AGEWELL

AGE-WELL Industry Advisory Group:

The Tech-enabled Home

Aging in Place & Technology

- Over 90% of older Canadians want to age in place
- 72% feel confident using technology
- How can technology facilitate aging in place?

Input from Industry

- A perspective on how to engage industry in aging in place

Roadmap for the Industry Advisory Group

- Work within the framework of AGE-WELL's 8 Challenge Areas
- Provide input from diverse segments of industry
- Hear from older adults and caregivers
- What do innovators and industry need to consider when developing solutions in this space?

The Future of Technology and Aging Research in Canada

1. Supportive Homes & Communities
2. Health Care & Health Service Delivery
3. Autonomy & Independence
4. Cognitive Health & Dementia
5. Mobility & Transportation
6. Healthy Lifestyles & Wellness
7. Staying Connected
8. Financial Wellness & Employment

From Roadmap to Journey Map

Start

7:10 AM — 1

Wake Up
Concern: In bed/out of bed
Care Recipient: "Let's start my day"
Caregiver : "Did mom have a good night sleep? Is she up and about?"

7:30 AM — 2

Shower
Concern : Safety inside the washroom
Care Recipient: "I hope I don't slip again"
Caregiver: "How do I know if mom can get help if needed?"

8:30 AM — 3

Breakfast
Concern : Eating patterns
Care Recipient: "I don't really feel like breakfast today"
Caregiver: "Did she eat today?"

10:00 AM — 4

Morning TV
Concern : Reachability
Care Recipient: "Was that the phone ringing?"
Caregiver : "Mom is not answering her phone. Where is she? Is she okay?"

11:30 AM — 5

Chores
Concern : Home maintenance
Care Recipient: "I am too tired"
Caregiver : "Can my mom still take care of her home?"

1:15 PM — 6

Share Trend Report
Concern : Sharing of behavior trends
Care Recipient: "I have an appointment soon. Let me get my tablet"
Caregiver : "Mom received the reminder for her medical appointment. I'll send the doctor the activity reports"

1:30 PM — 7

Telehealth Appointment
Concern: Easy way to connection to a medical professional
Care Recipient: "Let me share the results with my daughter"
Caregiver: "How do I stay involved?"

2:00 PM — 8

Video Call Family
Concern: social connection; two-way video calls
Care Recipient: "How do I make a video call?
Caregiver : "Why can't she remember how to log on?"

2:30 PM — 9

Bathroom
Concern: Toilet usage patterns
Care Recipient: "This doesn't feel right but it will go away."
Caregiver : "I noticed that she is going to bathroom a lot more than usual. What does this mean?"

3:45 PM — 10

Watching TV
Concern: Remote support
Care Recipient: "Why isn't this working?"
Caregiver : "How do I help mom remotely?"

4:00 PM — 11

Care Aid visit
Concern: Who is at the door
Care recipient: "I wish I could see who is at the door on my TV"
Caregiver : "When did the care aid come today?"

5:00 PM — 12

Grocery Shopping
Concern: 1) getting lost outside 2) locking the door
Care Recipient: "Did I lock the door?"
Caregiver : "Where did mom go?"

6:00 PM — 13

Cook Dinner
Concern: Forgetting they are cooking
Care Recipient: "What is that smell?"
Caregiver : "I hope mom is safe at home"

6:45 PM — 14

Medication
Concern: Medication adherence at the correct time
Care Recipient: "Which pills do I take?"
Caregiver : "Did she take her medicine today?"

7:00 PM — 15

Listening to Music
Concern: Remote control of technology
Care Recipient: "Why isn't this working?"
Caregiver : "How do I help mom remotely?"

3:00 AM — 16

Sleep
Concern: Wandering or falling in the evening
Care Recipient: "I need to go outside"
Caregiver: "Is mom safe and sound at home?"

Addressing our Limitations

- Older adults are not a monolith
- Needs, access, digital literacy and more
- Given all of this, where can we provide input or guidance?

Tech-enabled Homes Should Be...

- **User friendly:** simplicity over rich feature sets to start, support and not replace in-person care, include services to support the tech
- **Intelligent**: predictive, proactive and personalized
- **Connected:** circle of care, social groups, services, resources; tech within home should be integrated
- **Ethical:** prioritize privacy, accessible
- **Effective:** resilient, validated

Toolkit for innovators & industry: **Guiding questions**

Back to the Journey

Start

7:10 AM — 1

Wake Up
- Capture sleep quality and out of bed
- Predict risk of falls
- Health and wellness check
- Daily schedule and social opportunities

7:30 AM — 2

Shower
- Slip resistant surfaces, fall detection sensors, water usage monitor
- Alert system including voice control/override

8:30 AM — 3

Breakfast
- Sensors for safety (stove, smoke, fire)
- Meal recommendations
- Virtual meal prep assistance
- Video calling
- Medication management

10:00 AM — 4

Morning TV
- Monitoring sitting patterns and activity patterns in the home while maintaining privacy
- Recommendations for physical and social activities

11:30 AM — 5

Chores
- Automation or chore assistance via technology
- Easy connection to assistance

1:15 PM — 6

Share Trend Report
- Easy to understand for resident and circle of care
- Information shared with health care professional is clinically relevant
- Health outcome predictions and proactive recommendations
- User-owned data and privacy prioritized
- Levels of access determined by resident

1:30 PM — 7

Telehealth Appointment
- Virtual appointments with physician (potential for reduced wait times)
- Data and reports shared with consent from: in-home sensors, resident self-reports and trends, connected medical devices, treatment adherence reports

2:00 PM — 8

Video Call Family
- Multilingual voice control, with accessible interface
- Drop-in feature available if wellness check or predictive system indicates need for connection or assistance

2:30 PM — 9

Bathroom
- Risk assessment based on bathroom visits
- Fall detection
- Voice activated emergency assistance

3:45 PM — 10

Watching TV
- Virtual exercise sessions, games, interactive learning sessions
- Recommendations for community activities
- Connecting with community

4:00 PM — 11

Care Aid visit
- Provide context and quick updates for care provider
- Notification for resident and family in advance of visit

5:00 PM — 12

Grocery Shopping
- Connection to services (delivery, pickup, transit options)
- Wearable technology and/or PERS
- Potential link to way finding tools for support if needed

6:00 PM — 13

Cook Dinner
- Stove safety features
- Dining recommendations
- Opportunity for social connections or virtual check-ins

6:45 PM — 14

Medication
- Reminders, tracking adherence and refill
- Linking to health measures and outcomes
- Medication interaction alerts
- Proactive recommendations to improve health
- Emergency detection and response

7:00 PM — 15

Listening to Music
- Voice activated entertainment
- Tailored content
- Life-enhancing and inspiring content and activities
- Digital literacy tools

3:00 AM — 16

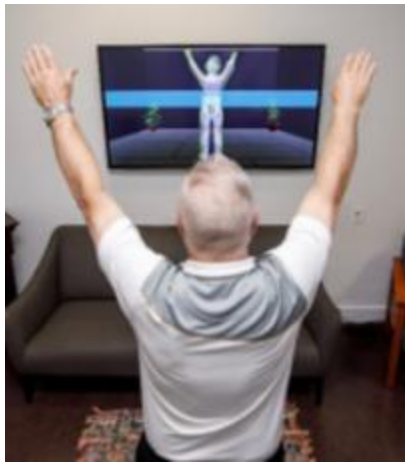
Sleep
Smart lighting for way finding and safety

Sleep aids and stress relief

Monitoring for health emergencies (e.g., stroke, dangerous glucose levels)

Where else is action needed?

1. Guidelines and standards
2. Infrastructure
3. Upskilling
4. Digital literacy training and support
5. Better communication within relevant stakeholder groups



Next Steps

- Industry Advisory Group will continue its work
- We welcome feedback and input to guide our work
- Check out the whitepaper

THANK YOU!

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