

# Aging in Place Stakeholder Consultation Results November 30, 2016

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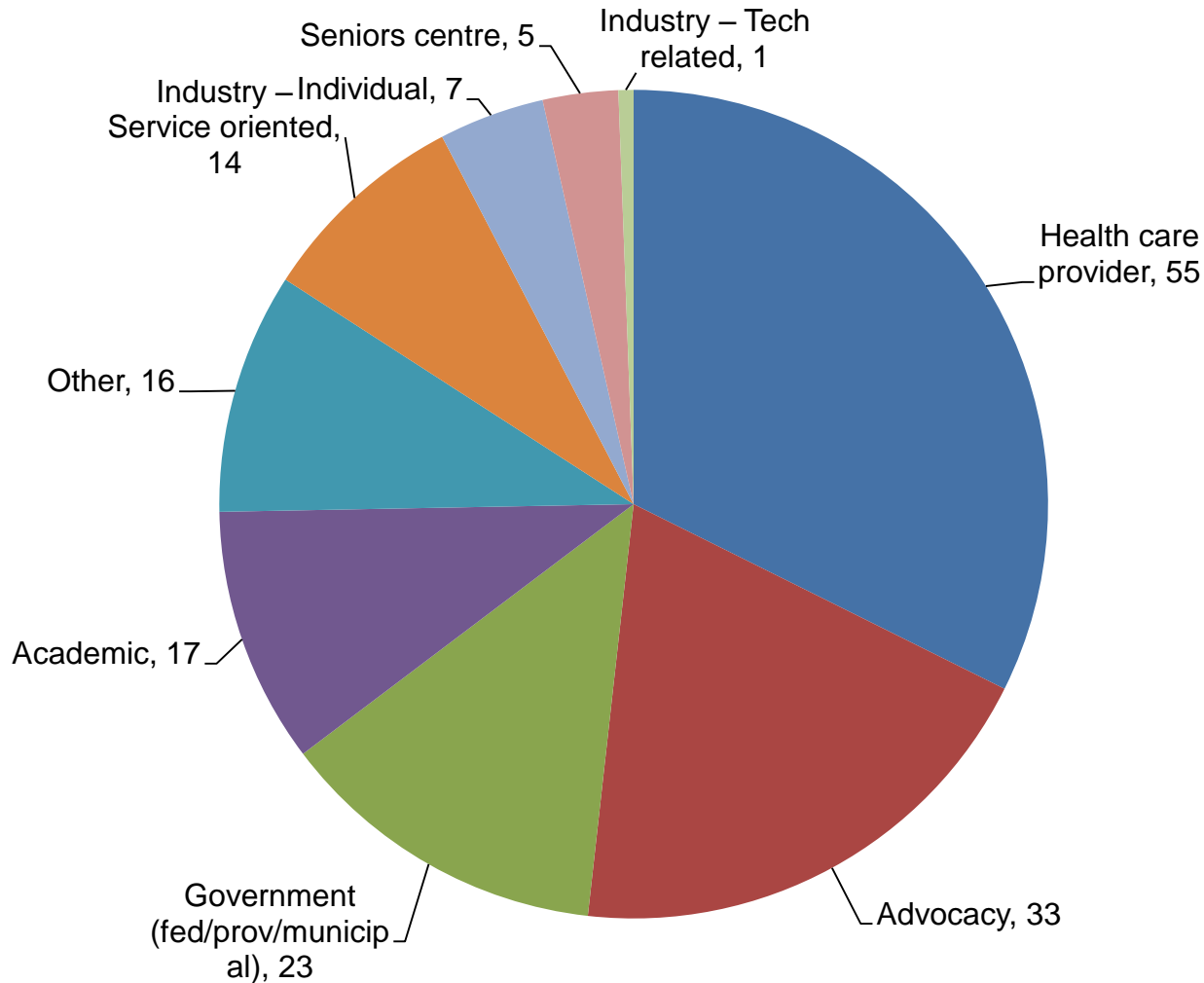
## Overview of Consultation

- Over 450 invitations to participate were sent out
- Consultation ran from August 12<sup>th</sup> to September 2<sup>nd</sup>
- Participants asked to respond to a set of 18 questions
- Questions captured a range of information, including:
  - Organizational affiliation
  - Geographic region
  - Ranking barriers and challenges to remain at home in a urban setting
  - How technology could reduce barriers
  - Rural issues
  - Care giver and health care team issues
  - Technology development and commercialization, and target issues
  - Technology readiness and barriers
- 172 participants completed the questions = Approx. 40%

# Aging in Place – Geographic Distribution /Affiliation

- Respondents from across all provinces and territories
- Largest number of respondents:
  - Alberta - 61
  - Ontario - 43
  - New Brunswick – 15
  - British Columbia and Nova Scotia – 10 each
- Remaining provinces and territories: 30
- Respondents asked to indicate their affiliation
- Academic health care provider, academic Institution/organization, government-funded healthcare provider or community health care provider, industry – service or technology oriented, provincial or federal organization, not mandated to provide health care services, seniors advocacy organization, and other

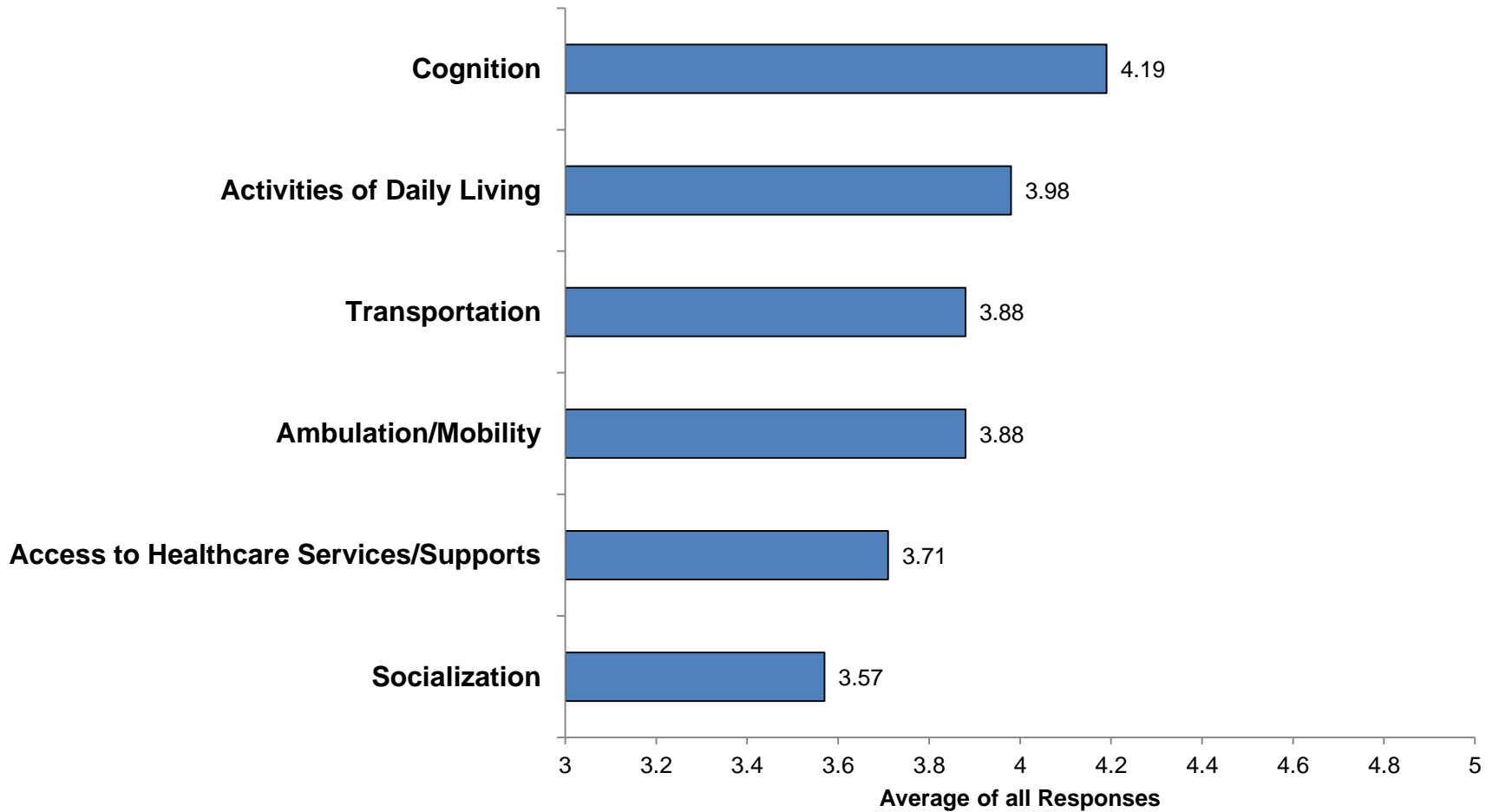
# Aging in Place – Organizational Affiliation



# Aging in Place - Ranking Barriers and Challenges to Remain at Home in a Urban Setting

- Questions 3 to 8 – (Part a & b)
- Asked to rank the barriers and challenges on a scale of:
  - 5 (Very Significant) to 1 (Very Minor)
- Across a series of challenges and barriers to remain at home:
  - Activities of Daily Living
  - Cognition Issues
  - Mobility/Ambulation
  - Access to Health Care Services
  - Socialization
  - Transportation

# Aging in Place - Ranking of Barriers and Challenges



# Barriers and Challenges

**Cognition:** Memory loss and understanding issues related to grocery, meal preparation, medical, medication and money management, appointments and schedules, how things function, understanding how to operate technologies like televisions, computers, automatic door openers, even telephones with new features. Risks, such as open doors, leaving oven/stove on, wandering, driving, and fraudsters.

**Activities of Daily Living:** Loss of capacities and abilities related to basics of personal care, e.g., bathing, toileting, dressing, medication management, sleep, continence. Instrumental functions, such as functional mobility & transfers, health monitoring, money management/bill payment, shopping, meal preparation, laundry, homemaking, pet care, community access, interior/exterior home maintenance.

**Transportation:** Loss of drivers license, loss of independence/isolation, reluctance to dealing with the public transportation system and scheduling for appointments, grocery. Costs related to taxis, imposition on family, friends, neighbours. Rural issues and a lack of coordinated public transportation, and related costs!!

# Barriers and Challenges

**Ambulation/Mobility:** Poor mobility and the risk of falls is a major threat to independence. Home design and layout, leads to inability to access areas of the home – upstairs toilet/bath, or an escape route. Most homes not designed for wheelchairs/electric vehicles, lifts and other aids. Decreased mobility presents challenges for appointments, groceries, socialization, meal prep., and self care, plus home maintenance. Impacts on driving ability, and access to public transportation. Winter months and being isolated in the home due to fears of falling was highlighted.

**Access to Health Care:** Depending on what level of cognitive/mobile decline, level of English and health literacy they have, and how much support they have, access can be a major issue. Affordable transportation 24 / 7 that is timely, and availability of services in immediate areas. Lack of health care professionals – doctors, nurses, OT, physio, and case management. Funding, lack of respite services, home care support, access to information.

**Socialization:** Mobility, transportation issues, finances, limited social contacts, sensory/cognitive loss, loss of drivers license, loss of spouse/significant other, social and language barriers, access to affordable social media, elder avoidance by family and others.



# How Technology Could Help Reduce Challenges/Barriers to Aging in Home

## **Cognition:**

- Autonomous robotics applications that monitor medications - even record a video while a senior takes medications, and interact with senior to provide stimulation
- Next generation voice-activated computer software or smart phone apps
- A portal, service that can be accessed to provide education/information/navigation community agencies and societies to provide aids to assist with hearing/vision etc
- More non-invasive monitoring systems that are not dependent on the direct output of the senior to define their needs

## **Activities of Daily Living:**

- Remote monitoring able to look at the senior in the environment, medication reminders
- Technologies that alert elderly to obstacles, uneven surfaces, environmental factors that could pose a problem.
- Smart clothing – able to monitor a person's breathing, heart and skin temperature
- Video-based interaction for safety, social support, monitoring, physician/clinician assessment
- Mandatory changes to building codes; creating incentives to build barrier-free homes

# How Technology Could Help Reduce Challenges/Barriers to Aging in Home

## Transportation:

- Self-driving vehicles for non-urgent transportation between sites, pre-programmed with the assistance of family or professional caregivers
- Technology that helps seniors plan for and confirm transportation options in a simple and affordable way e.g., on demand service (pickup at door)
- Self-driving vehicles, especially offered as a public transport service (not personally owned).
- Self-driving wheelchairs that use the bicycle lanes or pathways
- Affordable options after loss of drivers license

## Ambulation/Mobility:

- Technology including position tracking to assess mobility decline for early intervention
- Scooters, wheelchairs, bed supports depending on where the senior lives.
- Technology to aid in entering into the home due to steps
- Exoskeleton to assist people with motion disability
- Next generation robotic “Power Walkers” to help reduce falls
- Adding GPS and verbal and visual navigation aids to walker and scooters

# How Technology Could Help Reduce Challenges/Barriers to Aging in Home

## Access to Health Care:

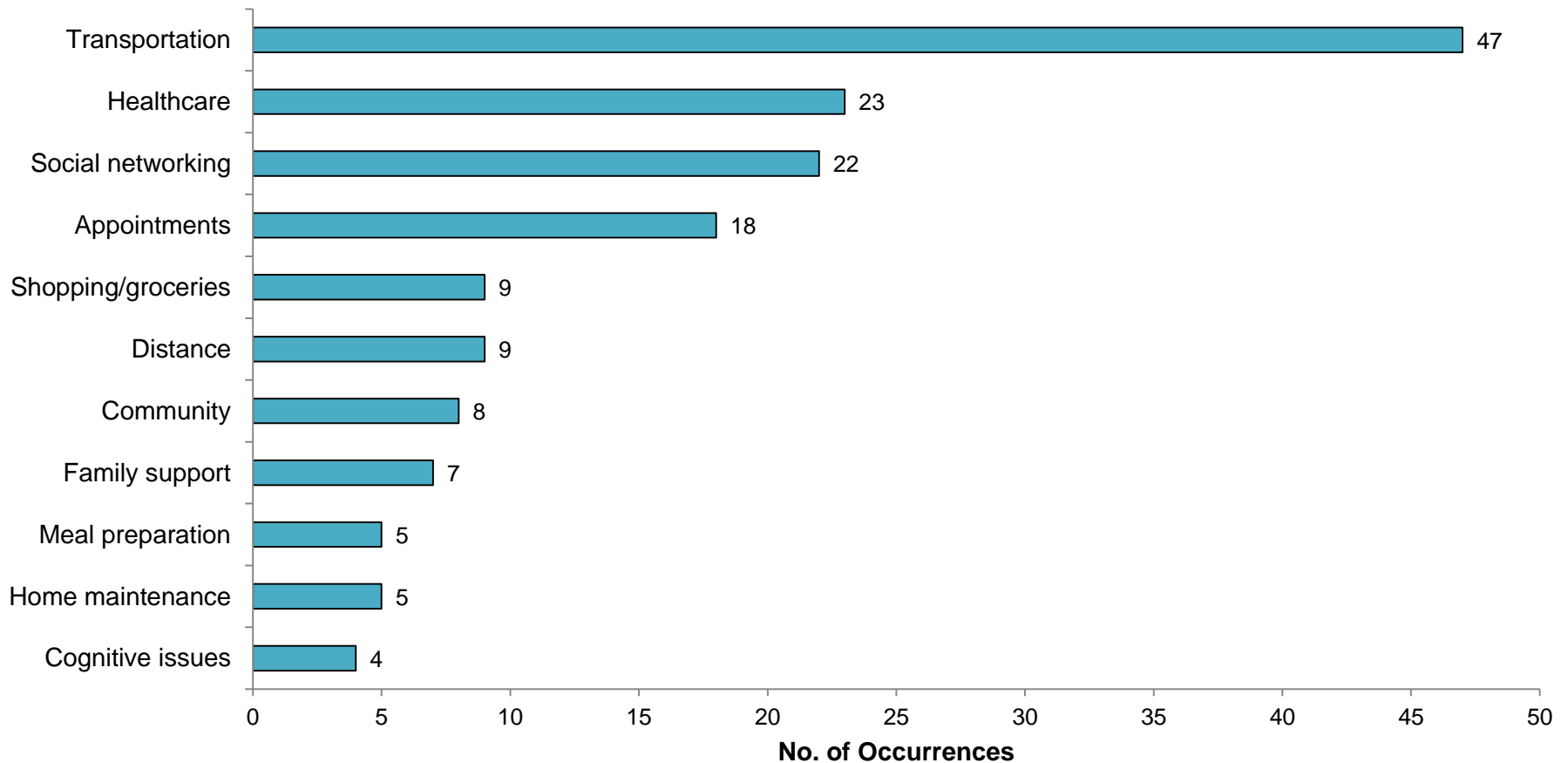
- A secure common, centralized health record and information hub!
- Dr's apps that could be booked online, x-rays, prescriptions could be accessed online then e-mailed to local pharmacy, test results viewed online, with questions forwarded to family
- Secure telehealth, video, virtual, robotic visits by doctor and other professionals for those patients unable to make ambulatory visits to offices
- Filters and diagnostic algorithms which match clients to available services in their area more quickly, and when an intervention might be required
- Universal touchscreen technology, with language translation capacity to allow a two way conversation
- Transportation!

## Socialization:

- Skype, FaceTime, Facebook, video streaming platforms seen as beneficial, but...
- There are "easy" cell phones meant for seniors, why not "easy" tablets or laptops – voice activated software would help, and/or computer literacy components, plus the ability to deal with cognitive and sensory issues
- Telepresence capabilities of robots to support social interaction, via 3D googles
- Transportation!
- Cost and accessibility are major factors!

# Additional Barriers that Specifically Affect Seniors Living in Rural Areas?

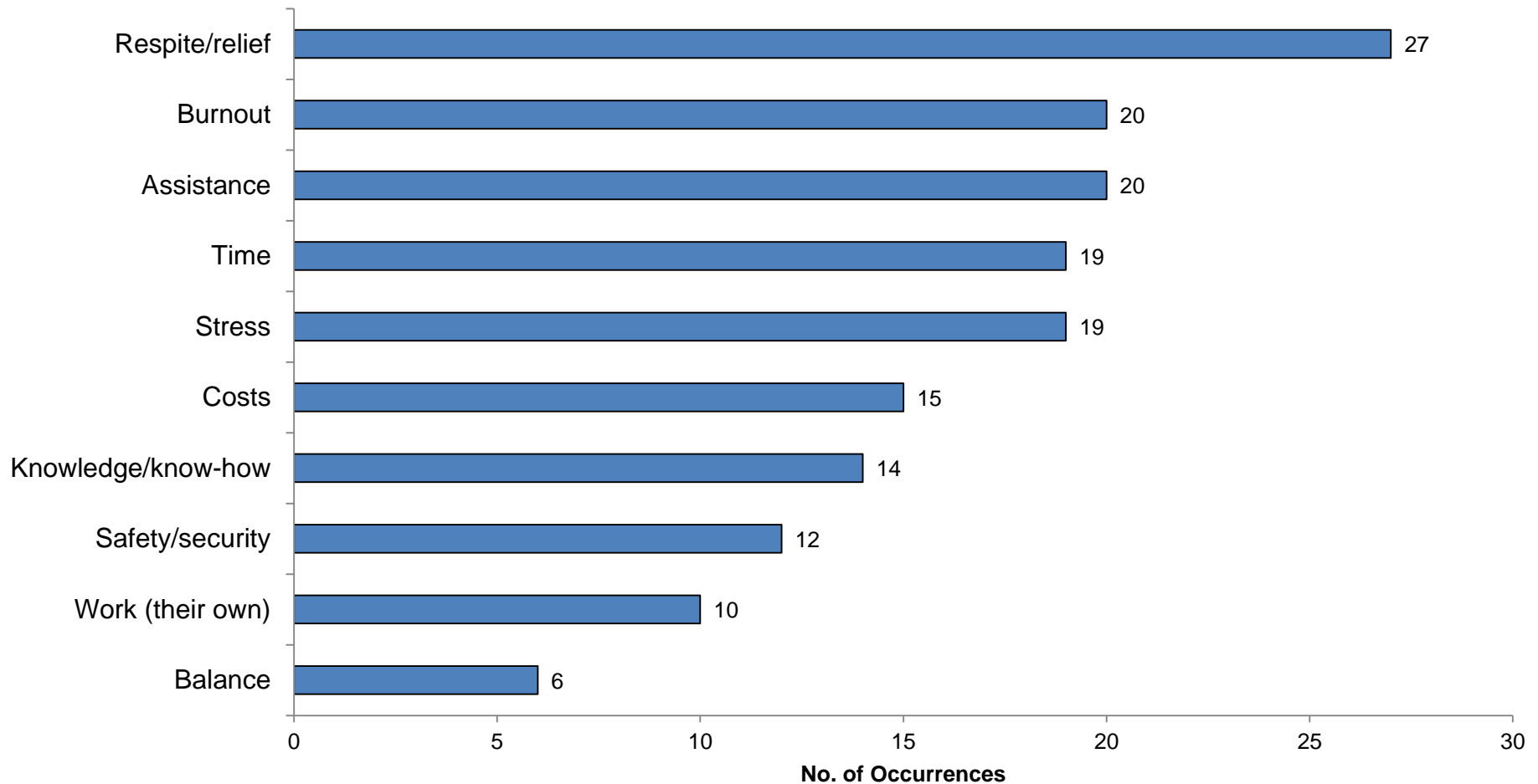
The barriers are similar, but larger and more extreme



# How Technology Could Help Reduce Challenges/Barriers in Rural Areas

- Everyone should have the right to high-speed data
- Phone, Skype, telemedicine to reduce need for seniors to travel long distances for medical care
- Mobile telehealth services that could be set up in a client home, or in a seniors block
- Decreasing the need for transportation, by having medications sent to more local centres
- Driver-less cars, coordinated systems for picking up people
- Cost effective technologies
- Training programs/services on how to use technology

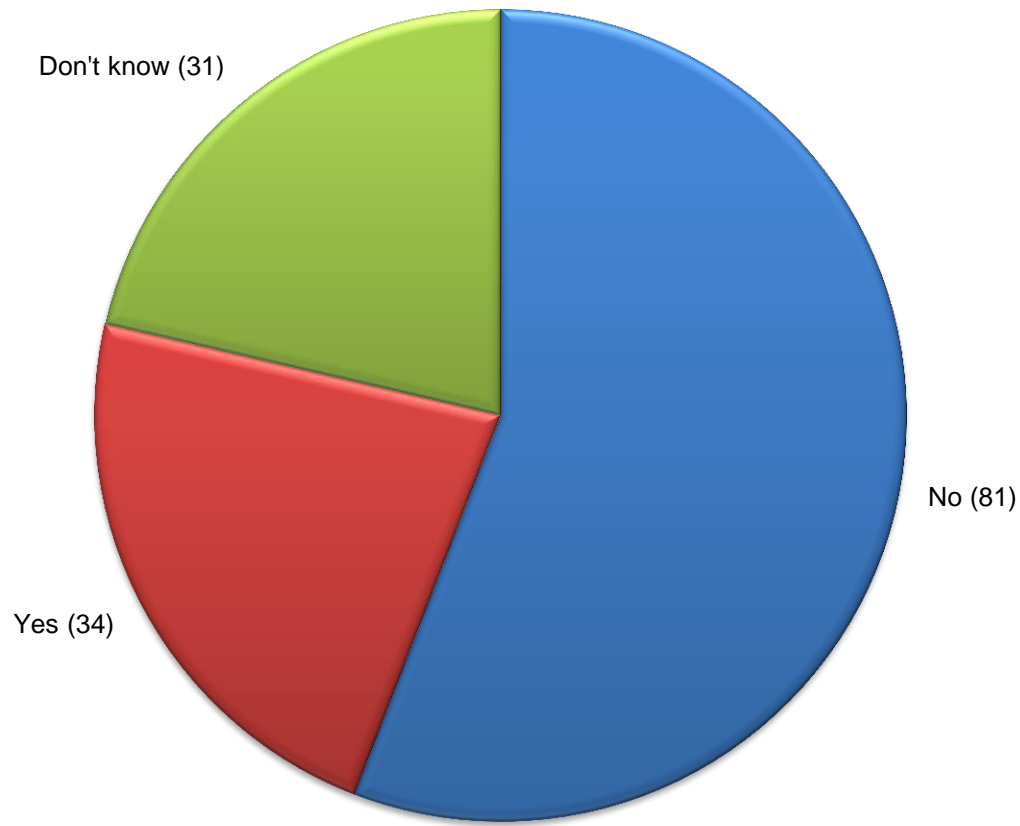
# What Are The Most Significant Challenges Facing The Families or Caregivers of Seniors?



# What are the most significant challenges facing the health care team who support seniors living at home?

- Shared electronic medical records
- Constant communication and connectivity with the other providers (formal and informal, social care and sick care)
- Better use of modern tools - home care continues to be a very 1950s model
- Ability to find appropriate resources. Lack of accessibility and timeliness of supports, funding issues
- Travel- distance between appointments reduces time and funding for the visit time
- Training of personnel, and upgrading
- Poor scheduling, delivery coordination, logistics in health sector
- Communication between support team, family and senior
- The IT infrastructure in the province is challenging

# Is Your Organization Involved in Developing or Commercializing Technology Solutions





# What Barriers are These Technology Solutions Intended to Address?

- Socialization, Safety, Virtual Visits by Clinicians, Medication Reminders
- Mobility – fall monitoring
- Communication
- Safety and security
- Health monitoring
- Exercise
- Cognition improvement
- Costs – managing costs
- Training technologies for care givers

# How Close to Market are These Technology Solutions?

- a) Currently available on the market: **12 responses**
- b) 1-2 years: **7 responses**
- c) More than 2 years: **11 responses**

# Barriers or Challenges Which Have Prevented These Technology Solutions From Being Fully Utilized

- Funding
- Market/client need
- Acceptance (reluctance of seniors to try new technology)
- Regulation – CRTC
- Lack of high speed internet, even just outside of a city
- Better education and knowledge translation is needed
- Organizations/provincial governments are hesitant to try new technologies
- One barrier is knowing exactly what the needs are. Another is knowing which solution should be pursued
- There is a significant gap in Canada with respect to a receptor community for these new technologies-- i.e. lack of industry to take them on, lack of funding to support them, and lack of government programs

Thank You!

Comments?

Reactions?

