



Exercise & Dementia: Benefits and Lessons Learned in Virtual Delivery of Minds in Motion®





Introduction to Speakers



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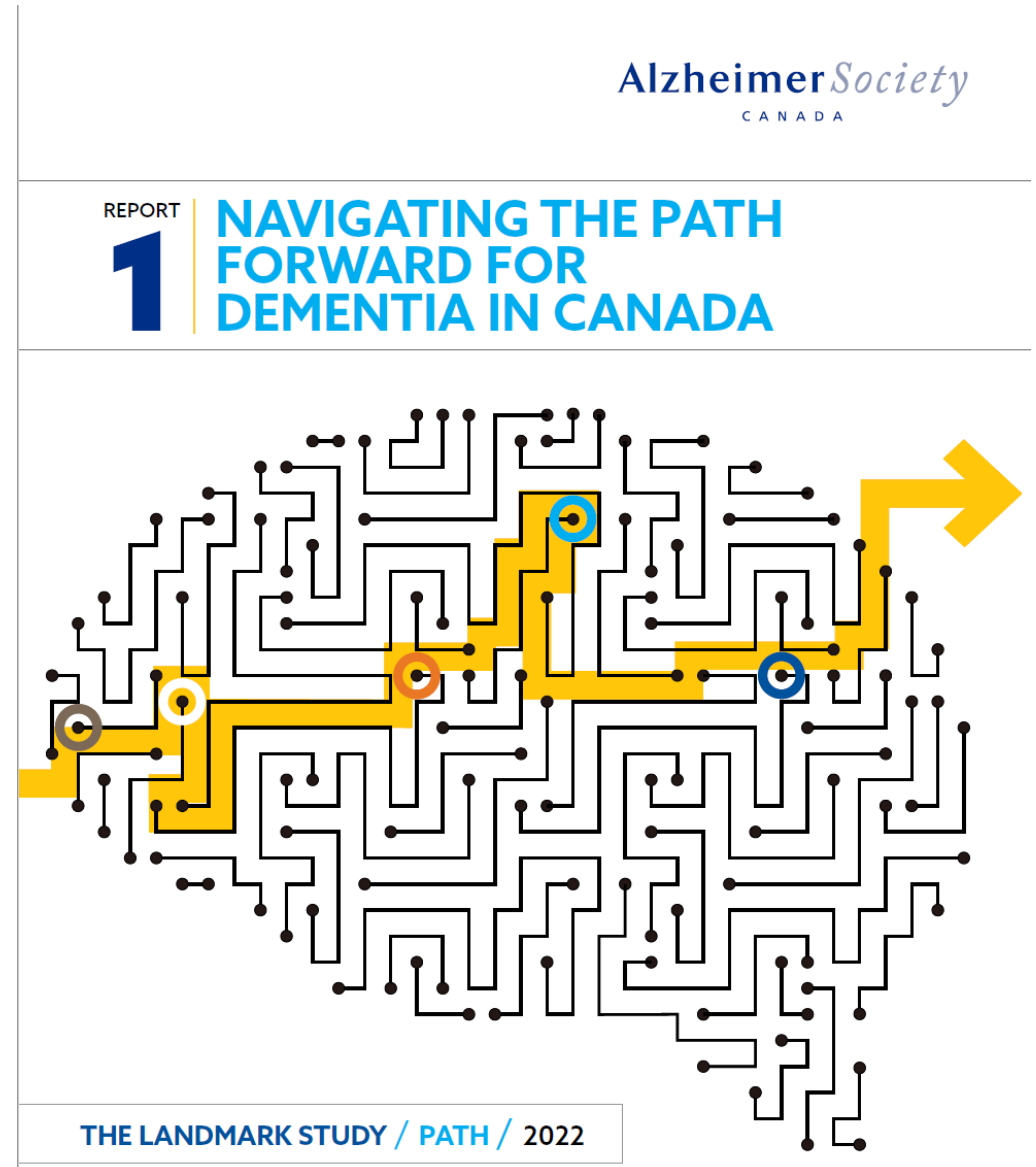
Land Acknowledgement

- The Alzheimer Society of Ontario acknowledges our obligation to truth and reconciliation and acknowledges that this land on which we are gathered today is part of the ancestral land of the Chippewa, Odawa, and Potawatomi peoples, referred to collectively as the Anishinaabeg. It is through the connection of the Anishinaabeg with the spirit of the land, water and air that we recognize their unique cultures, traditions, and values. Together as treaty people, we have a shared responsibility to act with respect for the environment that sustains all life, protecting the future for those generations to come. Please take a moment to reflect on your own commitment to demonstrate change through your words and actions that honour the Calls to Action

The Landmark Study 2022

The number of people living with dementia is on the rise.

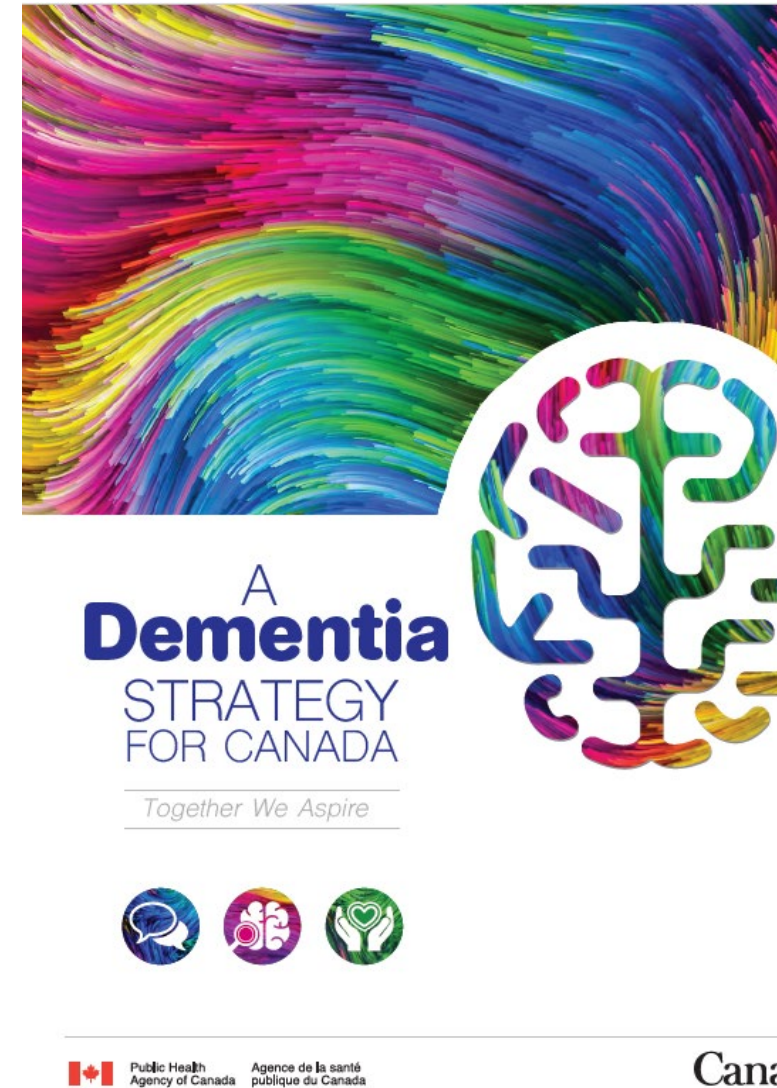
There are ways to delay or eliminate the risk of developing dementia.



Canada's National Dementia Strategy

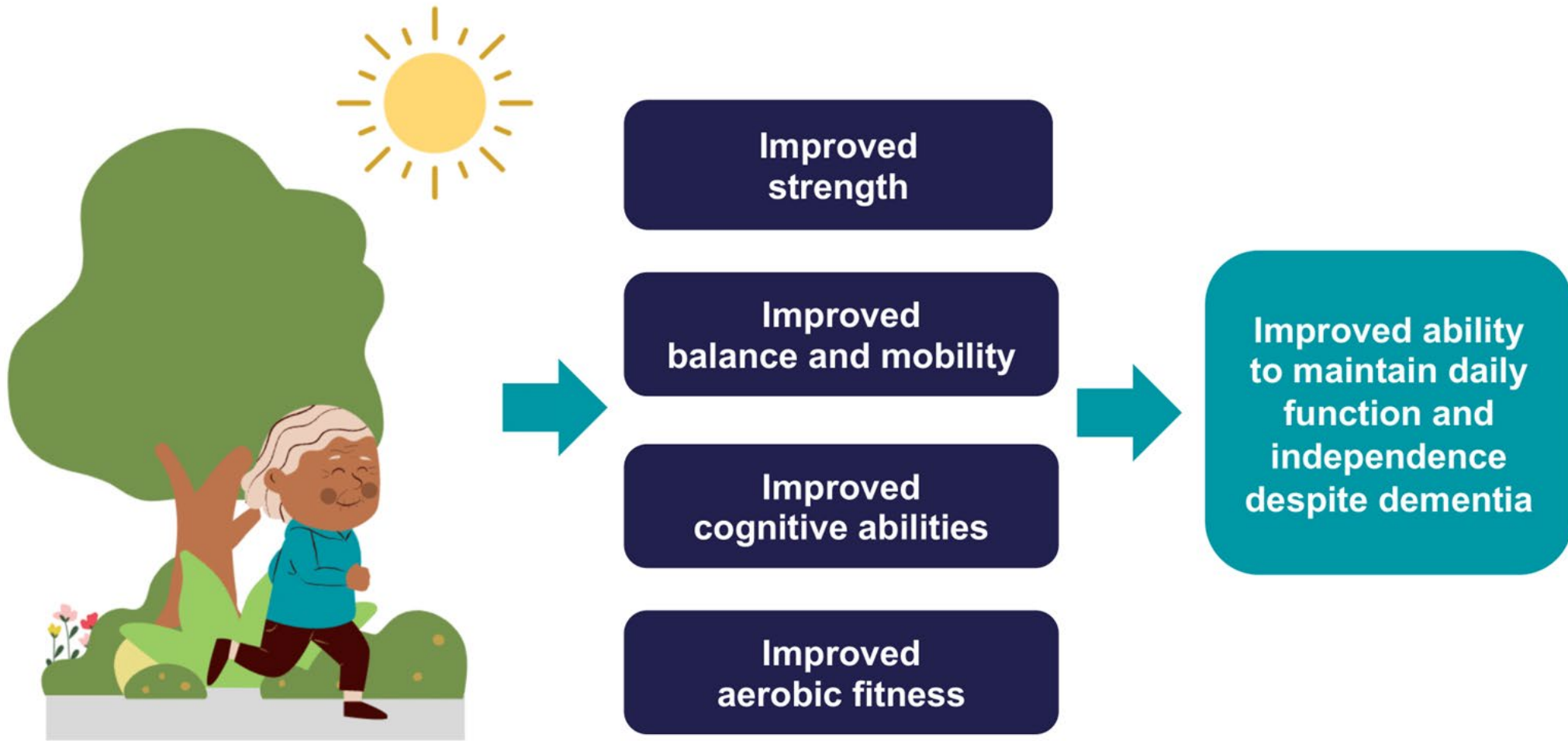
Three national objectives:

- Prevent dementia
- Advance therapies & find a cure
- **Improve the quality of life of people living with dementia and care givers**





The Benefits of Exercise



Ginnis et al. BMC Public Health 2017;
Groot et al. Ageing Research Reviews 2016; 25: 13-23



Beyond Function...



Cedervall et al. 2014; Genoe & Dupuis 2014;
McDuff & Phinney 2015; Phinney et al. 2007



Benefits of Cognitive Engagement

Benefits of cognitive stimulation for people living with dementia include:

- Reduced depression and anxiety
- Improved quality of life
- Improved cognition
- Better communication and interaction skills

Vedel et al. 2020 Alzheimer's Dement






The Minds in Motion® Program

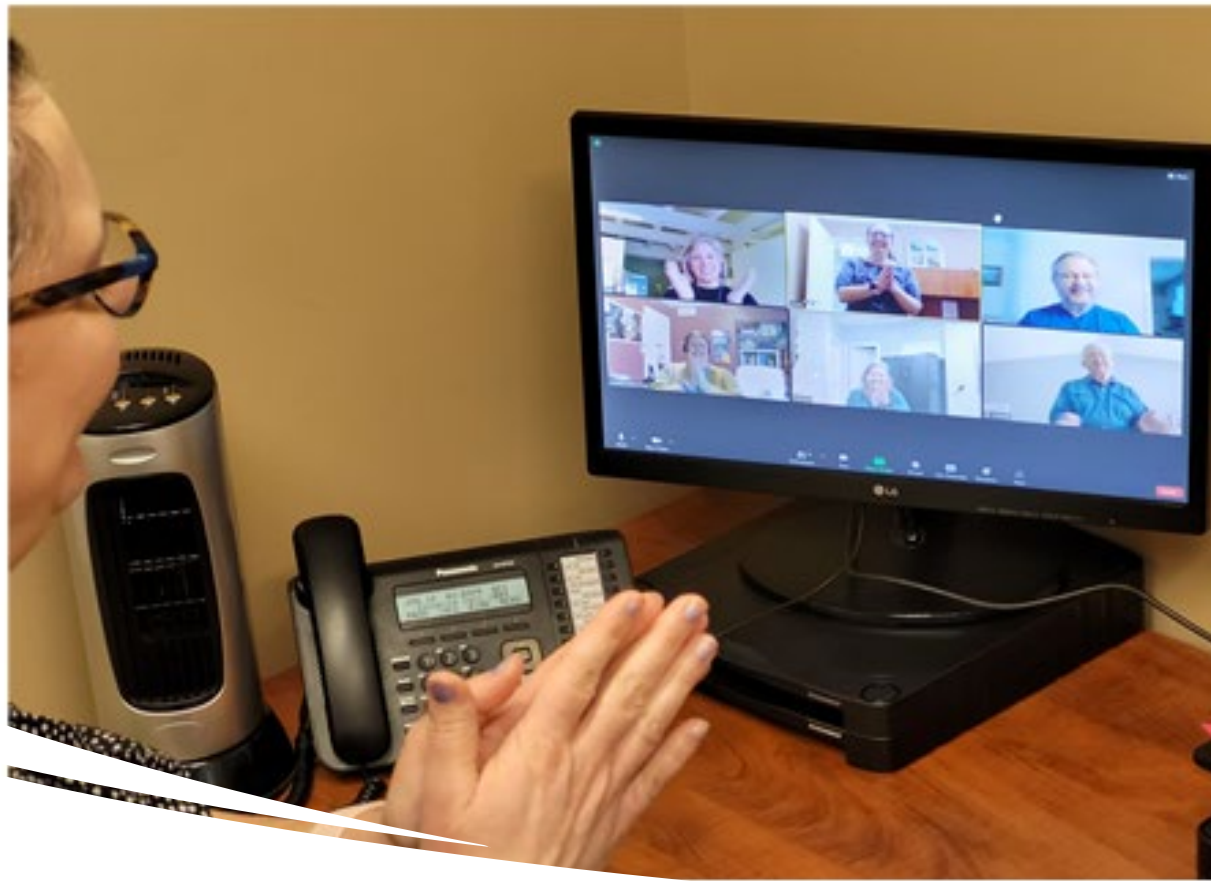
Minds in Motion® is an evidence-based social program that incorporates physical and mental stimulation for people with early to mid-stage signs of Alzheimer's disease or other form of dementias and their care partners.

The program offers the opportunity to establish new friendships with others who are living with similar experiences through three key components, exercise and social and cognitive activities.



Evolution of Minds in Motion®

- **2013: Ontario Brain Institute funds Minds in Motion program development**
 - Exercise + mental & social stimulation
 - Mental & social stimulation informed by recreational therapy
- **2014-2016: Trillium Foundation funds the Minds in Motion pilot**
 - Positive impact on physical activity, well-being, physical function
 - For both people living with dementia and care partners
- **2017+: Expansion of Minds in Motion (but largely funded by local grants)**
 - Mental & social stimulation moves away from recreational therapy approach
 - Some divergence in delivery (intensity/type of exercise, activities in cognitive/social stimulation) across societies
- **2020: Rapid transition to 'virtual' Minds in Motion**



Rationale for a Virtual Minds in Motion® Program

- COVID-19
- Accessibility



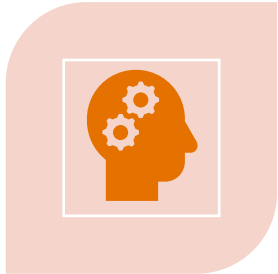
Overview of Project



Develop the evidence-informed Virtual MiM program



Deliver the evidence-informed Virtual MiM program



Increase access to and knowledge of the Virtual MiM program

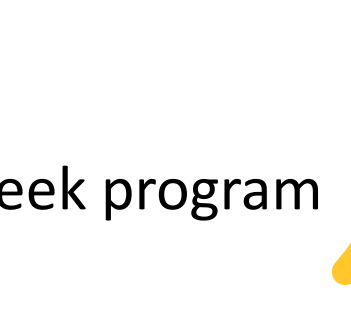


Update the framework for Social and Cognitive Stimulation





Virtual Delivery Model

- 30 to 45 minutes of exercise:
 - Cardiovascular training
 - Strength training
 - Balance activities
 - We show standing and seated versions for exercises
 - 30 to 45 minutes of social cognitively stimulating activities
 - At least once a week for 8 weeks
 - Our evaluation was for once a week program
 - We recommend twice a week!
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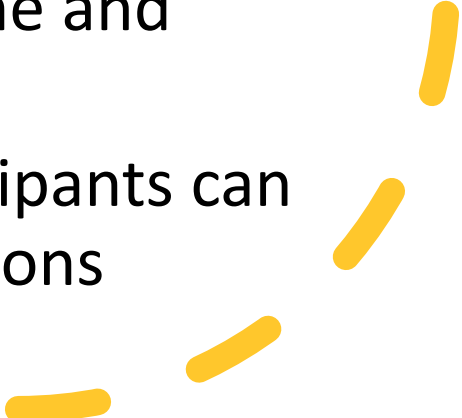


Virtual Best Practices

Personnel:

- Two facilitators to demonstrate: one for seated exercise and one for standing exercise
- Third for tech difficulties and/or emergencies

Technology:

- Have a headset with a microphone and share “sound only”
 - Have everyone on mute so participants can hear instructor with no interruptions
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Virtual Best Practices – continued

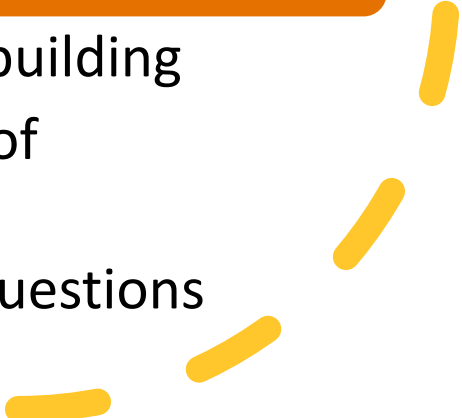
Safety:

- Camera is to always be on
- Phone nearby in case of emergency
- Review key safety points

Delivery:

- Be clear and concise with instructions
- Demonstrate different levels of difficulty for exercise

Social:

- Provide opportunities for relationship building
 - Find a balance in the level of difficulty of activities/questions
 - Allow time for participants to process questions
- 



Social Framework

Ice Breakers

Meditation and Mindfulness

Revisiting/Recalling Memories from the Past

Self-Care

Cognitive Resources

Promoting Conversation and Social Interaction

Strengths

Happiness



Benefits of In-Person Minds in Motion®



Improved physical function

- Endurance
- Strength
- Shoulder flexibility



Improved physical activity levels

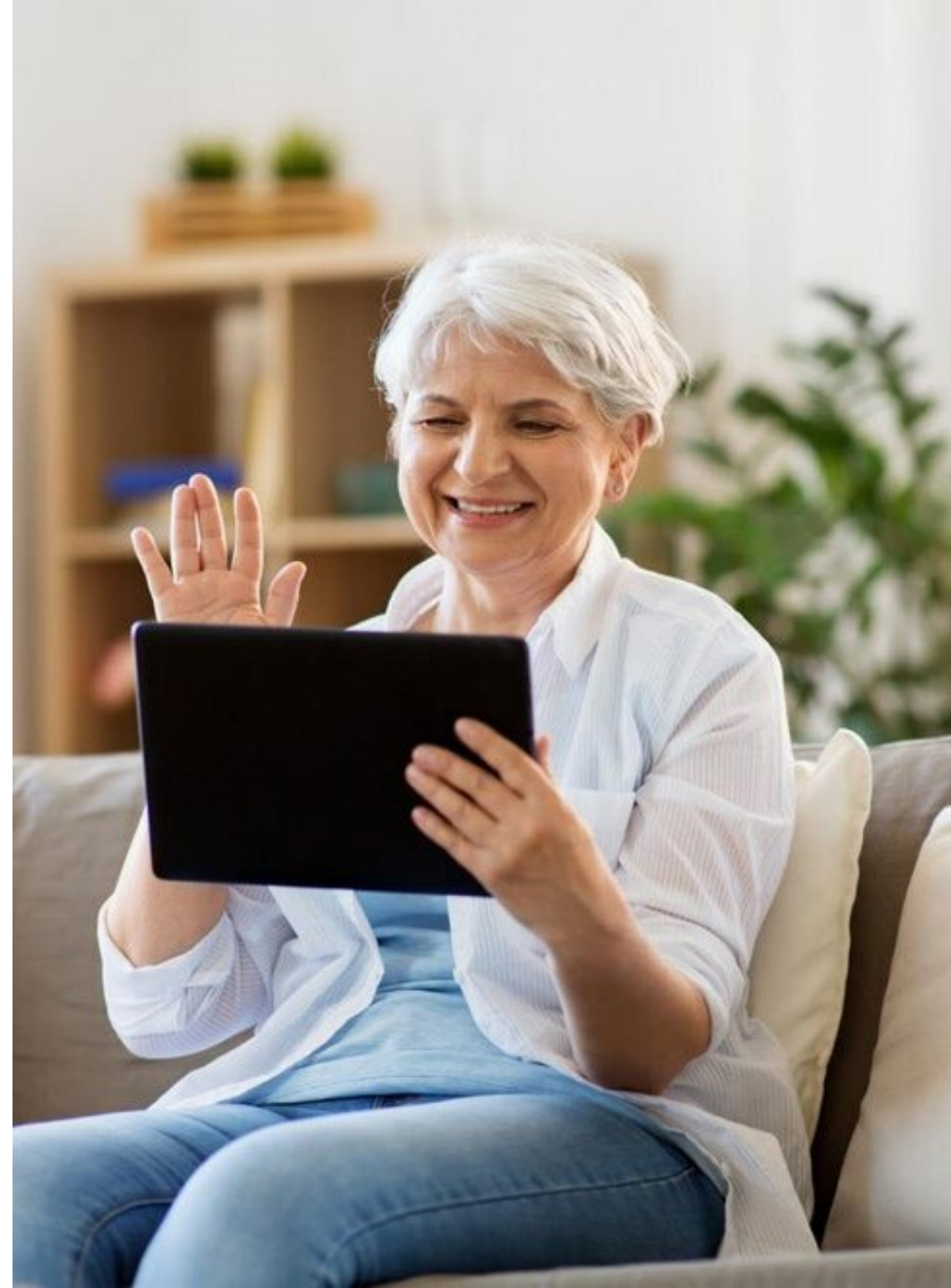


Improved mental well-being



Overview of the Virtual Minds in Motion[®] Evaluation

- February 2022 – January 2023
- 27 programs offered by 6 Alzheimer Societies
- 203 participants across the sessions:
 - 112 people living with dementia
 - 91 care partners





Virtual Minds in Motion[®] Evaluation

- Participants completed assessments before starting program and after finishing program
- We assessed:
 - Well-being (mental/social/physical)
 - Physical activity
 - Cognitive leisure activity
- Some participants also did interviews after the program





Virtual Minds in Motion[®]: Who Participated?

	People living with dementia	Care partners
Age (years)	78 years	70 years
Sex (% female)	49%	76%
Ethnicity (% white)	84%	90%
Level of Education (% more than high school)	73%	83%
Current Marital Status (% married/have a partner)	70%	93%



Feasibility of Virtual Minds in Motion[®]

People living with dementia

- Attendance rate = 86%
- Completion rate = 78%

Care partners

- Attendance rate = 86%
- Completion rate = 83%
- No adverse events!



Satisfaction with Virtual Minds in Motion®

- Both people living with dementia and care partners reported their satisfaction with program and staff, including feelings of respect, benefit, enjoyment:
 - Scored from strongly disagree (bad) to strongly agree (good)
 - Score for most questions was between agree and strongly agree (4.3 to 4.9 out of 5)
 - The only score below 4/5 was satisfaction with the number of sessions per week



Satisfaction with Virtual Minds in Motion[®]

- Both people living with dementia and care partners reported the difficulty of the physical activity 'about right'
- 83% of people living with dementia and 89% of care partners were interested in re-enrolling in virtual Minds in Motion[®]



Improvements among People Living with Dementia

- Improved quality of life / well-being
 - As rated by the person living with dementia or their care partner
- Increased participation in:
 - Physical activity
 - Cognitive leisure activities





Improvements among Care Partners



- Improved mental well-being
 - Changes in physical and social well-being dimensions were not as notable
- Increased participation in:
 - Physical activity
 - Cognitive leisure activities

Theme #1:
Social connection through
virtual programs is possible,
although challenges exist





Social connection through virtual programs is possible, although challenges exist

Like when we went in – you know, the last two times, the best time was after the program was supposed to have ended. So, when it was like 2:30, then some of us would just stay on longer.

~Participant

I think that, you know, talking to people and seeing what other people are doing it's always good. Because then you can look at things and think, "I think I can do that and it would probably be of some benefit to me".

~Participant



Social connection through virtual programs is possible, although challenges exist

Mostly they were doing it from home and so there's you know pictures on the wall behind or furniture or a dog running through. But you sort of – to me that just gave it all a bit of flavour so I didn't mind it.

~Volunteer



Social connection through virtual programs is possible, although challenges exist

There is still a social connection because I feel at the end they're a lot more talkative. And some of them at the end of the Program will talk about if they've decided that they both live Sudbury they'll just connect on that level. But it's not the same because they feel like they're talking, you know, having this conversation while everyone else is still listening. It's different than in person for sure.

~Instructor

Theme #2: Virtual Minds in Motion® improves abilities and motivation within and beyond the program





Virtual Minds in Motion[®] improves abilities and motivation within and beyond the program

I noticed some improvements in strength and condition and so on, just doing just even once a week, from the beginning of the class to the end. I know the first session; I felt like there were some things they were doing that I felt like I couldn't get through.

~Participant

I know I felt like my strength in general has really declined since I stopped working at the beginning of COVID. And I've noticed, even though I think the intensity of the classes has increased over time... I'm feeling stronger now and able to get through just fine compared to the beginning.

~Participant



Virtual Minds in Motion[®] improves abilities and motivation within and beyond the program

Well for me it was the awareness of how much strength I needed to regain in my legs and my legs are important because they're my independence. You lose them and you're really messed up. And I realized the benefit of taking time to do a program of some description for half an hour... it's made me more aware that you have to make the time to do this because it's what your body needs. You have to look at the body like an engine, you have to maintain it. It's made me more aware like that.

~Participant

Theme #3:
Virtual programs are
convenient and feasible,
depending on the person





Virtual programs are convenient and feasible, depending on the person

If they stop doing it online and start saying, “Ok, show up at this arena on the other side of town at 10:00 instead” ... it’s just not as attractive as being able to just do it at home. And then shower immediately and get changed and then get onto something else, it takes less time, less gas.

~Participant

The nearest place that we would have to go to maybe find one would be, like – I think there might be one in Lindsay... we’re talking about, like, an hour drive there and an hour drive back, so the convenience of it – yeah, like, this isn’t five minutes down the road when you live up north.

~Participant



Virtual programs are convenient and feasible, depending on the person

It's a whole learning [process] to press the right buttons..., enlarge the screen, turn the mute off... So we were trying to help them from a distance. They may have a different computer, they may have less experience and so that is challenging.

~Instructor



Virtual programs are convenient and feasible, depending on the person

It was so small. And we have a – this is supposed to be a 15-inch laptop, and people were using tablets. So I can't imagine how small we appeared.

~Participant

So, we decided Minds in Motion – I'm going to put it on the TV, so then we could see everything a little clearer.

~Participant

Minds in Motion Participants



ERNIE AND EVA

