact of Dementia Strategic Fund risk reduction projects

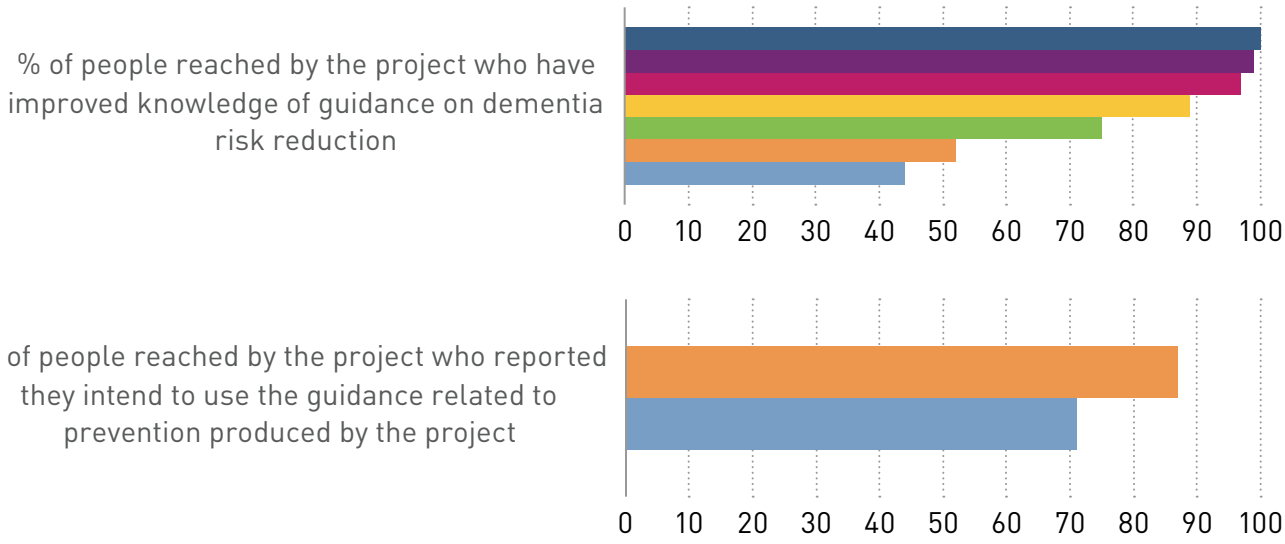
Reporting by DSF projects provides an indication of the effectiveness and benefits of their activities. DSF awareness-raising projects have contributed, for example, to increased awareness about dementia risk factors, how the built and social environment can contribute to risk reduction, and the number of those taking steps to reduce dementia risk. DSF guidance projects reported, for example, improved knowledge of guidance on risk reduction and participants' intention to use it. Projects measured their impact in part by asking participants for feedback through surveys and interviews. The charts below show results for some of the measured impacts across multiple projects.

FIGURE 9: Select indicators from DSF projects focused on risk reduction[41]

Awareness-raising projects (each bar represents one project)



Guidance projects (each bar represents one project)



National public education campaign: reaching millions to raise awareness on risk reduction

Reducing the risk of developing dementia was one theme of the Public Health Agency of Canada (PHAC)'s national public education campaign. The primary audience was adults 25 years and older with a focus on populations in Canada at greater risk for developing dementia, including individuals living with or at greater risk of chronic health conditions, as well as Black, South Asian, and Indigenous populations.

During the risk reduction campaign phases, ads were placed on television, digital platforms, and street furniture as well as in transit stations, pharmacies, casual dining establishments, and clinics. Content created included two videos to raise awareness of high blood pressure and physical inactivity as risk factors for dementia, an interactive quiz, and skill-testing questions on ways to reduce risk on the *Family Feud* and *Au Suivant* television game shows. Other approaches included ads on paid social media and search engine marketing.

Across all phases of the risk reduction campaign, advertising resulted in 144.5 million impressions and individuals clicked on ads 815,000 times. Results from a survey of approximately 2,000 Canadian adults about the effectiveness of the risk reduction campaign ads found that 86% felt the topic of the ads was important, 80% felt they clearly conveyed how to reduce dementia risk, and 73% of those who recalled the ads took action as a result of seeing them, such as sharing information and making lifestyle changes.

FIGURE 10: Campaign results: Reducing dementia risk

National public education campaign:

Reducing dementia risk

Advertising

144.5M ad impressions, users clicked on ads **815K times**

73%
who recalled the ads took action (shared info, made lifestyle changes, etc.)

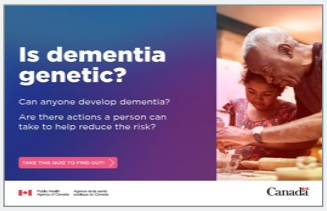
86%
felt the topic of the ads was important

80%
felt the ads clearly conveyed how to reduce dementia risk

Risk factor video ads on physical inactivity & high blood pressure

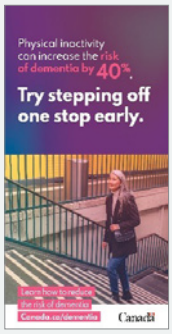
Social media

Interactive quiz



Out-of-home ads

Transit stations, pharmacies, street furniture, public transit, casual dining & clinics



Dementia content on Family Feud and *Au Suivant* TV shows

Note: K = thousand, M = million

Two spokespersons, one Anglophone and one Francophone, supported the risk reduction campaign through media interviews and other activities that resulted in 13.7 million impressions across Canada. In addition, six social media influencers promoted dementia risk reduction messages on their channels, further extending the reach of the campaign to new audiences.

Eleven articles and a radio spot to raise awareness of how to reduce risk were made available to media outlets to use. Across all phases focused on risk reduction, these articles and the radio spot resulted in a potential audience reach of over 9.1 million, based on the media organizations using this material.

Spokesperson tour – risk reduction

13.7M impressions
Interviews resulted in 111 media placements

Influencer campaign

182K impressions
7000 engagements

Articles & radio spot for media use

9.1M
reach

Risk reduction poster

Shared with network of 21K subscribers to reach Indigenous communities

A dementia risk reduction poster was shared with a network of Indigenous communities across the country.

Across all campaign activities, messages encouraged people to visit the Government of Canada dementia website for more information. There were more than 840,000 visits to these dementia webpages during the phases focused on dementia risk reduction.

Pursuing progress on risk reduction through research and innovation

Over the past five years the Canadian Institutes of Health Research (CIHR) has launched new strategic programs and invested in breakthrough research on the identification of risk and protective factors linked to dementia, the development of resources and tools to support risk reduction, and the implementation of programs to help prevent or delay the onset of dementia.

CIHR has supported research that uses data from the **Canadian Longitudinal Study on Aging (CLSA)** to expand what we know about risk factors linked to dementia, including linkages between cognitive decline and hearing loss. Data from the CLSA informed the finding that almost 50% of dementia cases in Canada are attributable to 12 modifiable risk factors, which contributes to the identification of strategies to reduce dementia risk.[42] This data is also being used to develop a reliable method for identifying both diagnosed and undiagnosed dementia, helping researchers learn more about what increases or reduces the risk of neurocognitive disorders.[43] In 2021, CIHR committed $52 million for five years to support continued CLSA implementation.

Preventing brain diseases that cause dementia has been one of the three key themes of the CIHR-funded **Canadian Consortium on Neurodegeneration in Aging (CCNA)** since its establishment in 2014. CCNA contributions[44] related to dementia prevention and risk reduction include the successes of the **Canadian Therapeutic Platform Trial for Multidomain Interventions to Prevent Dementia (CAN-THUMBS UP)**.

Brain Health Pro, a CAN-THUMBS UP component, involved 354 people from all regions of Canada that were at risk of dementia in a bilingual, comprehensive, web-based educational program, aimed to increase dementia literacy, foster engagement, and promote lifestyle changes to reduce dementia risk. The participants completed a 12-month program and assessments with early results indicating this education tool is effective and accessible. Brain Health Pro's unique model, involving contributions from 100 researchers, citizen advisers and partners, as well as the use of digital tools to increase accessibility, allowed it to attract additional funding and expand dementia prevention research.

CIHR-funded CCNA research has led to key advancements in understanding dementia risk and resilience including:

- Establishing for the first time an association between higher white matter lesions in the brain – an indicator of disease of the blood vessels that supply the brain – with increased risk of cognitive decline.[45] This study provides important insights into the mechanisms through which cerebrovascular and neurodegenerative pathologies interact.
- Discovering the potential of lactate, a substance made when the body breaks down sugar during exercise, to improve memory and learning in the brain as it ages, making it a possible target for clinical research.[46]
- Identifying sensory health, including hearing, vision and olfaction, as early non-cognitive markers of dementia. This research contributed to practical guidelines with recommendations on how to recognize non-cognitive markers of risk of dementia, highlighting the importance of hearing screening for risk reduction.[47]

Through the CCNA, CIHR has supported the creation of tools and resources that aim to encourage Canadians to adopt healthy brain habits and lower their risk of developing dementia later in life. These investments have **created learning opportunities for children** to encourage risk reduction awareness at an early age, as well as a bilingual **resource** to encourage healthy eating aligned with healthy brain aging that has been demonstrated to improve the quality of participants' diets and their metabolic profile. Moreover, between 2019 and 2024 the CCNA research teams produced more than 400 knowledge products related to neurodegenerative disease prevention, including peer-reviewed journal publications, invited lectures, presentations, reports, and technical briefs.

CIHR has also supported the development of 22 resources promoting brain health and risk reduction through the **Brain Health and Cognitive Impairment in Aging (BHCIA) Knowledge Synthesis and Mobilization Grants Program**, including YouTube videos, infographic presentations, publications, and policy briefs.

Strategy objective: Advancing therapies and finding a cure

One of the national dementia strategy's objectives is to advance therapies and find a cure. The strategy's pillar of research and innovation encourages efforts toward this objective as well as the objectives focused on prevention and quality of life. Trends in the Canadian Institutes of Health Research (CIHR)'s dementia-related investments and activities are shared below. There have been multiple notable advances resulting from CIHR's investments since the release of the strategy, including on dementia therapies.

The strategy's aspirations for advancing therapies include increasing annual investment in dementia research so that it exceeds 1% of dementia care costs, increasing availability of new evidence-informed person-centred therapies, including people living with dementia and dementia caregivers as active participants and partners in research, and making efforts in research design to ensure that findings can be understood, adopted and quickly put into practice.

Increasing federal investment in dementia research

Over the last five years, there has been a notable increase in CIHR's annual investment in dementia research from approximately $42 million in 2019–2020 to approximately $58 million in 2023–2024.[48] Further, the number of unique nominated principal investigators[49] in dementia research has increased (from 262 to 357), as has the number of grants and awards in dementia research across all of CIHR's programs (from 306 to 410).

FIGURE 11: Total investment in dementia research across all CIHR programs

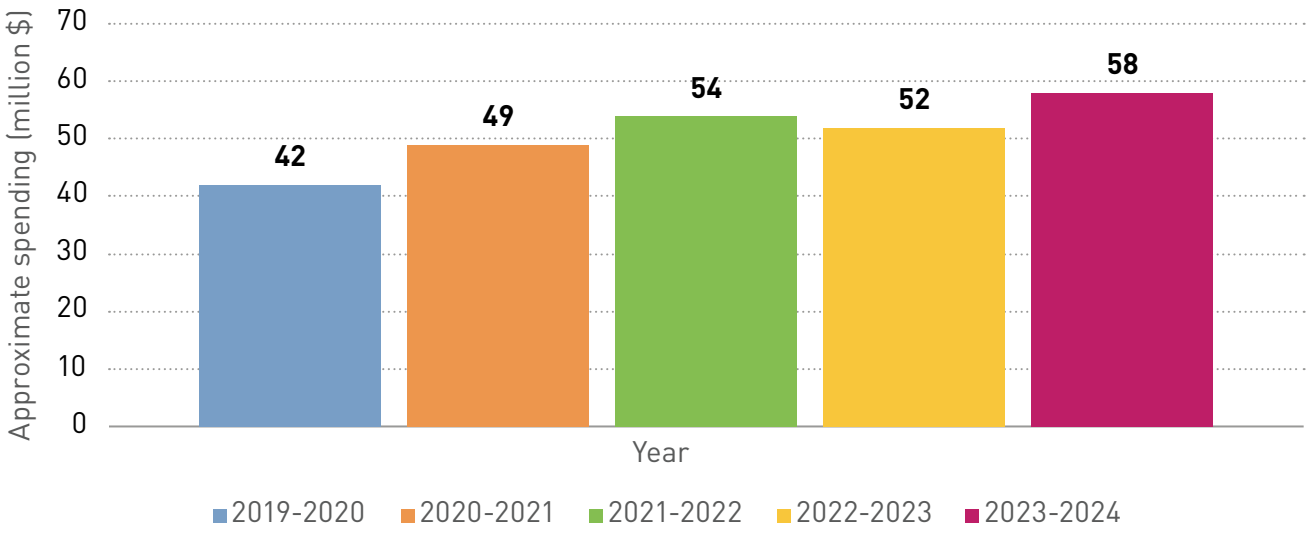
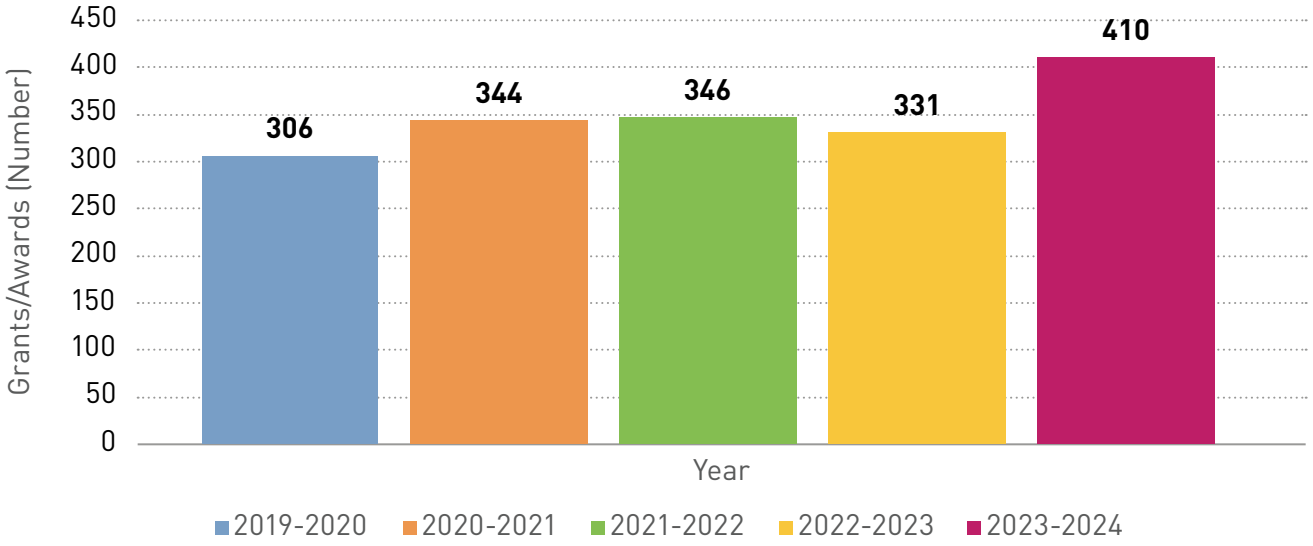


FIGURE 12: Number of grants and awards in dementia research across all CIHR's programs[50]



CIHR has invested in the sustainability of the research ecosystem, supporting the next generation of dementia researchers through projects such as the development of a training platform to assist them in promoting the adoption of research findings. CIHR also supports early career researchers through funding opportunities with the Alzheimer Society of Canada through its Alzheimer Society Research Program and with the Brain Canada foundation through its Future Leaders Program.

Pursuing progress on advancing therapies through research and innovation

Although there are no treatments that can reverse cognitive decline, recent research has made notable strides in advancing dementia therapies. Over the past five years, CIHR has invested in research—from fundamental studies to better understand the aging brain and disease mechanisms to the development of innovative therapeutic approaches and treatments—paving the way toward the eventual discovery of a cure.

Examples of research breakthroughs achieved with support from CIHR include:

- A discovery of naturally occurring molecules in the retina that protect the nervous system from inflammation.[51] This U.S. patented discovery offers promising opportunities for development of new treatments for neurodegenerative diseases, including Alzheimer's.
- Uncovering the way toxic proteins linked to Alzheimer's disrupt brain molecules that are essential for communication between brain cells.[52] This discovery opens the door to developing new treatments for dementia by protecting these molecules and preventing damage to brain function.

- Unlocking the potential of microglia, the brain's immune cells that become less efficient with age, as a new therapeutic target for Alzheimer's disease.[53] By investigating ways to improve microglial functions, researchers hope to develop innovative therapies to prevent or slow the progression of the disease.

A key CIHR vehicle for supporting research on advancing therapies has been the Canadian Consortium on Neurodegeneration in Aging (CCNA), which includes treatment as one of its overarching themes.

Novel CCNA research to advance therapies for neurodegenerative diseases includes:

- Development of an antibody that shows potential as a treatment for early Alzheimer's disease. It is now entering a phase of human testing.[54]
- Phase 2 and phase 3 randomized clinical trials for a potential treatment for apathy[55] and agitation[56] in dementia. This research allowed researchers to secure additional funding for the development of treatments.
- A randomized control trial[57] to test the efficacy and long-term impact of a non-pharmaceutical intervention that combines cognitive training and leisure activities for older adults with the risk of dementia. The **results of the ENGAGE trial** included significant improvements in the memory, attention, and daily functioning of older adults experiencing memory issues.

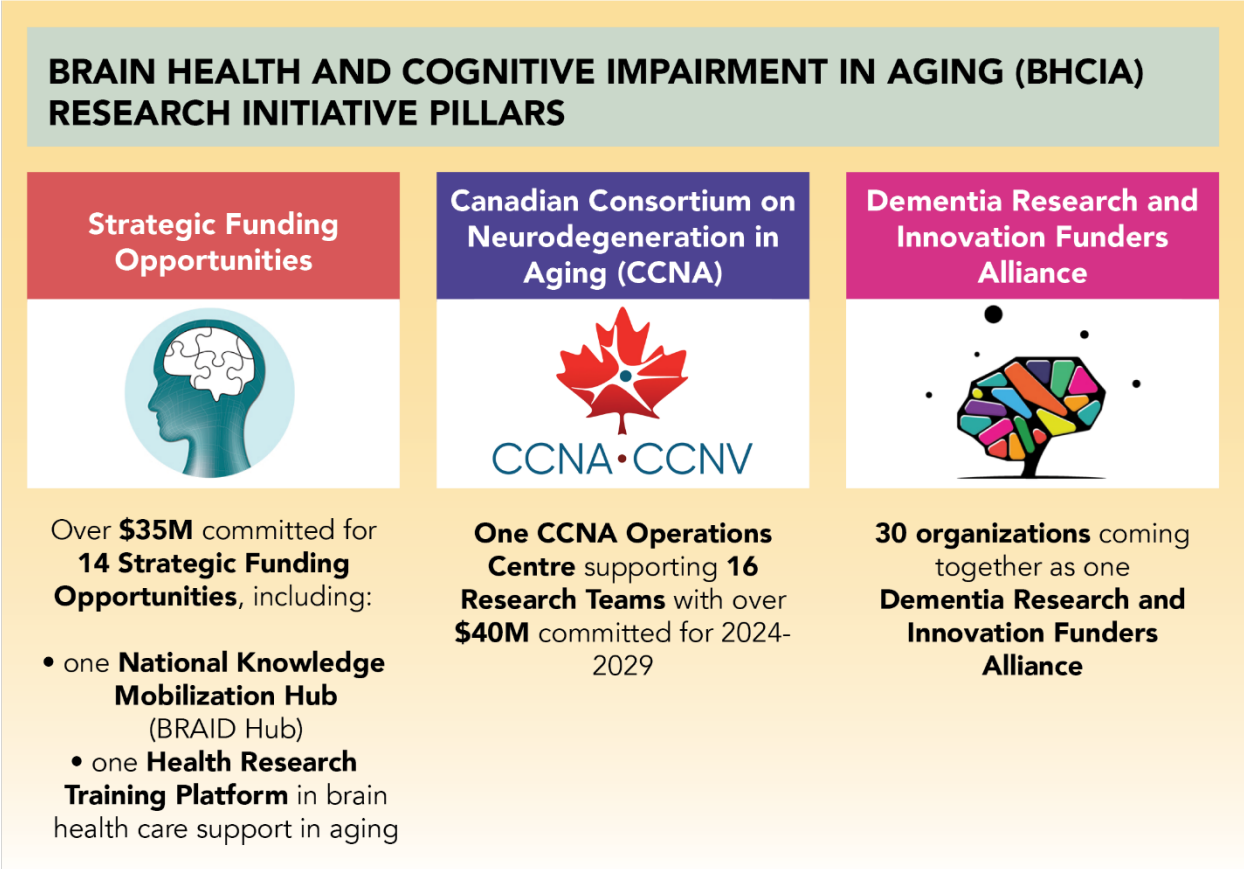
Between 2019 and 2024, CCNA research teams produced more than 800 knowledge products related to advancing therapies for dementia, including publications in peer-reviewed journals, lectures, panels, presentations, guidelines for policy, toolkits, as well as traditional and social media publications.

To inform future studies and the development of therapies, the CCNA launched a "big data" platform that is expected to have a transformational effect on the Canadian dementia research community. The Comprehensive Assessment of Neurodegeneration and Dementia (COMPASS-ND) observational cohort study integrates a wide range of experimental, clinical, cognitive, imaging, biomarker, and genetic information of people living with various types of dementia, enabling a study of their complexity and comparisons across diseases. In 2023–2024, COMPASS-ND completed and shared the assessments of an initial cohort of 1,173 participants. COMPASS-ND has generated 52 publications on topics ranging from frailty, hearing loss, olfaction, visual performance, gait speed, vascular brain lesions to mild behavioural impairment, as well as how biological sex might play a role in these topics. Novel intervention studies of diet, exercise, and cognitive stimulation are being based on COMPASS-ND participants with mild memory loss.

CIHR has supported notable advancements toward finding a cure for dementia by strengthening the research ecosystem. Over the past five years, the CCNA engaged in more than 220 new domestic and international collaborations. For each dollar invested in the CCNA, researchers have doubled or nearly tripled their funding through other funding sources. For example, in 2023–2024 the CCNA secured $20.5 million in additional partner funding to the initial $8.4 million from CIHR and partners.

Similarly, since its launch in 2023, CIHR's **Brain Health and Cognitive Impairment in Aging (BHCIA) Research Initiative** has brought the initial commitment of $20 million from the 2022 federal Budget to over $75 million, by combining the Government of Canada investment with partner commitments. With this combined funding, the BHCIA Research Initiative supports 16 strategic funding opportunities aligned with the objectives of the national dementia strategy.

FIGURE 13: The BHCIA Research Initiative at a glance



Moving forward, CIHR will continue to strengthen cooperation between key research funders and interested parties, including through the **Dementia Research and Innovation Funders Alliance**, launched by **CIHR's Institute of Aging** in 2023. The Alliance brings together more than 30 organizations from the dementia research and innovation ecosystem in Canada and includes people with lived experience. Alliance members are working together to identify gaps and opportunities, and implement strategies for effective knowledge mobilization.

Expanding research partnerships in Europe

CIHR joined the EU Joint Programme – Neurodegenerative Disease Research (JPND) in 2012, making Canada the first non-European Union country to participate. Since then, CIHR has launched 14 funding opportunities as part of JPND, contributing over $9 million to 37 projects with partners including the Public Health Agency of Canada (PHAC), the Brain Canada Foundation, and the Women's Brain Health Initiative. Canadian researchers have worked with more than 30 countries, resulting in an international partner contribution exceeding $40 million. Some of the contributions of CIHR-funded JPND research in the last five years include supporting dementia caregivers in navigating care options[58] and the development of **resources** to improve dementia diagnosis and care.[59] CIHR will continue to be a partner as the JPND transitions to the new EU initiative, EP BrainHealth.

Engaging people with lived experience in research and innovation

CIHR funding has supported the engagement of people with lived experience of dementia in the development of therapies and treatments. In 2020, CCNA introduced the **Engagement of People with Lived Experience of Dementia (EPLED)** program, to meaningfully involve people living with dementia and dementia caregivers in research processes. After the first year, the EPLED Advisory Group concluded that developing trusting relationships, providing education, offering support, being flexible, and acknowledging tensions between research, practice, and lived experience were vital to its success. The program is ongoing and since 2020, EPLED Advisory Group members have taken on various research-related roles, including as co-applicants/co-investigators on grants, as well as co-presenters and co-authors in academic and non-academic settings.

Strategy objective: Improving the quality of life of people living with dementia and dementia caregivers

There are many factors that influence the quality of life of people living with dementia and caregivers. Quality of life relies on the contributions of a wide range of Canadian organizations, including all levels of government. It is affected, for example, by the degree of stigma in Canadian society, the extent to which communities are designed to be dementia-inclusive, and access to and quality of key supports, including health care and supportive resources for family and friend caregivers.

This report presents data trends that provide an indication of a few aspects of the quality of life of people living with dementia and caregivers, as well as highlights of results from public opinion research focusing on stigma, dementia-inclusive communities, caregiver capacity and supports.

Aspirations for the dementia strategy's quality of life objective include that all people living in Canada understand dementia and stigma no longer exists, and that a timely diagnosis provided in a compassionate manner is available to all people living in Canada, along with needed resources and

supports. The aspirations also include integrated, person-centred quality care across all settings, that individuals feel welcomed and well cared for when hospitalization or admission to long-term care is necessary, and care provider access to the resources and training needed to deliver quality care is available. Finally, the strategy calls for access for all unpaid caregivers to the resources and supports required both to protect their own wellbeing and to care for someone living with dementia.

Some aspects of quality of life appear to be improving

The tracking of data points for quality of life shows positive trends this year. Fewer people living with dementia receiving publicly funded home care were reported as exhibiting depression, daily pain and withdrawal from activities of interest and/or reduced social interaction. This data comes from assessments completed by publicly funded home care providers in Yukon, British Columbia, Alberta, Manitoba, Ontario, Nova Scotia, and Newfoundland and Labrador.

TABLE 4: Aspects of quality of life for people living with dementia receiving publicly funded home care[60]

Data point	Percentage (%) in 2019–2020	Percentage (%) in 2020–2021	Percentage (%) in 2021–2022	Percentage (%) in 2022–2023	Percentage (%) in 2023–2024	Trend between 2019–2020 and 2023–2024[61]
Exhibiting **withdrawal from activities of interest and/or reduced social interaction**	**19.1**	**21.1**	**19.1**	**17.7**	**17.4**	**Better**
Displaying a **potential or actual problem with depression**, based on a depression rating scale	**24.8**	**24.9**	**24.8**	**23.9**	**22.9**	**Better**
Experiencing **daily pain** (severe and not severe)	**34.6**	**33.8**	**34.5**	**34.0**	**33.7**	**Better**

There has also been a slight decrease in the percentage of unpaid family/friend caregivers for people living with dementia who are experiencing distress from 37.1% in 2019–2020 to 35.3% in 2023–2024.[62] However, the percentage of caregivers for people living with dementia who are experiencing distress has remained about double that of caregivers for people without dementia who are experiencing distress over the last several years (37.1 versus 18.9 in 2019–2020; 35.3 versus 19.2 in 2023–2024).

TABLE 5: Caregivers for people living with dementia experiencing distress[63]

Data point	Percentage (%) in 2019–2020	Percentage (%) in 2020–2021	Percentage (%) in 2021–2022	Percentage (%) in 2022–2023	Percentage (%) in 2023–2024	Trend between 2019–2020 and 2023–2024[64]
Caregivers who provided care for people living **with dementia** experienced distress	**37.1**	**36.6**	**38.1**	**35.6**	**35.3**	**Better**

Public opinion research results on quality of life suggest priorities for future efforts

Improving the quality of life of people living with dementia and dementia caregivers relies on efforts to eliminate stigma, to enable dementia-inclusive communities that welcome and value them, to provide sufficient care and supports within the community and through the health care system, and to support the capacity of caregivers while protecting their wellbeing. Recent public opinion research conducted for the Public Health Agency of Canada (PHAC) has provided more insight into these topics.[65]

Stigma related to dementia remains a challenge

Public opinion research has included questions to better understand public attitudes toward dementia and how common dementia-related stigma is.[66] For example, surveys have explored comfort levels when interacting with people living with dementia and sharing news of a dementia diagnosis, along with perceptions about people living with dementia. Questions were asked to understand views about living with dementia, including about the quality of life of people living with dementia and their capacity to continue activities such as working after the onset of symptoms.

Comparing public opinion research results between 2020 and 2023 suggests little change generally in public attitudes regarding dementia-related stigma; however, for a few questions there appears to be a negative shift (see Table 6). As well, fewer respondents reported feeling comfortable with the idea of disclosing a dementia diagnosis to family (57% in 2023 versus 64% in 2020); friends (40% versus 49%); neighbours and others in the community (24% versus 31%); and employers (20% versus 31%).[67] Discomfort with discussing a diagnosis may be related to stigma. Notably, the proportion of respondents who believe that people generally hold negative assumptions about those with dementia rose from 68% in 2020 to 83% in 2023. Although the factors contributing to a shift in attitudes around dementia-related stigma are unclear, studies suggest that the COVID-19 pandemic may have intensified the stigmatization of groups perceived as high risk for COVID-19, including older adults and those living with dementia.[68]

TABLE 6: Comparison over time of public attitudes related to dementia-related stigma

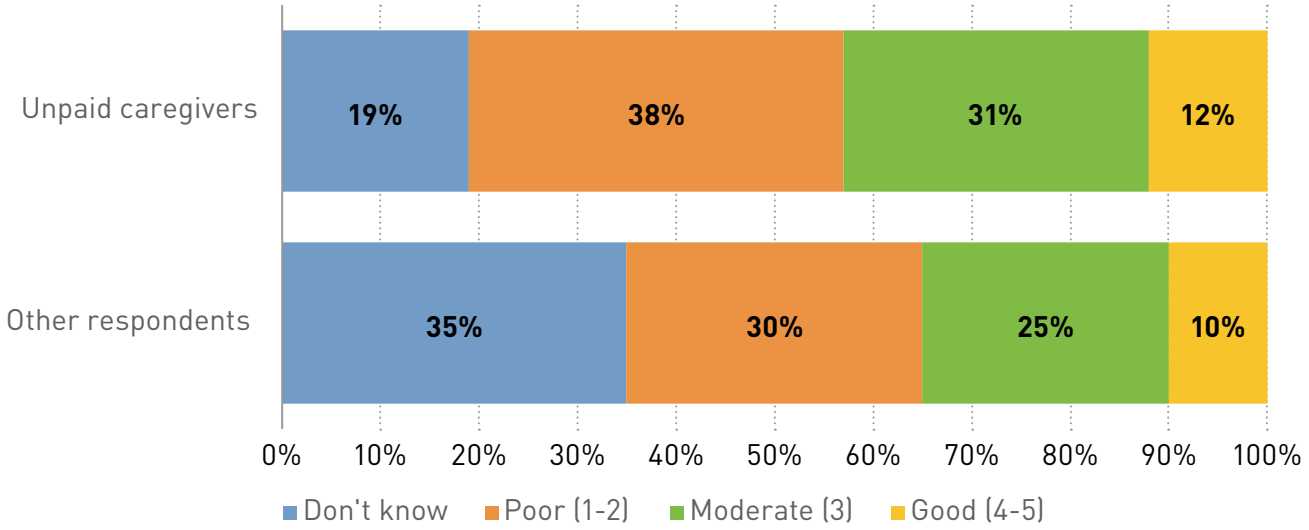
Survey question	2020	2023
Comfort levels (% moderately comfortable or higher, 3-5 on 5-point scale):[69] **How comfortable would you** ...?		
feel interacting with someone living with dementia?	**50%**	**43%**
be with asking a health care provider for information about dementia symptoms which could lead to obtaining an assessment and diagnosis?	**72%**	**68%**
Perceptions of people living with dementia**:**[70] **To what extent do you agree or disagree with**...?		
the view that people have negative assumptions about the abilities of people living with dementia?	**68% Agree**	**83% Agree**
the view that people living with dementia generally face a lower quality of life than people without dementia?	**10% Disagree**	**11% Disagree**
the view that people living with dementia are sometimes able to continue working for years after the onset of symptoms?	**47% Agree**	**41% Agree**

Dementia-inclusive communities are a priority with more work needed to expand them

Many factors affect how inclusive a community is for people living with dementia. Public opinion research has explored familiarity in Canada with the concept of dementia-inclusive communities and views on how inclusive Canadian communities are. Many respondents believe it is a priority for their communities to be dementia-inclusive. More than half (54%) of respondents in 2023 ranked it as a high priority, while almost one-third (30%) ranked it as a moderate priority.[71]

However, respondents have mixed views of how inclusive their communities are for people living with dementia. Dementia caregivers were more likely to provide a rating than those who were not caregivers (see Figure 14).

FIGURE 14: Rating of how dementia-inclusive the respondent's community is (2024)[72]

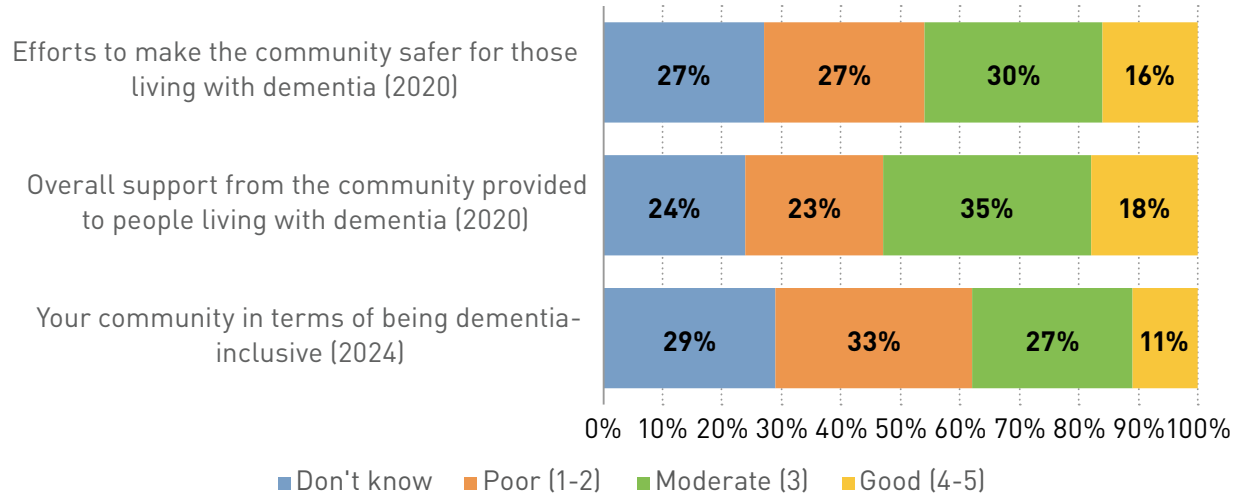


In a dementia-inclusive community, measures are in place that make it possible for people living with dementia to protect and improve their health and wellbeing, live independently, safely navigate and access local activities, and maintain social networks.[73]

Views on community supports for people living with dementia have become less positive

Public opinion research questions have asked about the quality of community supports for those living with dementia. In 2020, respondents were more positive about efforts to improve community safety and overall support for those living with dementia than they were in 2024, when asked about the extent to which their community is dementia-inclusive (see Figure 15).

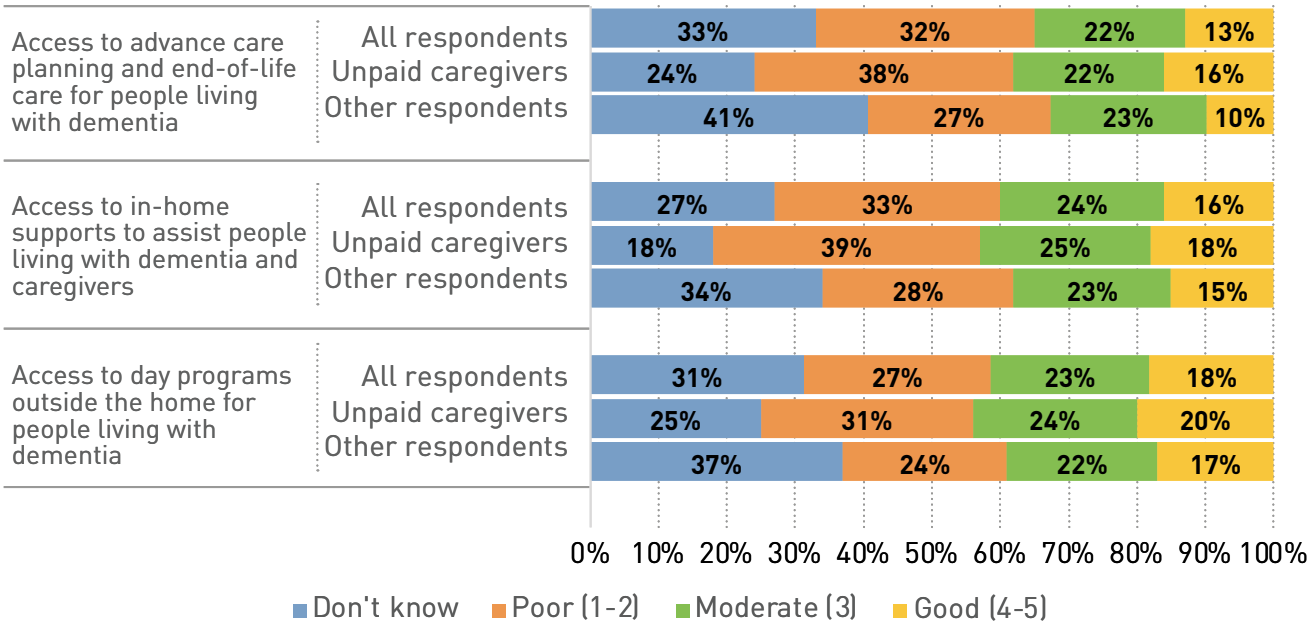
FIGURE 15: Perceptions over time of community safety, community support, and inclusion for people living with dementia[74]



Perceptions on the quality of other forms of supports

Respondents who reported knowing someone living with dementia in the 2024 survey were asked about access to in-home supports, day programs outside the home, advance care planning and end-of-life care (see Figure 16). Fewer than half gave a moderate to good rating of three or higher on a five-point scale with often one-quarter to one-third not able to provide a rating.

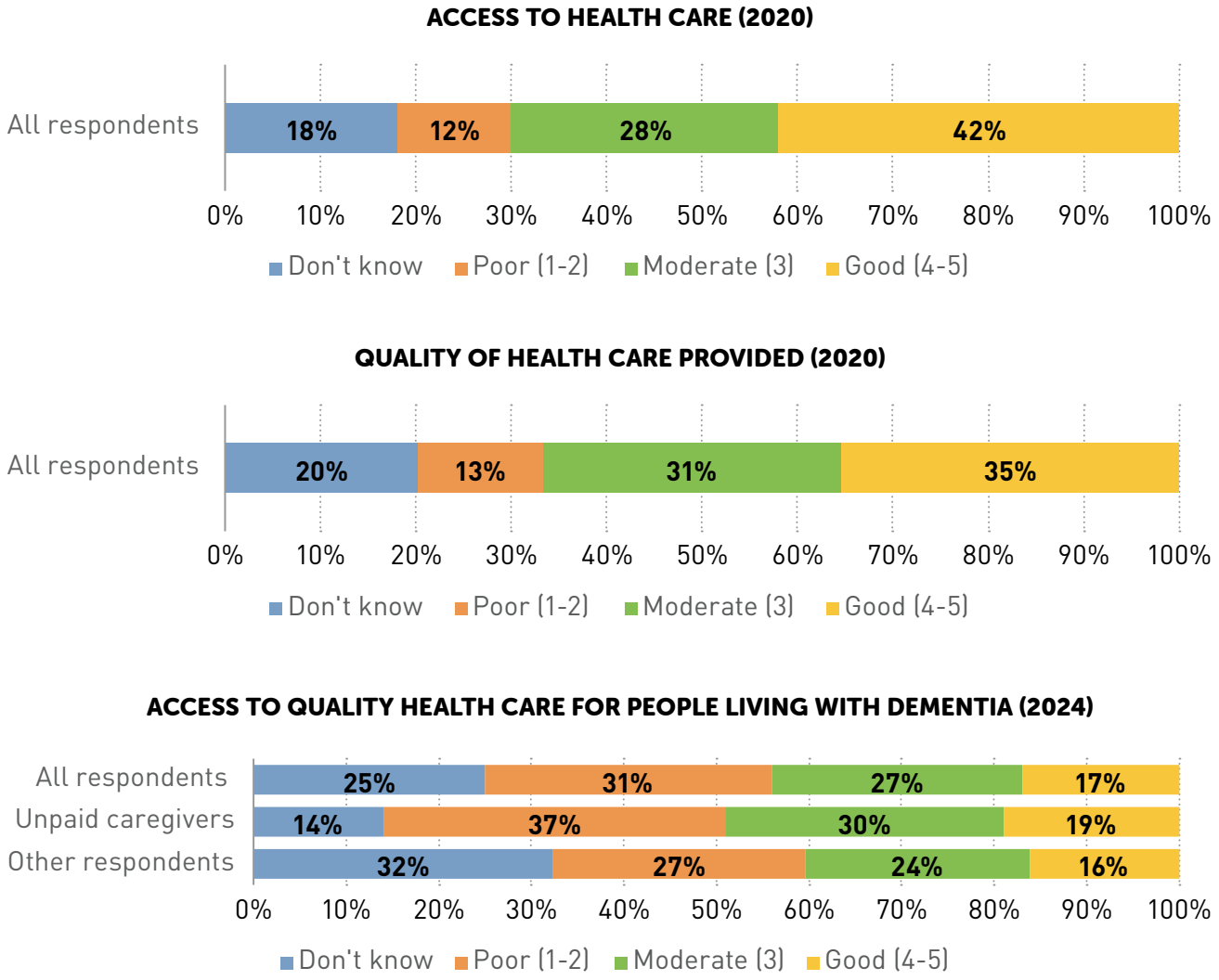
FIGURE 16: Perceptions of other forms of support for people living with dementia and caregivers (2024)[75]



Views are mixed on access to and quality of health care for people living with dementia

Access to health care and the quality of the care for people living with dementia are important factors for quality of life. Questions about perceptions and experiences related to these topics suggest a more negative view among respondents in 2024 compared with 2020 (see Figure 17).[76] Unpaid caregivers are more likely than other respondents to rate their community as poor or moderate to good in terms of the quality of health care for people living with dementia and less likely to report they don't know how to rate it.

FIGURE 17: Perceptions over time of access to and the quality of health care for people living with dementia[77]



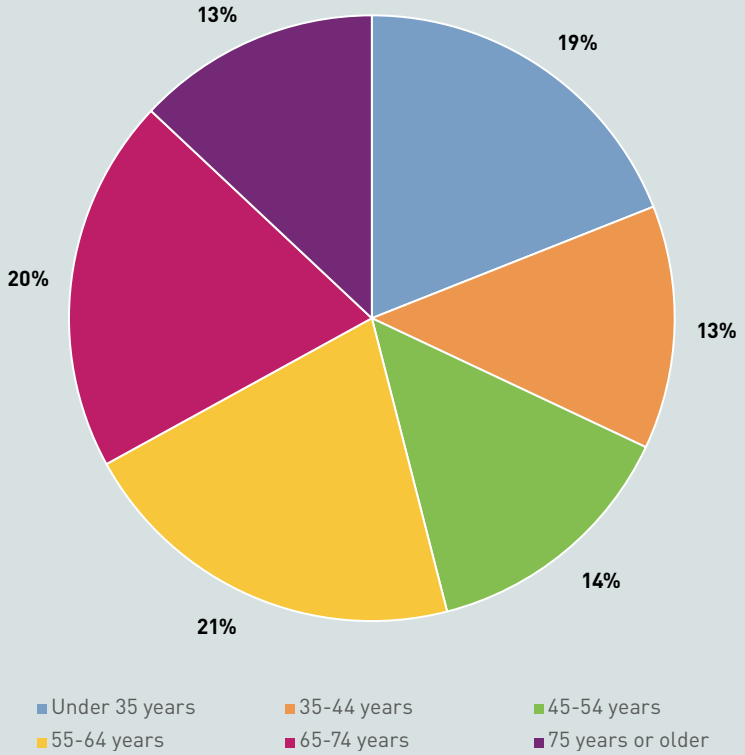
Who are Canada's unpaid dementia caregivers?

Public opinion research suggests it is increasingly common for individuals living in Canada to provide unpaid caregiving support to people living with dementia. Almost half (47%) of respondents in 2024 reported providing one or more forms of unpaid care to someone living with dementia over the last five years, compared with 36% in 2020. In 2024, these forms of care were most often through visiting and providing social or emotional support (42%), assisting with transportation (26%), helping with the activities of daily life (25%) and general health care and monitoring (23%). Many respondents provided several types of unpaid care; on average, unpaid caregivers spent 16.5 hours per week doing so.

Those providing unpaid dementia care are most likely to be a relative, close friend, neighbour or volunteer. Indigenous respondents were more likely to provide unpaid care to a close friend (26%) or neighbour (16%) compared with others (16% and 7% respectively). Southeast Asian respondents were also more likely than others to provide unpaid care to a neighbour (16% versus 7% of other respondents).[78] Respondents who identified as members of the 2SLGBTQI+ community were more likely to have provided care to an acquaintance (16%) or a neighbour (13%) compared with other respondents (6% and 7% respectively).

While caregiving is shared across all age groups, there is a slightly higher proportion of caregivers among younger and older age groups compared with those in midlife (see Figure 18). Caregivers were more likely to report being diagnosed with a chronic health condition than respondents not providing care (60% versus 48%). This suggests that a notable proportion of caregivers may be balancing their own health needs alongside caregiving responsibilities. Among respondents who identified themselves as unpaid dementia caregivers in 2024, slightly more were female (55%) than male (44%).[79]

FIGURE 18: Age distribution of unpaid dementia caregivers[80]



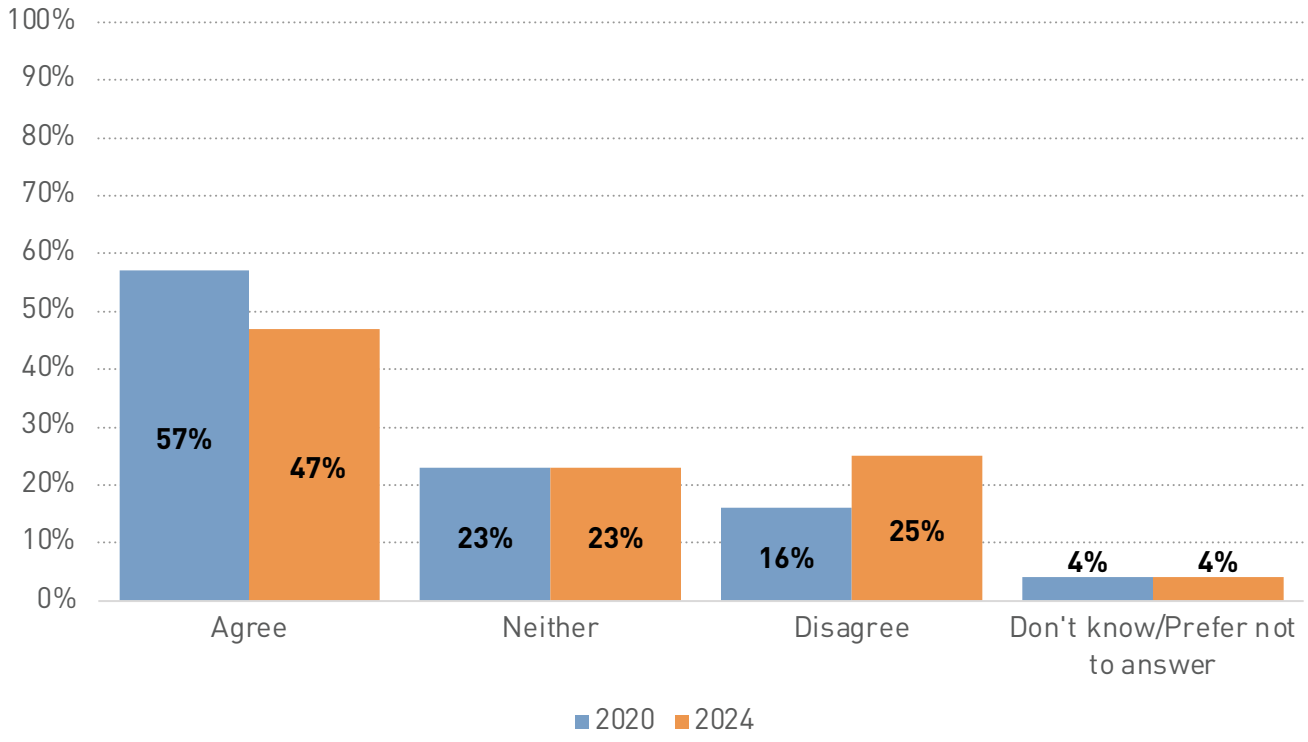
Assessing unpaid caregiver capacity to provide the care needed

Unpaid caregivers provide a wide range of supports to people living with dementia – from help with chores and daily activities to personal care and emotional support. While their role is essential to the daily lives and wellbeing of those they care for, it can also be demanding and challenging. Through public opinion research, caregivers were asked to reflect on their ability to meet the care needs of someone living with dementia, as well as sharing information on the reasons why they did or did not feel able to do so.

Self-assessed ability of dementia caregivers to meet care needs

Unpaid caregivers were asked whether they felt they were able to provide the care needed for someone living with dementia in a satisfactory and timely manner. Nearly half of caregivers (47%) in 2024 agreed they were able to provide the necessary care, a decrease from 57% in 2020 (see Figure 19).

FIGURE 19: Self-assessed ability of dementia caregivers to provide the care needed[81]



Reasons for being able to provide the care needed

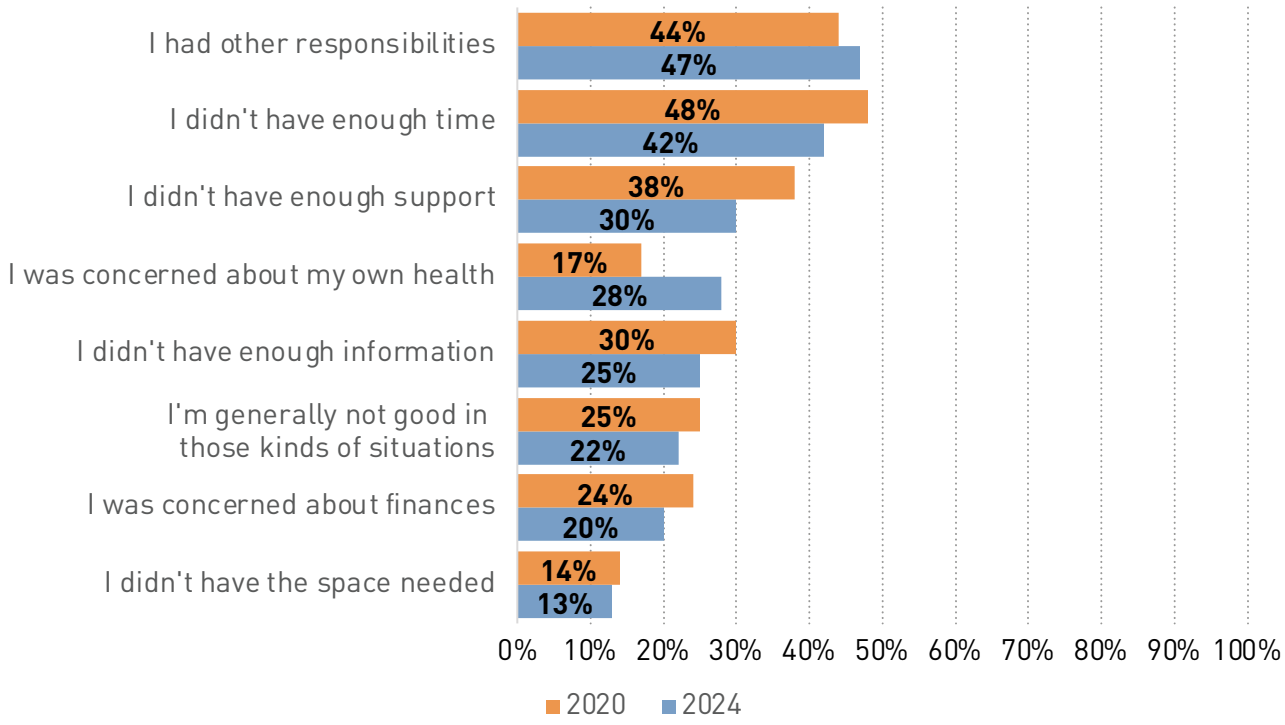
In 2024, the most common reasons reported for feeling able to provide the care needed were:[82]

- having enough time / a flexible schedule (71%);
- living close enough (63%);
- not being concerned about finances (44%); and
- having access to information (43%).

Reasons for not being able to provide the care needed

Caregivers who felt unable to provide the care needed most commonly said it was due to having other responsibilities, not having enough time, a lack of support, and concerns about their own health (see Figure 20). In 2024, fewer respondents noted a lack of time, support or information as reasons they felt unable to provide the care needed, while more pointed to concerns about their own health and other responsibilities compared with 2020.

FIGURE 20: Common reasons for feeling unable to provide the care needed[83]



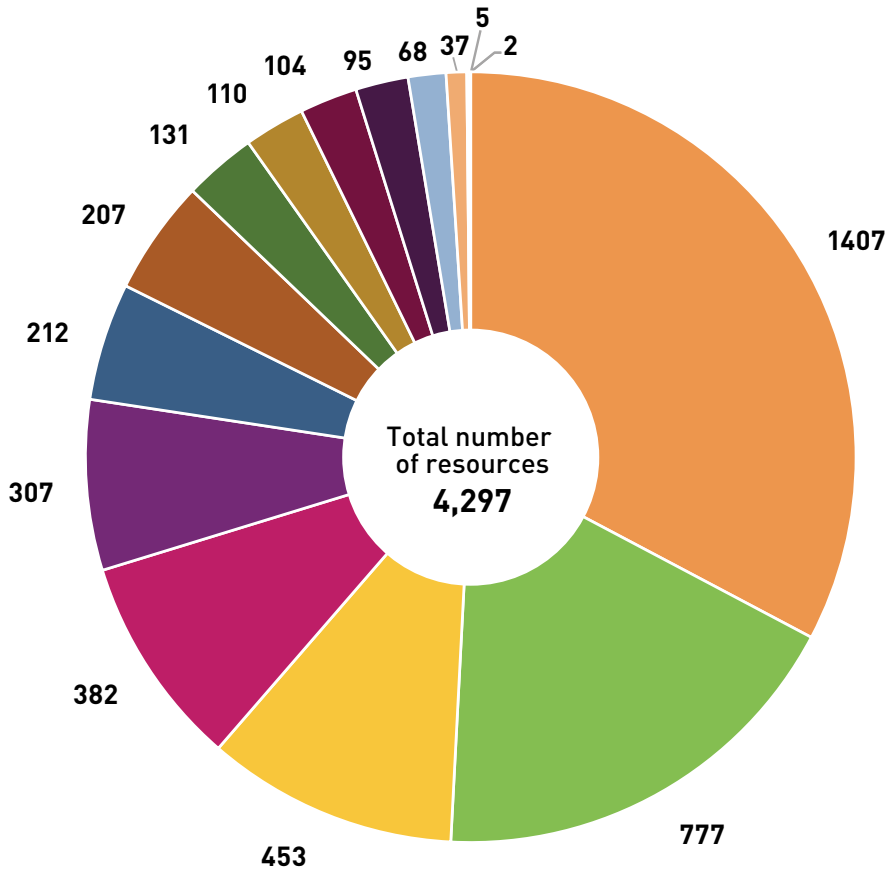
In 2024, men were more likely than women to say they had other responsibilities (54% versus 43%), were "not good in those situations" (29% versus 18%), and did not have the space needed (20% versus 9%). Meanwhile, women were more likely to say they were concerned about their own health (33% versus 20%) and finances (24% versus 14%). Indigenous respondents were more likely than others to say they did not have the space needed (24% versus 13% of others).

Project resources are supporting improved quality of life

As part of the Public Health Agency of Canada (PHAC)'s efforts to support implementation of the national dementia strategy, three funding programs have contributed to its objective to improve quality of life: the Dementia Community Investment (DCI), the Dementia Strategic Fund (DSF) and the Enhanced Dementia Surveillance Initiative (EDSI).

Across the 55 DCI and DSF projects focused on improving the quality of life of people living with dementia and dementia caregivers, 4,297 resources[84] were created that reached individuals at least 67 million times. The most common types of resources created were related to social media, educational events (webinars and presentations), fact sheets and newsletters, as well as materials to support training on topics such as stigma, dementia-inclusive communities and person-centred care (see Figure 21).

FIGURE 21: Resources produced through DCI and DSF projects focused on improving quality of life for people living with dementia and dementia caregivers (projects = 55)[85]



Several projects tailored resources for specific populations, including:

- 2SLGBTQI+ individuals;
- ethno-cultural minorities;
- Indigenous populations;
- individuals with intellectual disabilities; and
- rural/remote communities.

The DCI and DSF together supported 55 awareness-raising, guidance and community projects with a focus on improving the quality of life of people living with dementia and dementia caregivers. Just over half of these projects (34/55) produced resources in both official languages (English and French). Several projects (16/55) produced resources in other languages to improve access to dementia information such as:

- digital resources and culturally specific resources in Simplified Chinese (15), Traditional Chinese (15), Italian (15), Punjabi (16), Hindi (16) and Urdu (16);
- a "Dementia in the Chinese Community" video series to capture the perspective of lived experience within the community featured Mandarin and Cantonese speakers;
- culturally- and language-specific materials to educate individuals about dementia information and raise awareness:
  - a "Dementia Guide" was translated to Tamil;
  - an "Experiences of Dementia in South Asian Communities in Canada" video was developed in Punjabi;
  - an "Understanding Dementia" video was developed in Hindi and Punjabi; and
- tip sheets for individuals working in intergenerational programming (e.g., benefits of intergenerational programming for seniors with dementia, creating dementia-inclusive spaces for intergenerational programs, how to talk to children about dementia) were developed in Arabic, Farsi, Hindi, Punjabi, Simplified Chinese, Spanish, Tamil, Traditional Chinese, Vietnamese and Tagalog.

Project resources on quality of life have reached millions of people

Projects funded through the DCI and DSF supporting the national strategy objective on quality of life reported reaching more than 43 million individuals directly. Moreover, the resources produced by these projects reached individuals more than 67 million times.

Among resource categories, marketing and awareness campaigns had the highest reach at more than 37 million, followed by traditional media, social media, and videos or film (Figure 22). Among the many types of resources created, new websites now provide easier access to dementia-related information, such as culturally appropriate and culturally safe resources, resources for clinicians to deliver person-centred care in ethnic and cultural minority communities and to Indigenous populations, and guidance tailored for supporting individuals living with dementia who also have intellectual and developmental disabilities.

FIGURE 22: Reported reach of DCI and DSF project resources focused on quality of life[86]

37,149,000+	**Marketing and awareness campaign** impressions
18,877,000+	**Traditional media** impressions (e.g., features in magazines, newspapers, radio, TV, and press releases)
9,218,000+	**Social media** impressions
832,000+	**Video and film** views
707,000+	**Website** and webpage views
421,000+	Times **factsheets and newsletters** were accessed
116,000+	**Educational event** attendees (e.g., webinars, presentations, conferences, and lectures)
108,000+	Times **posters and infographics** were accessed
56,000+	Times **toolkits, manuals, booklets, guidelines and best practices** were accessed
50,000+	Times **frequently asked questions documents, tip sheets, and pamphlets** were accessed
22,000+	Listens to **podcast and other audio resources**
18,000+	Times **academic publications** (e.g., articles, literature reviews, conference posters) were accessed
17,000+	Times **formal training** (e.g., e-learning modules and workshops) was accessed
4,000+	Individuals **consulted and engaged**

Gauging the impact of projects focused on quality of life

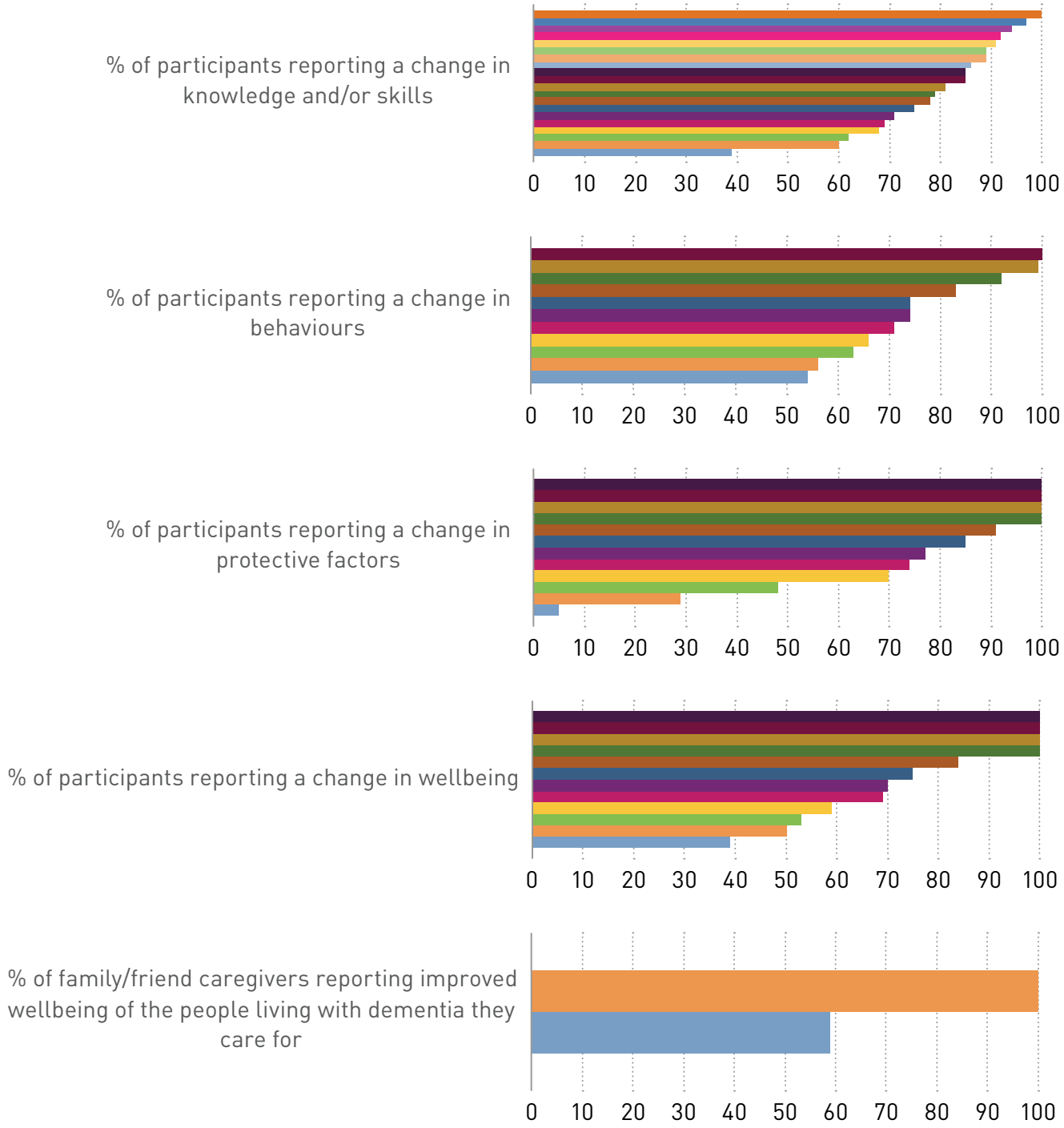
Reporting by projects focused on quality of life shows results that include increased awareness among Canadians about: the aspects of built and social environment that contribute to making them dementia-inclusive; the ability of people living with dementia to remain active in and contribute to their community; and the ability of people living with dementia to experience a good quality of life. Other reported results include, for example, increased comfort interacting with someone living with dementia and increased comfort sharing a dementia diagnosis with others such as family, friends, employers, and neighbours. These results contrast in some cases with general population trends from public opinion research, indicating that project resources have been effective in advancing the strategy's objective related to quality of life.

DSF projects focusing on improving access to high-quality dementia guidance reported that participants agreed that project outputs: improve knowledge of dementia guidance on person-centred care; provide better access to resources needed to deliver quality care; and improve the feeling of preparedness to provide care for people living with dementia and to take steps to reduce stigma. Further, participants agreed the resources would improve dementia care, would be used by others, are feasible to adopt, and are something they would recommend to others. Guidance projects also reported that participants felt better equipped to navigate health care and other support systems.

Projects measured their impact in part through participant surveys and interviews. Figure 23 presents some of the most commonly reported indicators related to improving quality of life for people living with dementia and dementia caregivers.

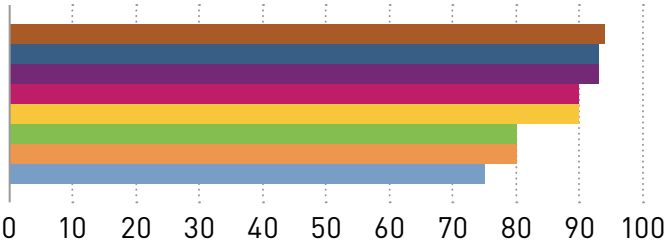
FIGURE 23: Select indicators from DCI and DSF focused on improving quality of life for people living with dementia and dementia caregivers[87]

DCI PROJECTS (EACH BAR REPRESENTS ONE PROJECT)

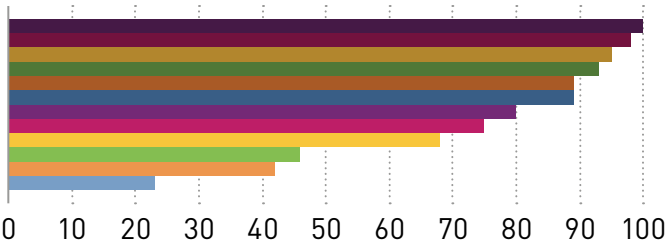


DSF – AWARENESS-RAISING PROJECTS (EACH BAR REPRESENTS ONE PROJECT)

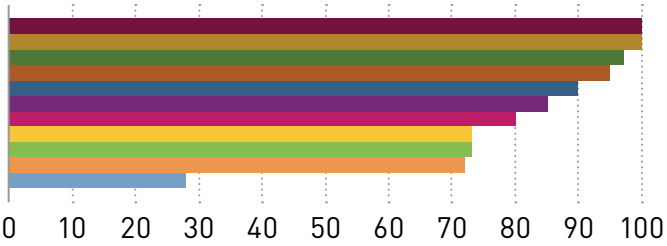
% of people reached by the project who gained knowledge and/or skills on the individual aspects of built and social environments that contribute to making them dementia-inclusive



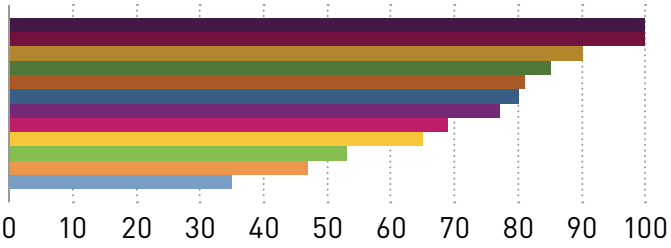
% of people reached who gained knowledge and/or skills on the ability of people living with dementia to remain active in and contribute to their community



% of people reached by the project who gained knowledge and/or skills on the ability of people living with dementia to experience a good quality of life

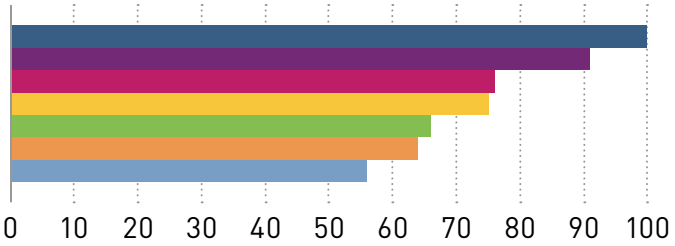


% of people reached by the project who subsequently feel comfortable interacting with someone living with dementia

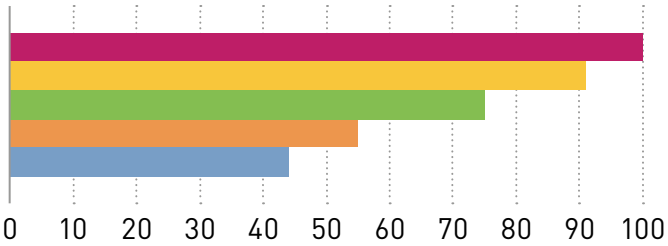


DSF – GUIDANCE PROJECTS (EACH BAR REPRESENTS ONE PROJECT)

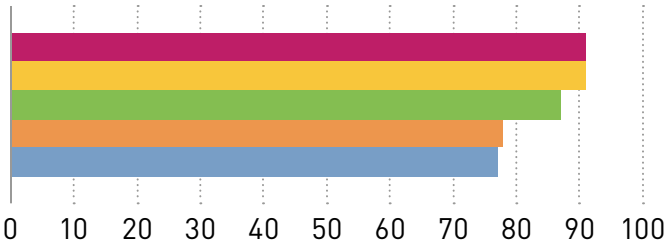
% of people reached by the project who feel better prepared to provide care for people living with dementia



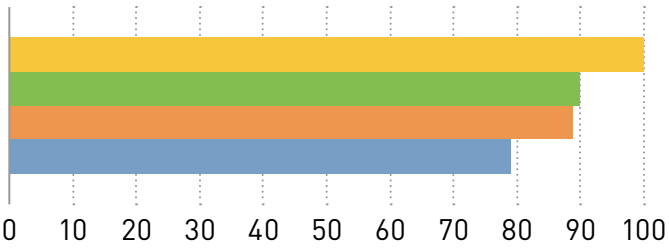
% of people reached by the project who have improved knowledge of dementia guidance on person-centred support, communication and care for people living with dementia and caregivers



% of people reached by the project who reported they intend to use the guidance related to quality of life produced by the project



% of people reached by the project who reported the project as having a meaningful contribution to improving access and use of dementia guidance in Canada



The DCI is an ongoing PHAC funding program. It aims to optimize the health and wellbeing of people living with dementia and family/friend caregivers and increase knowledge about dementia risk and protective factors. DCI projects have focused on, for example, fostering dementia-inclusive communities, improving access to quality care, and enhancing caregiver support. More than 5,600 people living with dementia and nearly 3,600 family/friend caregivers have participated in DCI projects to date, including through meaningful engagement in project governance and advisory roles to ensure their lived experience informs the design and delivery of projects.

National public education campaign on dementia: Reducing stigma and enabling communities to be more dementia-inclusive

Reducing stigma and enabling communities to be more dementia-inclusive was one focus of the national public education campaign undertaken by the Public Health Agency of Canada (PHAC). The primary audience was adults 40 years and older with an emphasis on people living with or prone to chronic health conditions, women, service providers and ethnic minority groups.

This advertising campaign reached millions of people living in Canada through television, digital platforms and newspapers. Content developed included a video on how to interact in a supportive way with someone living with dementia, two testimonial videos from people living with dementia, and an interactive quiz. Paid social media and search engine marketing were also used to share information to help reduce dementia-related stigma. Advertising resulted in 83.2 million impressions and people clicked on ads 297,300 times across all campaign phases focused on this theme. Results from a survey of approximately 2,000 Canadians about the effectiveness of the stigma campaign ads found that 76% felt the ads helped reduce negative perceptions, 68% felt they clearly conveyed how to support people living with dementia, and 63% felt they provided new information.

FIGURE 24: Campaign results: Reducing stigma and enabling communities to be more dementia-inclusive

National public education campaign:

Reducing stigma and enabling communities to be more dementia-inclusive

Digital advertising

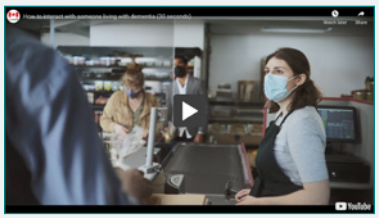
83.2M ad impressions, users clicked on ads 297.3K times

76%
felt the ads helped reduce negative perceptions

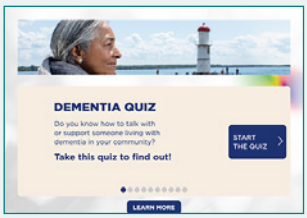
68%
felt the ads clearly conveyed how to support people living with dementia

63%
felt the ads provided new information

Video: How to interact with someone living with dementia



Interactive quiz



Social media

Testimonial videos featuring people living with dementia

Note: K = thousand, M = million

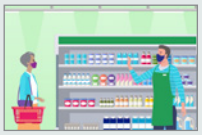
Two spokespersons, one Anglophone and one Francophone, supported the stigma theme of the campaign through media interviews and other activities. Their efforts resulted in 177 media placements, with a combined reach of over 21.5 million impressions across Canada.

Five articles, an informational video on how to help reduce stigma, and the two testimonial videos noted above were made available to media outlets to use. Across all campaign phases focused on stigma, these articles and videos resulted in a potential audience reach of over 31.4 million, based on the media organizations using this material.

Articles & radio spot for media use

31.4M reach

Informational video: Help reduce the stigma behind dementia



Throughout the campaign phases focused on stigma reduction, people were encouraged to visit the Government of Canada dementia website (**Canada.ca/dementia**) for more information, resulting in over 277,000 visits.

Enhancing dementia surveillance to support quality of life

Ten of the resources produced by projects funded by the Enhanced Dementia Surveillance Initiative (EDSI) contributed to supporting the quality of life of people living with dementia. These resources include findings that better describe the characteristics and outcomes of those living with dementia, which can better inform approaches to the care provided by dementia caregivers and health professionals. As a result, care can be more effectively tailored, leading to improved quality of life for those living with dementia.

Information about the care trajectory of those living with dementia, as well as social and economic characteristics, helps to inform appropriate health care, across care settings, to support a high quality of life.

An **article** (2024) summarizing key findings from the Canadian Institute for Health Information's **dementia trajectory report** funded by EDSI, includes the following:

- Around 60% of people living with dementia who entered long-term care (LTC) had a hospitalization three months before their move; only 12% were hospitalized in the three months after they moved.
- Overall, those who have ongoing mental health and/or substance use disorders are more likely to face challenges accessing home care services and transitioning to an LTC facility. For example, they had longer periods of alternative level of care (defined as when a patient stays in a hospital bed but does not need the full level of care in that setting) compared with those without mental health and/or substance use disorders (40 days compared with 27 days).

Pursuing quality of life through research and innovation

The advancement of knowledge to improve the quality of life and health of older Canadians is a fundamental goal of the Canadian Institutes of Health Research (CIHR) Institute of Aging.

CIHR invests in research to help people living with dementia stay actively involved in their communities. Highlights include:

- Preventing social isolation: CIHR has supported research that identifies ways to improve social connectedness,[88] as well as clinical trials of interventions, to decrease social isolation and loneliness of older adults living with dementia.[89]

- Aging in place: CIHR, in collaboration with Health Canada's End of Life Care Unit and Healthcare Excellence Canada, invested in bringing together diverse stakeholders – including international, federal, provincial, and territorial partners, researchers, implementation experts, and people with lived experience – to discuss ways to optimize federal support for community-led care. This process also helped identify best practices for using a **compassionate communities model** for enabling aging in place.

Developing, evaluating and implementing strategies to improve the health and wellbeing of dementia caregivers and care providers is one of the main research areas of the Brain Health and Cognitive Impairment in Aging (BHCIA) Research Initiative. Over the last five years, CIHR invested in research that expanded our understanding of caregiver experiences and supported interventions to improve the quality of life of caregivers and care providers of people living with dementia. Research in this area is supported through most BHCIA funding opportunities, many of those in partnership with Azrieli Foundation and its Centre for Caregiving Excellence.

Since 2020, efforts under the umbrella of the Canadian Consortium on Neurodegeneration in Aging (CCNA) have made notable strides toward improving access to quality dementia care, supporting improvements in care delivery, and promoting culturally inclusive approaches to dementia research. Some examples include:

- Access to quality care: improving the delivery of dementia care through one-day, team-based **memory clinics**, in collaboration with rural primary health care teams in 10 communities in Saskatchewan. Patients and families reported valuing the comfort and convenience of local care, "being heard," being in the same room and on the "same page" with the care team and receiving help for the future.
- Culturally safe approaches to research: the CCNA established a strong foundation for an independent national Indigenous dementia research collaboration, the **Community-Based Indigenous Cognitive Health Network**, and fosters respectful partnerships between researchers and Indigenous communities.

Between 2019 and 2024, CCNA research teams released more than 1,100 knowledge products related to improving the quality of life of people living with dementia, including peer-reviewed publications, public events, panels, webinars, traditional and social media publications, videos, and podcasts.

Moving forward, CIHR will continue to invest in research to address the needs of dementia caregivers, as well as the stigma and social isolation of people living with dementia. CIHR will also support the evaluation and implementation of promising programs, services and models of care to improve the quality of life of those impacted by cognitive impairment and dementia, including through BHCIA Implementation Science Team grants, an investment of $7.5 million starting in 2024.

Supporting people living with dementia and dementia caregivers during climate-related emergencies: Public opinion research results

To better understand the experiences and needs of people living with dementia and dementia caregivers during climate-related emergency situations, the Public Health Agency of Canada (PHAC) undertook public opinion research in 2024 with individuals with lived experience.[90] Participants included paid care providers, first responders, and government/logistical planners, most of whom had provided direct or indirect support to people living with dementia during, for example, forest fires/wildfires, severe air pollution (including wildfire smoke), floods, heavy rain and snow, ice storms, hurricanes and tornados, and/or extreme heat and cold. Other participants were people living with dementia and unpaid caregivers who recently experienced such an emergency, including, in some cases, evacuation.

This research examined the impacts of these emergencies, the challenges faced, and gathered participants' suggestions for tools and resources that could help in future situations.

> “The past few years have been wild. We see polar vortexes, with extreme cold of -40°C or colder for about 10 days, and that is now happening regularly. And then we have high smoke index days in the summer, and the heat is exacerbated with that. We have days of +40°C or +35°C.”
>
> **– First responder**

Challenges faced during climate-related emergencies

Participants highlighted key challenges they observed being faced by people living with dementia and caregivers during climate-related emergencies (see Table 7).

TABLE 7: Examples of challenges observed

People living with dementia	Dementia caregivers
▶ Sudden worsening of symptoms (temporary or permanent) ▶ Difficulty recognizing an emergency or its severity ▶ Disruptions to routine ▶ Communication challenges that limit ability to understand and follow guidance ▶ Reluctance to leave familiar surroundings	▶ Increased responsibilities and stress, raising risk of “burn out” ▶ Lack of guidance on preparing for and providing care in emergencies ▶ Limited ability to help if living in a different community ▶ Financial strain (lost income, travel costs, supplies) ▶ Uncertainty about available resources or supports, including financial supports

> “There is a significant increase in stress and flareups of other health conditions. Complications of other health conditions. [After the emergency] there is generally a worse health condition overall.”
>
> **– Care provider**

> “How do you plan for what you don’t know what’s coming? We would have these conversations around what they like [to bring] if [a climate-related emergency] happened but the problem is they forget. In the moment they don’t recognize the issue, the danger.”
>
> **– Caregiver**

Participants also identified the needs of people living with dementia and suggested strategies to address them during climate-related emergencies (see Table 8).

TABLE 8: Examples of observed needs and suggested strategies

Needs	Strategies to address needs
Understanding	▶ Slow down interactions and provide reassurance
Consistency and normalcy	▶ Keep the person living with dementia in their home whenever possible and ensure consistency of care providers for those living in long-term care ▶ Include familiar items or activities in an emergency bag (in the event of evacuation)
Support and individual care (particularly during evacuation)	▶ Involve family for support and have a list of important contacts available ▶ Have access to information on the current health condition of the person living with dementia and establish and understand their health condition at baseline
Clear, simple communication	▶ Use visual cues, share only information directly relevant to the person living with dementia

> "They [people living with dementia] need someone to take the time with them. The more rushed they are, the more stressed and anxious they will become. We offer them as much patience as possible."
>
> – Care provider

Evacuation experiences

Emergency evacuations during climate events were especially challenging, as people living with dementia often lacked clarity about what to take with them, the urgency of the situation or why evacuation was necessary. Disruptions to routine, separation from familiar surroundings, limited mobility, loud environments, and the risk of getting lost in crowds further complicated coping and functioning. Participants noted that evacuations can be traumatic, particularly for those with past experiences of displacement, such as Indigenous Peoples who had been taken to residential schools.

> "People are going to be housed in large areas [in case of evacuation] and it will be confusing and chaotic and extremely stress-inducing. I would like to see small locations and someone in those locations dedicated on checking on people with needs. Someone reassuring and calm. If I can't be there to be the reassuring factor, I would like to see someone tasked to deal with those needs."
>
> – Caregiver

> "... when [sic] you are taking them from one place to the other that place also needs to be safe, safety measures put in place. If [people living with dementia] are in a place they do not know, they are looking to go home. You will need to increase supervision."
>
> – Government/Logistical planner

Available tools and resources for climate-related emergency support

Dementia caregivers and people living with dementia reported having few tools to prepare for and respond to climate-related emergencies, and expressed a need for more information and support. While care providers working in supportive housing or long-term care settings noted general emergency plans, none mentioned plans specific to climate-related emergencies.

Some participants identified useful existing resources, including:

- A phone line for accessing health care professionals (e.g., 8-1-1 HealthLine)
- Videos for the public on dealing with emergencies in general
- Tracking devices
- Telephone access to psychiatric nurses
- Health information sheets with care directions posted in the home
- Mobile community paramedic services
- A vulnerable person registry

Suggestions for tools and resources

Participants recommended that information for people living with dementia and dementia caregivers be available in multiple formats—such as short, simple videos and translations into different languages—to explain climate-related emergencies. They also suggested a centralized portal to share information and community resources.

> "When I am not as anxious, I would readily absorb the information regarding future planning, rather than during an emergency. I would like to have a list of resources, pointers, or a note [that says]: if this, do that; if this, do that. So, I have a clear path. In a stressful situation, I may not be able to determine the correct course of action."
>
> – Person living with dementia

Care providers noted a lack of standardized training specific to dementia and climate emergencies; existing workshops typically focus on general crisis response.

> “Nothing in any course is specific to climate emergencies – it deals with high-stress situations. There are no resources specific to climate emergency. We need to bring awareness to the challenge and add to existing tools.”
>
> **– First responder**

Participants highlighted tools and resources that would be especially helpful in a climate-related emergency:

Resources for care providers and first responders:

- Door signs to alert first responders to the presence of someone living with dementia
- Proactive weather alerts for long-term care homes
- Easier access to medical records during emergencies
- An app with dementia-specific guidance for different scenarios
- A dedicated phone line for first responders to ask for advice
- In-person wellness check-ins

> “I don’t have access to the full [medical] information on a resident with dementia and because there are vast degrees [of the condition], everyone is different. If I don’t know that person’s history, you are working blind. Information is key to all of this.”
>
> **– Care provider**

For dementia caregivers:

- Emergency kit checklists tailored to dementia
- Scenario-based guidance (e.g., wildfire preparation; evacuation orders)
- Communication strategies during and after emergencies
- A dedicated phone line for questions
- An early-warning alert system (e.g., cell phone alerts)

For people living with dementia:

- Community resource phone lists
- Short, easy-to-understand videos about emergencies

Participants further suggested that long-term care homes develop climate-specific preparedness and response plans, and create coordinated emergency response teams. Municipalities were encouraged to design evacuation protocols tailored to people living with dementia, including having designated evacuation sites with appropriate security, supportive resources, and specialized transportation.

Conclusion

Since 2019, the national dementia strategy has been supported by federal investments of more than $400 million in research and innovation, community-based projects, awareness raising, surveillance, data-gathering and guidance. While the Public Health Agency of Canada (PHAC) leads the federal contribution to the strategy's implementation, it is a collective effort that relies on other federal partners, other levels of government, and stakeholders from across the country who directly support progress on its objectives through a wide variety of activities. We thank all those working to support Canada's dementia strategy and its vision of a Canada in which all people living with dementia and dementia caregivers are valued and supported, quality of life is optimized, and dementia is prevented, well understood and effectively treated.

We also thank those who contributed to this year's report, including participants in **PHAC's public opinion research studies**. If you would like to receive communications about the national dementia strategy and funding opportunities or provide information about relevant dementia-related activities, please contact the **PHAC Dementia Policy Secretariat**.

Appendices

Appendix A: Trends in risk and protective factors across Canada

Dementia risk and protective factors

TABLE 1A: Percentage of population with modifiable dementia risk factors over time

Dementia risk/protective factor	Percentage (%) of Canadian population with factor (Year 1)	Percentage (%) of Canadian population with factor (Year 2)	Trend[91, 92]	Source
% of population (aged 20+) that reports having less than a high school **education**[93, 94]	10.5 (2018)	7.9 (2023)	Better[95]	Canadian Community Health Survey (CCHS), 2018; 2023[96]
% of population (aged 18+) that reports being current **smokers** (daily or occasional)	16.7 (2018)	11.4 (2023)	Better[97]	CCHS, 2018; 2023[98]
% of population (aged 18+) that reports heavy **drinking**[99]	20.3 (2018)	19.4 (2023)	No significant change[100]	CCHS, 2018; 2023[101]
% of population (aged 12+) who reported sustaining a **head injury or concussion**	1.6 (2020)	1.7 (2022)	No significant change	CCHS Traumatic Brain Injury Rapid Response (TBIRR), 2020; CCHS, 2022
% of population (aged 18–79) with high **LDL cholesterol**	41.2 (2014–2015)	33.3 (2018–2019)	No significant change	Canadian Health Measures Survey (CHMS), 2014–2015; 2018–2019
% of population (aged 20+) with diagnosed **diabetes**[102]	10.3 (2017–2018)	10.7 (2022–2023)[103]	N/A[104]	Canadian Chronic Disease Surveillance System (CCDSS), 2017–2018; 2022–2023
% of population (aged 20+) with diagnosed **hypertension** (high blood pressure)[105]	23.5 (2017–2018)	22.3 (2022–2023)	N/A[106]	CCDSS, 2017–2018; 2022–2023

Dementia risk/protective factor	Percentage (%) of Canadian population with factor (Year 1)	Percentage (%) of Canadian population with factor (Year 2)	Trend[91, 92]	Source
% of population (aged 15+) classified as meeting criteria for **major depressive episode** in the 12 months prior to interview[107]	4.7 (2012)	7.6 (2022)	Worse	CCHS Mental Health (MH), 2012; Mental Health and Access to Care Survey (MHACS), 2022[108]
% of adults (aged 18+) that are living with **obesity** (self-reported, adjusted BMI)[109]	26.8 (2018)	30.2 (2023)	Worse[110]	CCHS, 2018; 2023[111]
% of population (aged 15) in Canada who performed below Level 2 in **reading literacy**[112]	13.8 (2018)	18.1 (2022)	Worse	Programme for International Student Assessment (PISA), 2018; 2022[113]
% of population (aged 65+) with an **uncorrected vision problem**[114]	3.0 (2019)	6.3 (2023)	Worse	CCHS, 2019; 2023

TABLE 1B: National average fine particulate matter (PM2.5) concentrations in Canada over time

Dementia risk factor	Micrograms per cubic metre (Year 1)	Micrograms per cubic metre (Year 2)	Trend	Source
National population-weighted average fine particulate matter (PM2.5) concentration (**air pollution**) (micrograms per cubic metre)[115]	8.3 (2001)	6.8 (2021)	Better[116]	**Fuller-Thomson et al. (2024)**

TABLE 1C: Percentage of population with modifiable dementia protective factors over time

Dementia protective factor	Percentage (%) of Canadian population with factor (Year 1)	Percentage (%) of Canadian population with factor (Year 2)	Trend[117, 118]	Source
% of population (aged 18+) who report accumulating at least 150 minutes of moderate-to-vigorous **physical activity** each week, in bouts of 10 minutes or more[119, 120]	58.5 (2016)	53.9 (2021)	Worse	CCHS, 2016; 2021
% of population (aged 18+) that reports a "very strong" or "somewhat strong" sense of belonging to their local community (**social isolation** is a dementia risk factor)[121]	67.1 (2018)	60.6 (2023)	Worse[122]	CCHS, 2018; 2023[123]

Dementia risk and protective factors across Canada

TABLE 2A: Dementia risk factors across Canada[124]

Dementia risk factor	Source [125, 126, 127]	Nat'l	AB	BC	MB	NB	NL	NT	NS	NU	ON	PE	QC	SK	YT
% of population (aged 20+) that reports having less than a high school **education**[128]	CCHS (2023)	7.9	7.0	6.2	9.2	8.8	11.6	N/A	7.9	N/A	6.5	9.3	11.1	8.2	N/A
% of population (aged 18+) that reports being current **smokers** (daily or occasional)	CCHS (2023)	11.4	10.8	9.5	12.4	14.7	15.4	N/A	13.7	N/A	11.1	11.9	12.5	12.2	N/A
% of population (aged 18+) that reports heavy **drinking**[129]	CCHS (2023)	19.4	19.3	19.4	19.9	19.1	22.3	N/A	21.2	N/A	17.4	20.6	22.2	19.9	N/A
% of population (aged 12+) who reported sustaining a **head injury or concussion**	CCHS (2022)	1.7	2.7	2.2	1.7	1.8	1.5	N/A	2.1	N/A	1.5	F[130]	1.4	1.5	N/A
% of population (aged 18–79) with high **LDL cholesterol**	CHMS (2018–2019)	33.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
% of population (aged 20+) with diagnosed **diabetes**[131]	CCDSS (2022–2023)	10.7	10.5	10.5	12.7	N/A	11.7	N/A	10.4	8.9	11.7	9.8	8.6[132]	11.1	9.1
% of population (aged 20+) with diagnosed **hypertension** (high blood pressure)[133]	CCDSS (2022–2023)	22.3	24.2	21.7	28.6	N/A	28.9	N/A	24.5	22.4	22.9	23.1	18.8[134]	25.0	21.8
% of population (aged 15+) classified as meeting criteria for **major depressive episode** in the 12 months prior to interview[135]	MHACS (2022)	7.6	9.6	8.2	7.7	X[136]	X	N/A	8.8	N/A	8.3	X	5.8	F	N/A
% of population (aged 18+) that are living with **obesity** (self-reported, adjusted BMI)[137]	CCHS (2023)	30.2	31.2	24.3	35.1	41.1	41.1	N/A	38.3	N/A	30.0	39.7	29.1	40.2	N/A
% of population (aged 15) who performed below Level 2 in **reading literacy**[138]	PISA (2022)	18.1	14.8	17.0	22.1	27.6	25.1	N/A	23.0	N/A	17.2	20.0	19.4	22.4	N/A
% of population (aged 65+) with an **uncorrected vision problem**	CCHS (2023)	6.3	5.6	6.2	5.5	5.4	2.6	N/A	4.0	N/A	7.7	5.2	5.3	5.3	N/A

TABLE 2B: Dementia risk factors across Canada

Dementia Risk Factor	Source	National	Atlantic Canada	British Columbia	Prairies and northern Ontario	Southern Ontario	Southern Quebec
Regional population-weighted average fine particulate matter (PM2.5) (micrograms per cubic metre), for latest year (2021) (**air pollution**) (micrograms per cubic metre)[139]	Fuller-Thomson et al. (2024)	6.8	4.5	7.4	6.1	4.0	7.3

TABLE 2C: Dementia protective factors across Canada[140]

Dementia protective factor	Source [141, 142]	Nat'l	AB	BC	MB	NB	NL	NT	NS	NU	ON	PE	QC	SK	YT
% of population (aged 18+) that report accumulating at least 150 minutes of moderate-to-vigorous **physical activity** each week, in bouts of 10 minutes or more[143]	CCHS (2021)	53.9	58.0	62.4	52.8	50.6	50.3	N/A	55.4	N/A	51.5	51.3	51.7	52.2	N/A
% of population (aged 18+) that reports a "very strong" or "somewhat strong" sense of belonging to their local community (**social isolation** is a dementia risk factor)[144]	CCHS (2023)	60.6	61.2	61.2	64.0	61.9	70.5	N/A	62.3	N/A	61.4	62.1	56.3	67.9	N/A

Endnotes

1 A caregiver is defined as a person who provides care and support to a person living with dementia, and who is not a paid care provider. A caregiver is likely to be a relative, close friend, neighbour or volunteer. Support provided by a caregiver may include assisting with the activities of daily living, transportation such as to appointments, and offering information, advice and emotional support.

2 Please note that some of the websites this report links to may not have content in both English and French.

3 When interpreting the public opinion research presented in this report, please refer to the methodologies included in the reports that are posted on Library and Archives Canada.

4 CIHR's total investment in dementia research, including investigator-initiated research, research in priority areas, and training and career support programs between 2019–2020 and 2023–2024.

5 Dementia guidance refers to recommendations and advice that include formal guidelines based on rigorous, systematic evidence, as well as best practice statements based on a well-known, large body of indirect, linked or accepted evidence that strongly supports a net benefit.

6 Data from annual and final reports were taken from the most recent version provided by the recipient as well as any updates provided after the reporting period. In some cases, as is the case for traditional media channels, reach is based on anticipated circulation or audience numbers such as radio listenership.

7 Resource categories were created through an analysis of reporting by projects funded through the DCI and the DSF. A conservative approach was used so that the quantitative results for the number of resources produced and their reach are likely undercounted. For example, results may have been excluded if they were unclear or grouped in ways that did not align with categories chosen for this report. In addition, some projects did not include social media reach or website analytics in their total reach numbers although they may have reported using these channels. Projects that targeted both prevention and quality of life objectives have their resource results counted under both objectives when the resources themselves were not clearly focused on a single objective.

8 This number includes 35 completed DSF projects and 27 DCI projects that are either completed or currently underway.

9 Traditional media refers to media formats that originated before the internet, including newspapers, magazines, radio, and television. Traditional media resources may include digital versions such as digital versions of newspapers and magazines that may or may not also be available as hard copies.

10 Each project output that falls into the resource categories is counted and each language version of an output is counted as an individual output. In some cases, projects created resources that were translated into multiple languages to tailor resources to ethnic and cultural minority groups.

[11] Out-of-home advertising is paid advertising that reaches people outside their homes. This can include billboards, bus shelters, and digital signage in public spaces.

[12] Impressions in this context relate to the number of times a digital ad was displayed during the selected time range.

[13] Search engine marketing is paid digital advertising that increases the visibility of a website by paying for it to appear near the top of relevant search engine results pages.

[14] Media placement is the process of selecting specific locations and times where advertisements or promotions will appear.

[15] Engagements are the total number of times users interact with the content such as likes, shares, comments and clicks.

[16] This amount represents direct funding from the PHAC only.

[17] The number of publications reflects data from all projects receiving funding from the CIHR between 2019–2020 and 2023–2024 and was collected using Dimensions and End-of-Grant reports on 27 March 2025. The data included from End-of-Grant reports is not representative of all relevant projects as the majority (~90%) funded between 2019–2020 and 2023–2024 are either ongoing, so End-of-Grant reports have not yet been submitted, or the End-of-Grant report is not required (e.g., awards).

[18] The data on citations and mentions of publications from projects receiving funding from the CIHR between 2019–2020 and 2023–2024 was collected using Altmetric on 27 March 2025 and is not validated through other means. It reflects only the information for projects funded by CIHR directly. More information on sources of attention is available on **Altmetric website**.

[19] The nominated principal investigator is the grantee, or awardee, of a CIHR funding application. The grantee is responsible for leading the intellectual direction of the proposed activities and coordinating the financial and administrative aspects of the grant.

[20] The data on the CIHR dementia research project grant contributions to CIHR's mandate as well as the outcomes of CIHR-funded projects is collected through End-of-Grant reports. The data included from End-of-Grant reports is not representative of all relevant projects as the majority (~90%) funded between 2019–2020 and 2023–2024 are either ongoing, so End-of-Grant reports have not yet been submitted, or the End-of-Grant report is not required (e.g., awards).

[21] The data on the CIHR dementia research project grant contributions to CIHR's mandate as well as the outcomes of CIHR-funded projects is collected through End-of-Grant reports. The data included from End-of-Grant reports is not representative of all relevant projects as the majority (~90%) funded between 2019–2020 and 2023–2024 are either ongoing, so End-of-Grant reports have not yet been submitted, or the End-of-Grant report is not required (e.g., awards).

[22] Public Health Agency of Canada. Canadian Chronic Disease Surveillance System (CCDSS), Data Tool 2000–2023, 2024 Edition. Government of Canada. 2024. Available from: **https://health-infobase.canada.ca/ccdss/data-tool/Index**. Please note that many Canadian Chronic Disease Surveillance System measures were influenced by the COVID-19 pandemic from 2020–2021 to 2022–2023, which should be considered when interpreting data for those years. Further, New Brunswick and Northwest Territories data were not available for 2022–2023.

[23] World Health Organization. WHO global air quality guidelines. World Health Organization. 2021. Available from: **https://iris.who.int/bitstream/handle/10665/345329/9789240034228-eng.pdf**

[24] Ramage-Morin PL, Banks R, Pineault D, Atrach M. Unperceived hearing loss among Canadians aged 40 to 79. Health Rep. 2019 Aug 21; 30(8): 11–20. Available from: **https://pubmed.ncbi.nlm.nih.gov/31454408/**

[25] Livingston G, Huntley J, Liu KY, Costafreda SG, Selbæk G, Alladi S, Ames D, Banerjee S, Burns A, Brayne C, Fox NC, Ferri CP, Gitlin LN, Howard R, Kales HC, Kivimäki M, Larson EB, Nakasujja NN, Rockwood K, Samus Q, Shirai K, Singh-Manoux A, Schneider LS, Walsh S, Yao Y, Sommerlad A, Mukadam N. Dementia prevention, intervention, and care: 2024 report of the Lancet standing Commission. Lancet. 2024 Aug 10; 404(10452): 572–628. Available from: **https://doi.org/10.1016/S0140-6736(24)01296-0**

26 In this section on public opinion research results on prevention, research from 2020 refers to: Ekos Research Associates Inc. for the Public Health Agency of Canada. Dementia Survey. Government of Canada. 2020. Available from: **https://epe.lac-bac.gc.ca/100/200/301/pwgsc-tpsgc/por-ef/public_health_agency_canada/2020/076-19-e/index.html**, research from 2022 refers to: Ekos Research Associates Inc. for the Public Health Agency of Canada. Survey of Canadians Regarding Dementia Prevention. Government of Canada. 2022. Available from: **https://epe.lac-bac.gc.ca/100/200/301/pwgsc-tpsgc/por-ef/public_health_agency_canada/2022/104-21-e/index.html**, research from 2024 refers to: Ekos Research Associates Inc. for the Public Health Agency of Canada. Dementia Tracking Survey. Government of Canada. 2024. Available from: **https://epe.bac-lac.gc.ca/100/200/301/pwgsc-tpsgc/por-ef/public_health_agency_canada/2024/091-23-e/index.html**

27 In a 2022 public opinion research study, 4% of respondents mentioned genetics as a factor influencing their personal risk in the "other" category, as genetics was not a prompted answer. Results are for those under the age of 75. Ekos Research Associates Inc. for the Public Health Agency of Canada. Survey of Canadians Regarding Dementia Prevention. Government of Canada. 2022. Available from: **https://epe.lac-bac.gc.ca/100/200/301/pwgsc-tpsgc/por-ef/public_health_agency_canada/2022/104-21-e/index.html**

28 The chart shows results from the Dementia Survey (2020) and the Dementia Tracking Survey (2024). In 2020 and 2024, respondents were asked: "To the best of your knowledge, please indicate if each of the following is true or false. 1) Some ethnic/cultural groups have a higher risk of developing dementia, and 2) The risk of developing dementia is higher among people with chronic conditions such as hypertension, heart disease, and diabetes." Results are based on 4,207 respondents in 2020 and 4,427 respondents in 2024.

29 Responses to the survey question "How would you rate your personal risk of developing dementia?" in the Survey of Canadians Regarding Dementia Prevention (2022) and the Dementia Tracking Survey (2024) were measured using a 5-point scale: 1 (No risk), 2, 3 (Moderate), 4, and 5 (Very high). For reporting, responses were grouped as low (1–2), moderate (3), and high (4–5). Results are for those under the age of 75.

30 This data shows results from the Survey of Canadians Regarding Dementia Prevention (2022) and the Dementia Tracking Survey (2024), based on the question: "Why do you feel your risk of developing dementia is moderate to high? Select each one that applies." Results are from those under the age of 75 who feel their risk is moderate to high, with 1,070 respondents in 2022 and 2,346 respondents in 2024.

31 Ekos Research Associates Inc. for the Public Health Agency of Canada. Dementia Tracking Survey. Government of Canada. 2024. Available from: **https://epe.bac-lac.gc.ca/100/200/301/pwgsc-tpsgc/por-ef/public_health_agency_canada/2024/091-23-e/index.html**

32 This data and the data in Figure 6 show the top three responses from the Survey of Canadians Regarding Dementia Prevention (2022) and the Dementia Tracking Survey (2024) to the question: "Why do you feel your risk of developing dementia is low? Select each one that applies." Results are from those under the age of 75 who feel their risk is low, with 649 respondents in 2022 and 1,222 respondents in 2024.

33 Results are for those under the age of 75.

34 Responses to the survey question "To what extent do you believe that you can reduce your own personal risk of developing dementia going forward?" in the Survey of Canadians Regarding Dementia Prevention (2022) and the Dementia Tracking Survey (2024) were measured using a 5-point scale: 1 (Not at all), 2, 3 (To a moderate extent), 4, and 5 (To a great extent). For reporting, responses were grouped as low (1–2), moderate (3), and high (4–5).

35 Results should be interpreted with caution due to the small sample size of respondents from Newfoundland and Labrador (90 respondents).

36 Results should be interpreted with caution due to the small sample size of respondents from the Yukon (98 respondents).

37 For these projects, the term "resources" refers to materials that can be used by others to spread knowledge, such as videos and films, guidance documents, toolkits, academic papers, digital applications, podcasts, websites and training resources, as well as information shared through factsheets and newsletters. Refer to Table 2 for the full list of resources. Radio and television advertisements, as well as advertisements used for project recruitment, are not included as resources.

[38] The data presented in this section was compiled from project reports submitted to the PHAC. Projects were categorized under the objective of prevention or quality of life based on the stated objective of the project. In cases where projects addressed both objectives, further analysis was conducted to determine whether the resources developed should be counted under one or both objectives.

[39] For these projects, the term "resources" refers to materials that can be used by others to spread knowledge, such as videos and films, guidance documents, toolkits, academic papers, digital applications, podcasts, websites and training resources, as well as information shared through factsheets and newsletters. Refer to Table 2 for the full list of resources. Radio and television advertisements, as well as advertisements used for project recruitment, are not included as resources.

[40] The reach presented in this figure includes reports from projects focused solely on prevention along with those focused on both prevention and quality of life. The reach of projects focused on both objectives are counted in both the prevention and quality of life sections of this report. Access to a resource may be through any of a wide variety of methods, such as downloads, online views or distribution of hard copies. The reported reach is based on data available as of June 2025.

[41] Each bar in the figure represents the percentage of participants from a single project who responded to a given indicator. For indicators reported across multiple audiences, participant responses were combined to reflect an overall result.

[42] Son S, Speechley M, Zou GY, Kivipelto M, Mangialasche F, Feldman HH, Chertkow H, Belleville S, Nygaard H, Hachinski V, Pieruccini-Faria F, Montero-Odasso M. Potentially Modifiable Dementia Risk Factors in Canada: An Analysis of Canadian Longitudinal Study on Aging with a Multi-Country Comparison. J Prev Alzheimers Dis. 2024; 11(5): 1490–1499. Available from: **https://doi.org/10.14283/jpad.2024.105**

[43] Mayhew AJ, Hogan D, Raina P, Wolfson C, Costa AP, Jones A, Kirkland S, O'Connell M, Taler V, Smith EE, Liu-Ambrose T, Ma J, Thompson M, Wu C, Chertkow H, Griffith LE for the Canadian Longitudinal Study on Aging Memory Study Working Group. Protocol for validating an algorithm to identify neurocognitive disorders in Canadian Longitudinal Study on Aging participants: an observational study. BMJ Open. 2023; 13(11): e073027. Available from: **https://doi.org/10.1136/bmjopen-2023-073027**

[44] Chertkow H, Phillips N, Rockwood K, et al. Impact of a national dementia research consortium: The Canadian Consortium on Neurodegeneration in Aging (CCNA). Journal of Alzheimer's Disease. 2024 Dec 1; 102(3): 535–561. Available from: **https://doi.org/10.1177/13872877241290990**

[45] Dadar M, Mahmoud S, Zhernovaia M, Camicioli R, Maranzano J, Duchesne S for the Canadian Consortium on Neurodegeneration in Aging Group. White matter hyperintensity distribution differences in aging and neurodegenerative disease cohorts. Neuroimage Clin. 2022; 36: 103204. Available from: **https://doi.org/10.1016/j.nicl.2022.103204**

[46] Frame AK, Sinka JL, Courchesne M, Muhammad RA, Grahovac-Nemeth S, Bernards MA, Bartha R, Cumming RC. Altered neuronal lactate dehydrogenase A expression affects cognition in a sex- and age-dependent manner. iScience. 2024 Jun 21; 27(7): 110342. Available from: **https://doi.org/10.1016/j.isci.2024.110342**

47 Montero-Odasso M, Pieruccini-Faria F, Ismail Z, Li K, Lim A, Phillips N, Kamkar N, Sarquis-Adamson Y, Speechley M, Theou O, Verghese J, Wallace L, Camicioli R. CCCDTD5 recommendations on early non cognitive markers of dementia: A Canadian consensus. Alzheimer's Dement. 2020 Oct 17; 6(1): e12068. Available from: **https://doi.org/10.1002/trc2.12068**

48 This investment includes investigator-initiated research (e.g., funded through the Project Grant competition), research in priority areas (e.g., the BHCIA Research Initiative), and training and career support programs (e.g., fellowships).

49 The nominated principal investigator is the grantee, or awardee, of a CIHR funding application. The grantee is responsible for leading the intellectual direction of the proposed activities as well as coordinating the financial and administrative aspects of the grant.

50 This data point is the total number of funded grants (including priority announcements and bridge grants) and awards in dementia research across all of the CIHR's programs, including investigator-initiated research (e.g., funded through the Project Grant competition), research in priority areas (e.g., the BHCIA Research Initiative), and research training and career support programs (e.g., fellowships). A grant or award can be paid over multiple years and is counted for each year in which the funding is paid.

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54 Kaplan J, Gibbs E, Silverman J, Zhao B, Coutts J, Peng X, Plotkin S, Cashman N. Protection against toxic amyloid-beta oligomers by PMN310, a monoclonal antibody rationally designed for greater therapeutic potency in Alzheimer's disease (P1-6.006). Neurology. 2023 Apr 25; 100 (17 Supplement 2): 4597. Available from: **https://doi.org/10.1212/WNL.0000000000204094**

55 Mintzer J, Lanctôt KL, Scherer RW, Rosenberg PB, Herrmann N, van Dyck CH, Padala PR, Brawman-Mintzer O, Porsteinsson AP, Lerner AJ, Craft S, Levey AI, Burke W, Perin J, Shade D for the ADMET 2 Research Group. Effect of Methylphenidate on Apathy in Patients With Alzheimer Disease: The ADMET 2 Randomized Clinical Trial. JAMA Neurol. 2021 Nov 1; 78(11): 1324–1332. Available from: **https://doi.org/10.1001/jamaneurol.2021.3356**

56 Ruthirakuhan M, Herrmann N, Andreazza AC, Verhoeff NPLG, Gallagher D, Black SE, Kiss A, Lanctôt KL. Agitation, Oxidative Stress, and Cytokines in Alzheimer Disease: Biomarker Analyses From a Clinical Trial With Nabilone for Agitation. J Geriatr Psychiatry Neurol. 2019; 33(4): 175–184. Available from: **https://doi.org/10.1177/0891988719874118**

57 Belleville S, Moussard A, Ansaldo AI, Belchior P, Bherer L, Bier N, Bohbot VD, Bruneau MA, Cuddy LL, Gilbert B, Jokel R, Mahalingam K, McGilton K, Murphy KJ, Naglie G, Rochon E, Troyer AK, Anderson ND. Rationale and protocol of the ENGAGE study: a double-blind randomized controlled preference trial using a comprehensive cohort design to measure the effect of a cognitive and leisure-based intervention in older adults with a memory complaint. Trials. 2019 May 22; 20(1): 282. Available from: **https://doi.org/10.1186/s13063-019-3250-6**

58 Brazil K, Walshe C, Doherty J, Harding A, Preston N, Bavelaar L, Cornally N, Di Guilio P, Gollena S, Harington I, Henderson C, Kaasalainen S, Loucka M, Sussman T, Vlckova K, van der Steen JT. Implementation of an advance care planning intervention in nursing homes. An international multiple case study. Gerontologist. 2024; 64(6): gnae007. Available from: **https://doi.org/10.1093/geront/gnae007**

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60 Parts of these materials are based on data and information provided by the Canadian Institute for Health Information (CIHI). However, the analyses, conclusions, opinions and statements expressed herein are those of the author and not necessarily those of the CIHI. This data was drawn from the Resident Assessment Instrument - Home Care©- Home Care Reporting System, fiscal year 2023–2024. It is representative of people living with dementia receiving home care in British Columbia (all regions except Northern Health), the Yukon, Alberta (except the Calgary Zone), and Newfoundland and Labrador.

61 Chi-square tests were applied. Significance level set at 0.05, indicating whether any changes in trends are statistically significant.

62 For the purpose of this reported data, caregivers who are distressed are defined as primary caregivers who express feelings of distress, anger or depression and/or any caregiver who is unable to continue in their caring activities.

63 Parts of these materials are based on data and information provided by the Canadian Institute for Health Information (CIHI). However, the analyses, conclusions, opinions and statements expressed herein are those of the author and not necessarily those of the CIHI. This data was drawn from the Resident Assessment Instrument - Home Care©- Home Care Reporting System, fiscal year 2023–2024. It is representative of people living with dementia receiving home care in British Columbia (all regions except Northern Health), Yukon, Alberta (except the Calgary Zone), and Newfoundland and Labrador.

64 Chi-square tests were applied. Significance level set at 0.05, indicating that any changes in trends are statistically significant.

65 In this section on public opinion research results on prevention, research from 2020 refers to (Ekos Research Associates Inc. for the Public Health Agency of Canada. Dementia Survey. Government of Canada. 2020. Available from: **https://epe.lac-bac.gc.ca/100/200/301/pwgsc-tpsgc/por-ef/public_health_agency_canada/2020/076-19-e/index.html**), research from 2023 refers to (Nanos Research for the Public Health Agency of Canada. Stigma Related to Dementia in Canada. Government of Canada. Available from: **https://epe.bac-lac.gc.ca/100/200/301/pwgsc-tpsgc/por-ef/public_health_agency_canada/2023/103-22-e/index.html**), and research from 2024 refers to (Ekos Research Associates Inc. for the Public Health Agency of Canada. Dementia Tracking Survey. Government of Canada. 2024. Available from: **https://epe.bac-lac.gc.ca/100/200/301/pwgsc-tpsgc/por-ef/public_health_agency_canada/2024/091-23-e/index.html**).

66 The Dementia Survey (2020) and Stigma Related to Dementia in Canada (2023) were designed to engage a nationally representative sample of Canadians (4,207 respondents in 2020 and 5,056 respondents in 2023), allowing for comparison over time.

67 Responses to survey questions about personal comfort in various scenarios were measured using a 5-point scale: 1 (Not comfortable), 2, 3 (Moderately comfortable), 4, and 5 (Very comfortable). For reporting, responses were grouped as less than moderately comfortable (1–2), moderately comfortable (3), and moderately comfortable or higher (4–5). Only responses rated as moderately comfortable or higher (4-5) are presented in the statement.

68 Multiple sources are being referenced in this text. Bacsu JD, Fraser S, Chasteen AL, Cammer A, Grewal KS, Bechard LE, Bethell J, Green S, McGilton KS, Morgan D, O'Rourke HM, Poole L, Spiteri RJ, O'Connell ME. Using Twitter to Examine Stigma Against People With Dementia During COVID-19: Infodemiology Study. JMIR Aging. 2022 Mar 31; 5(1): e35677. Available from: **https://doi.org/10.2196/35677**. Lagacé M, Doucet A, Dangoisse P, Bergeron CD. The "Vulnerability" Discourse in Times of Covid-19: Between Abandonment and Protection of Canadian Francophone Older Adults. Front Public Health. 2021 Sept 3; 9: 662231. Available from: **https://doi.org/10.3389/fpubh.2021.662231**. Bacsu JR, Spiteri RJ, Nanson K, Rahemi Z, Webster C, Norman M, Stone C. Understanding stigma of dementia during COVID-19: a scoping review. Frontiers in psychiatry. 2024 Mar 26; 15: 1261113. Available from: **https://doi.org/10.3389/fpsyt.2024.1261113**

69 Responses to survey questions about personal comfort in various scenarios were measured using a 5-point scale: 1 (Not comfortable), 2, 3 (Moderately comfortable), 4, and 5 (Very comfortable). For reporting, responses were grouped as less than moderately comfortable (1–2), moderately comfortable (3), and moderately comfortable or higher (4–5). Only responses rated as moderately comfortable or higher (3-5) are presented in the table.

70 Responses to survey questions about perceptions of people living with dementia were measured using a 5-point scale: 1 (strongly disagree), 2 (disagree), 3 (neither), 4 (agree), and 5 (strongly agree). For reporting, responses were grouped as disagree (1-2), neither (3), and agree (4-5).

71 Earnscliffe Strategy Group for the Public Health Agency of Canada. Understanding Canadians' Attitudes and Knowledge to Promote Safe and Supportive Dementia-Inclusive Communities: Final Report. Government of Canada. 2023. Available from: **https://epe.bac-lac.gc.ca/100/200/301/pwgsc-tpsgc/por-ef/public_health_agency_canada/2023/133-22-e/index.html**. Responses to the survey question "What level of priority rating would you assign to having your community become more dementia-inclusive in these ways?" in Understanding Canadians' Attitudes and Knowledge to Promote Safe and Supportive Dementia-Inclusive Communities (2023) were measured using a 5-point scale: 1 (Not at all a priority), 2, 3 (Moderate priority), 4, and 5 (Very high priority). For reporting, responses were grouped as low priority (1–2), moderate priority (3), and high priority (4–5).

72 The chart shows results from the Dementia Tracking Survey (2024), based on the question: "From what you know or have heard, how would you rate your community…in terms of being dementia-inclusive?" Results are from 1,793 unpaid caregivers and 2,634 other respondents.

73 Narrative Research for the Public Health Agency of Canada. Dementia-inclusive communities and the built environment: Implementation challenges and opportunities: final report. Government of Canada. 2025. Available from: **https://epe.bac-lac.gc.ca/100/200/301/pwgsc-tpsgc/por-ef/public_health_agency_canada/2025/086-24-e/index.html**

74 The chart shows results from the Dementia Survey (2020) and the Dementia Tracking Survey (2024). In 2020, respondents were asked: "From what you know or have heard, how would you rate the level of support in your community that is provided to people living with dementia in each of the following areas…1) efforts to make the community safer for those living with dementia, and 2) overall support from the community provided to people living with dementia?" In 2024, respondents were asked: "From what you know or have heard, how would you rate your community…in terms of being dementia-inclusive?" Results are based on 4,207 respondents in 2020 and 4,427 respondents in 2024.

75 The chart shows results from the Dementia Tracking Survey (2024), based on the question: "From what you know or have heard, how would you rate your community in each of the following areas. 1) access to day programs outside the home for people living with dementia, 2) access to in-home supports to assist people living with dementia and caregivers, and 3) access to advance care planning and end-of-life care for people living with dementia?" Results are from 3,646 respondents who know someone living with dementia, including 1,790 unpaid caregivers and 1,856 other respondents.

76 Data for the Dementia Survey (2020) were collected from March to April, during the early stages of the COVID-19 pandemic in Canada.

77 The chart shows results from the Dementia Survey (2020) and the Dementia Tracking Survey (2024). In 2020, respondents were asked: "From what you know or have heard, how would you rate the level of support in your community that is provided to people living with dementia in each of the following areas…1) access to health care, and 2) quality of health care provided?" In 2024, respondents were asked: "From what you know or have heard, how would you rate your community in…access to quality health care for people living with dementia?" Results are from 4,207 respondents in 2020 and 4,427 respondents (including 1,793 unpaid caregivers and 2,634 other respondents) in 2024.

78 Results should be interpreted with caution due to the small sample size of respondents who identified as Southeast Asian (79 respondents).

79 This demographic breakdown is based on the question "What was your sex at birth?". For the question "What is your gender?", more unpaid dementia caregiver respondents identified as a woman (54%) than a man (43%).

80 The chart shows the age distribution of 1,793 respondents who identified themselves as unpaid caregivers from the Dementia Tracking Survey (2024). Percentages do not total to 100% due to rounding.

81 The chart shows results from the Dementia Survey (2020) and the Dementia Tracking Survey (2024), based on the question: "To what extent do you agree or disagree with the following statement: I felt that I was able to provide the care needed for someone living with dementia. Being "able" generally means responding to their needs in a satisfactory and timely manner, such as assistance with medical needs, emotional support, and/or assuring safety." Results are based on 1,418 unpaid caregivers in 2020 and 1,792 unpaid caregivers in 2024.

82 The question "As an unpaid caregiver to someone living with dementia, why did you feel able to provide the care needed for someone living with dementia?" was introduced in the Dementia Tracking Survey (2024) and was not included in previous surveys. As a result, no tracking of change over time is available.

83 The chart shows results from the Dementia Survey (2020) and the Dementia Tracking Survey (2024), based on the question: "As an unpaid caregiver to someone living with dementia, why did you feel unable to provide the care needed for someone living with dementia? (multiple responses accepted)". Results are from those who feel unable to provide care, including 273 unpaid caregivers in 2020 and 482 unpaid caregivers in 2024.

84 For these projects, the term "resources" refers to materials that can be used by others to spread knowledge, such as videos and films, guidance documents, toolkits, academic papers, digital applications, podcasts, websites and training resources, as well as information shared through factsheets and newsletters. Refer to Table 2 for the full list of resources. Radio and television advertisements, as well as advertisements used for project recruitment, are not included as resources.

85 The data/information presented in this section was compiled from project reports submitted to the PHAC. Projects were categorized as prevention or quality of life based on the objective of the project. In cases where projects addressed both objectives, further analysis was conducted to determine whether the resources developed should be counted under one or both objectives.

86 The reach presented in this figure includes reports from projects focused solely on quality of life along with those focused on both prevention and quality of life. The reach of projects focused on both objectives are counted in both the prevention and quality of life sections of this report. Access to a resource may be through any of a wide variety of methods, such as downloads, online views or distribution of hard copies. The reported reach is based on data available as of June 2025.

87 Each bar in the figure represents the percentage of participants who responded to a given indicator. For indicators reported across multiple audiences, participants responses were combined to reflect an overall result.

88 Shahpourzadeh K, Taverna F, Sheets D, Card KG. (n.d.). The impact of cognitive impairment on social inclusion and health: A rapid review. Manuscript under review.

89 One example is a pragmatic cluster randomized controlled trial of **Connecting Today** – a remote visiting program for care home residents living with dementia.

90 Narrative Research for the Public Health Agency of Canada. Emergency Preparedness and Response in Canada for People Living with Dementia: Final Report. Government of Canada. 2024. Available from: **http://epe.bac-lac.gc.ca/100/200/301/pwgsc-tpsgc/por-ef/public_health_agency_canada/2024/100-23-e/index.html**

91 For CCHS data: Significant differences for these indicators are based on 95% confidence intervals (i.e., "better" or "worse" if confidence intervals between two points do not overlap and "no significant change" is confidence intervals overlap between two data points). Note that data interpretation of significant differences based on confidence intervals is a conservative approach. The current table includes an estimate using the latest data available (e.g., 2022 CCHS for alcohol heavy drinking, education, smoking, and community belonging). Please note that the CCHS underwent a major redesign in 2022. The redesign centred on a change in data collection mode. As a result, caution should be used when comparing data between 2022 and previous cycles.

92 For CCDSS data: Trend analyses were calculated using the Joinpoint software, which tests the statistical significance of the trend over different time periods ($P \leq .05$). A statistically increasing trend was labelled as "worse" and on the contrary, a statistically decreasing trend was labelled as "better." If the trend was not statistically significant ($P > .05$), it was reported as "no significant change."

93 All data from the CCHS and CHMS are representative of Canada, excluding the territories. There are other exclusions in the CCHS that limit its generalizability: "Persons living on reserves and other Aboriginal settlements in the provinces; full-time members of the Canadian Forces; the institutionalized population, children aged 12 to 17 that are living in foster care, and people living in the Quebec health regions of Région du Nunavik and Région des Terres-Cries-de-la-Baie-James."

94 All rates are age-standardized to the 2011 Canadian population.

95 The CCHS underwent a major redesign in 2022. The redesign centred on a change in data collection mode. As a result, caution should be used when comparing data between 2022 and previous cycles.

96 Custom tabulations by the Behaviors, Environments and Lifespan Division/Centre for Surveillance and Applied Research. Public Health Agency of Canada.

97 The CCHS underwent a major redesign in 2022. The redesign centred on a change in data collection mode. As a result, caution should be used when comparing data between 2022 and previous cycles.

98 Statistics Canada. Table 13-10-0905-01 Health indicator statistics, annual estimates. Government of Canada. 2025. Available from: **https://doi.org/10.25318/1310090501-eng**

99 Heavy alcohol drinking is defined as binge drinking (i.e., five or more drinks for males and four or more drinks for females, on a single occasion) at least once a month in the past year.

100 The CCHS underwent a major redesign in 2022. The redesign centred on a change in data collection mode. As a result, caution should be used when comparing data between 2022 and previous cycles.

101 Statistics Canada. Table 13-10-0905-01 Health indicator statistics, annual estimates. Government of Canada. 2025. Available from: **https://doi.org/10.25318/1310090501-eng**

102 All estimates are age-standardized using the 2011 Canadian population.

103 Many CCDSS measures were influenced by the COVID-19 pandemic from 2020–2021 to 2022–2023. As the data should be interpreted with caution, the results of the trend analysis are not reported since the inclusion of pandemic years data could bias trend estimates. Further, New Brunswick and Northwest Territories data were not available for 2022–2023.

104 Many CCDSS measures were influenced by the COVID-19 pandemic from 2020–2021 to 2022–2023. As the data should be interpreted with caution, the results of the trend analysis are not reported since the inclusion of pandemic years data could bias trend estimates. Further, New Brunswick and Northwest Territories data were not available for 2022–2023.

105 All estimates are age-standardized using the 2011 Canadian population.

106 Many CCDSS measures were influenced by the COVID-19 pandemic from 2020–2021 to 2022–2023. As the data should be interpreted with caution, the results of the trend analysis are not reported since the inclusion of pandemic years data could bias trend estimates. Further, New Brunswick and Northwest Territories data were not available for 2022–2023.

107 Data come from a subset of the CCHS master file, which contains only information of respondents who have consented to share their information, called the share file. This was made available to the PHAC by Statistics Canada, through Data Acquisition, Access and Management.

108 Statistics Canada. Table 13-10-0465-01 Mental health indicators. Government of Canada. 2024. Available from: **https://doi.org/10.25318/1310046501-eng**

109 Obesity among adults is defined as a body mass index ≥ 30.0 kg/m2. This indicator is based on self-reported weight and height. BMI calculations are adjusted to respondent bias to more closely approximate measured values. Excludes pregnant women and persons less than 3 feet tall or greater than 6 feet 11 inches.

110 The CCHS underwent a major redesign in 2022. The redesign centred on a change in data collection mode. As a result, caution should be used when comparing data between 2022 and previous cycles.

111 Statistics Canada. Table 13-10-0905-01 Health indicator statistics, annual estimates. Government of Canada. 2025. Available from: **https://doi.org/10.25318/1310090501-eng**

112 This assessment of reading literacy is on a six-point scale, with tasks at Level 1 the least complex and increasing in complexity up to Level 6.

113 Results presented are only from Canada.

114 Level 6 "no sight at all" is excluded. Territories are also excluded. Statistics Canada. Self-reported eye health in Canada: 20 years of data. Health Reports. 2022. Available from: **https://www.doi.org/10.25318/82-003-x202200400002-eng**

115 According to the 2019 Global Burden of Disease project, air pollution, specifically from ambient fine particulate matter (PM2.5), is one of the leading environmental causes of death and disease both globally and in Canada (**Institute for Health Metrics and Evaluation, 2021**). Long-term exposure to PM2.5 is causally associated with morbidity and mortality from a variety of causes, particularly from respiratory and cardiovascular diseases. There is no clear evidence of a threshold for development of health effects, even at low levels of exposure. Emerging studies suggest that PM2.5 exposure can lead to neurological outcomes, including dementia. (**Health Canada, 2022**). Population-weighted concentration is a method of estimating population exposures to air pollution. It gives proportionately greater weight to the air pollution experienced where most people live. All concentrations are three-year averages.

116 While the concentration of PM2.5 has decreased in Canada in 2021 compared with 2001, choosing more recent data points as a comparator would lead to different conclusions on trends.

117 For CCHS data: Significant differences for these indicators are based on 95% confidence intervals (i.e., "better" or "worse" if confidence intervals between two points do not overlap AND "no significant change" is confidence intervals overlap between two data points). Note that data interpretation of significant differences based on confidence intervals is a conservative approach. The current table includes an estimate using the latest data available (e.g., 2022 CCHS for alcohol heavy drinking, education, smoking, and community belonging). Please note that the CCHS underwent a major redesign in 2022. The redesign centred on a change in data collection mode. As a result, caution should be used when comparing data between 2022 and previous cycles.

118 For CCDSS data: Trend analyses were calculated using the Joinpoint software, which tests the statistical significance of the trend over different time periods ($P \leq .05$). A statistically increasing trend was labelled as "worse" and on the contrary, a statistically decreasing trend was labelled as "better." If the trend was not statistically significant ($P > .05$), it was reported as "no significant change."

119 This physical activity measure uses self-reported data from the CCHS. Self-reported estimates of physical activity, which report perceived time, are often significantly higher than device-based measures, which measure actual movement. Self-report and device-measured data provide complementary information about different aspects of physical activity but should not be used interchangeably.

120 Numbers come from Statistics Canada—crude rates: Although in surveillance we continue recommending using measured data from the CHMS (also note that the physical activity recommendations within the Canadian 24-Hour Movement Guidelines changed in 2020 to "without bouts"), we recognize that self-reported data (currently only available "with bouts") as presented in this indicator is still useful to examine trends in particular before and during the COVID-19 pandemic.

121 Sense of belonging to a local community illustrates the social attachment of individuals with communities. Social isolation tends to be detrimental to health, while social engagement and attachments are associated with positive health outcomes (both physical and mental).

122 The CCHS underwent a major redesign in 2022. The redesign centred on a change in data collection mode. As a result, caution should be used when comparing data between 2022 and previous cycles.

123 Statistics Canada. Table 13-10-0905-01 Health indicator statistics, annual estimates. Government of Canada. 2025. Available from: **https://doi.org/10.25318/1310090501-eng**

[124] For Tables 2a and 2c, provincial and territorial differences observed with the CCDSS should be interpreted with caution. Although differences are statistically significant, methodological differences may explain the patterns observed in addition to actual differences in the health status of the populations. For instance, differences in detection and treatment practices, as well as differences in data coding, remuneration models and shadow billing practices likely play a role in the patterns observed. Provincial and territorial data for LDL cholesterol and major depressive episodes are not available. Territorial estimates based on the 2021 CCHS are unavailable. Data are only representative in the territories after two years of data collection. The latest estimates for territories come from the 2019–2020 CCHS (**https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310011301**). The next territorial estimates will come from the 2021–2022 CCHS.

[125] Statistics Canada. Table 13-10-0905-01 Health indicator statistics, annual estimates. Government of Canada. 2025. Available from: **https://doi.org/10.25318/1310090501-eng**

[126] Public Health Agency of Canada. Canadian Chronic Disease Surveillance System (CCDSS), Data Tool 2000–2022, 2024 Edition. Government of Canada. 2024. Available from: **https://health-infobase.canada.ca/ccdss/data-tool/Index**. Custom tabulations by the PHAC for education indicator using the 2023 Canadian Community Health Survey.

[127] Statistics Canada. Table 13-10-0465-01 Mental health indicators. Government of Canada. 2024. Available from: **https://doi.org/10.25318/1310046501-eng**

[128] All data from the CCHS and CHMS are representative of Canada, excluding the territories. There are other exclusions in the CCHS that limit its generalizability: "Persons living on reserves and other Aboriginal settlements in the provinces; full-time members of the Canadian Forces; the institutionalized population, children aged 12 to 17 that are living in foster care, and people living in the Quebec health regions of Région du Nunavik and Région des Terres-Cries-de-la-Baie-James." All rates are age-standardized to the 2011 Canadian population.

[129] Heavy alcohol drinking is defined as binge drinking (i.e., five or more drinks for males and four or more drinks for females, on a single occasion) at least once a month in the past year.

[130] Estimate is unstable or cannot be released.

[131] All estimates are age-standardized using the 2011 Canadian population.

[132] The modernization of the Quebec billing system for fee-for-service medical services by the Régie de l'assurance maladie du Québec (RAMQ) in 2016 has resulted in a decrease in the entry of diagnostic codes in the fee-for-service medical services file. Data should therefore be interpreted with caution, as a slight underestimation is suspected.

[133] All estimates are age-standardized using the 2011 Canadian population.

[134] The modernization of the Quebec billing system for fee-for-service medical services by the Régie de l'assurance maladie du Québec (RAMQ) in 2016 has resulted in a decrease in the entry of diagnostic codes in the fee-for-service medical services file. Data should therefore be interpreted with caution, as a slight underestimation is suspected.

[135] Data come from a subset of the CCHS master file, which contains only information of respondents who have consented to share their information, called the share file. This was made available to the PHAC by Statistics Canada, through Data Acquisition, Access and Management.

[136] Suppressed to meet the confidentiality requirements of the Statistics Act

[137] Obesity among adults is defined as a body mass index (BMI) ≥ 30.0 kg/m2. This indicator is based on self-reported weight and height. BMI calculations are adjusted to respondent bias to more closely approximate measured values. Pregnant women excluded.

[138] This assessment of reading literacy is on a six-point scale, with tasks at Level 1 the least complex and increasing in complexity up to Level 6.

[139] Regional values are based on Canadian airsheds, which are used to manage air quality at the regional level (**Canadian Council of Ministers of the Environment**). The regional exposure varies across Canada depending on contributions from anthropogenic (e.g,. on-road transportation), natural (e.g., wildfires), and transboundary sources (e.g., air pollution transport from the United States) of air pollution and their proximity to the population. All concentrations are three-year averages.

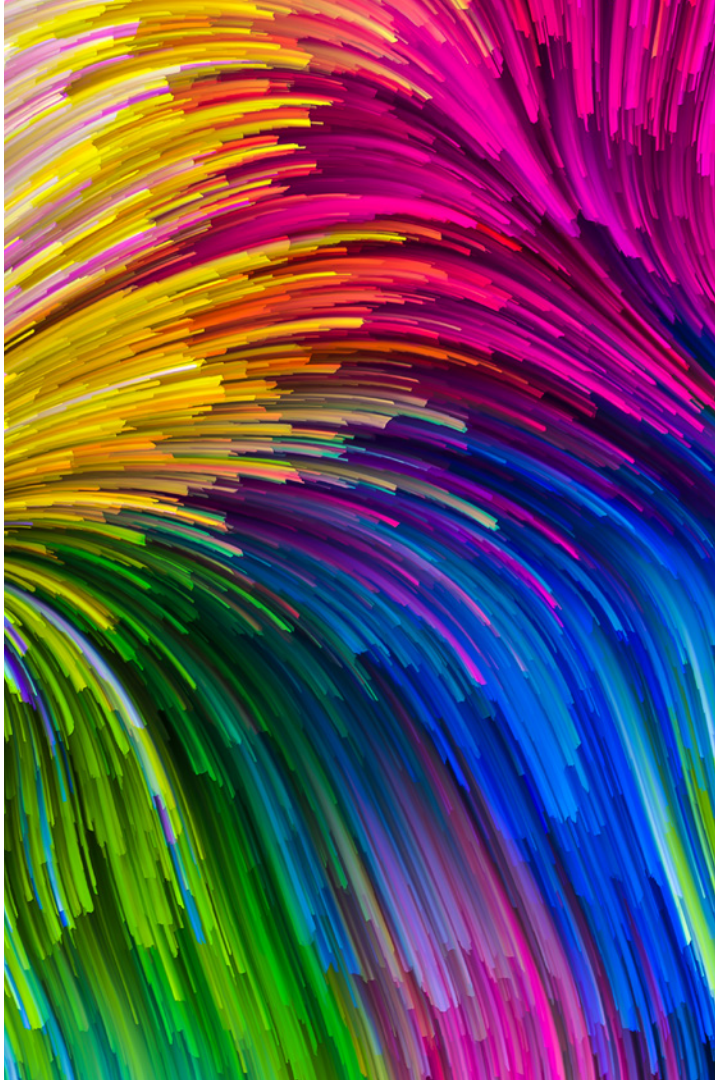
140 Territorial estimates based on the 2021 CCHS are unavailable. Data are only representative in the territories after two years of data collection. The latest estimates for territories come from the 2019–2020 CCHS (**https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310011301**). The next territorial estimates will come from the 2021–2022 CCHS.

141 Statistics Canada. Table 13-10-0905-01 Health indicator statistics, annual estimates. Government of Canada. 2025. Available from: **https://doi.org/10.25318/1310090501-eng**

142 Public Health Agency of Canada. Canadian Chronic Disease Surveillance System (CCDSS), Data Tool 2000–2019, 2021 Edition. Government of Canada. 2023. Available from: **https://health-infobase.canada.ca/ccdss/data-tool/Index**

143 This physical activity measure uses self-reported data from the CCHS. Self-reported estimates of physical activity, which report perceived time, are often significantly higher than device-based measures, which measure actual movement. Self-report and device-measured data provide complementary information about different aspects of physical activity but should not be used interchangeably. Numbers come from Statistics Canada—crude rates: Although in surveillance we continue recommending using measured data from CHMS (also note that the physical activity recommendations within the Canadian 24-H Movement Guidelines changed in 2020 to "without bouts"), we recognize that self-reported data (currently only available "with bouts") as presented in this indicator is still useful to examine trends in particular before and during the COVID-19 pandemic.

144 Sense of belonging to a local community illustrates the social attachment of individuals with communities. Social isolation tends to be detrimental to health, while social engagement and attachments are associated with positive health outcomes (both physical and mental).



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