



## A Background on Older Adults and Assistive Technology

**As a result of this presentation, learners will be able to:**

1. Describe basic demographics of the aging population in Minnesota
2. Define aging in place
3. Define assistive technology
4. Explain how assistive technology can support older adults aging in place
5. Relate functions of a smart home to needs of seniors aging in place

### Prevalence of Older Adults in MN

- According to the US Census Bureau, an estimated 16.3% of Minnesota’s 5,707,390-person population is 65 years of age or older. (1)
- 2015 data from the U.S. Census Bureau’s American Community Survey states that 32% of older adults self-report having a disability. (2)
- Those 65-74 years of age report disability at the rate of 22% while those 75+ report a 46% rate of disability. (2)
- Increasing number of older adults → need for increased consideration of how we can best support them and their goals.

### Desire to Age in Place

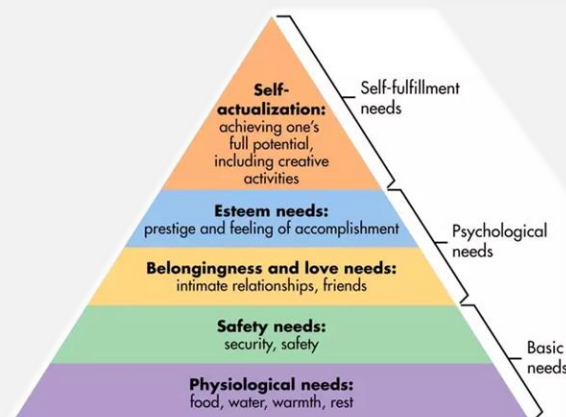
- Definition: “The ability to live in one’s own home and community safely, independently, and comfortably, regardless of age, income, or ability level.” (3)
- Nearly 90% of older adults plan to live in their homes and communities for as long as possible. (4)

### Activity – Brainstorming Requirements for Aging in Place

- Time yourself for one minute as you name as many requirements for aging in place as you can.
  - How many did you come up with?
- Now take an additional 30 seconds and look at your list, considering that the person has moderate memory loss
  - How did your list change?

### Needs for Aging in Place (5)

- Maslow’s Hierarchy of Needs
  - Basic needs
    - Physiological and safety needs
  - Psychological needs
    - Belongingness and love and esteem needs
  - Self-fulfillment needs
    - Self-actualization



## Defining Assistive Technology

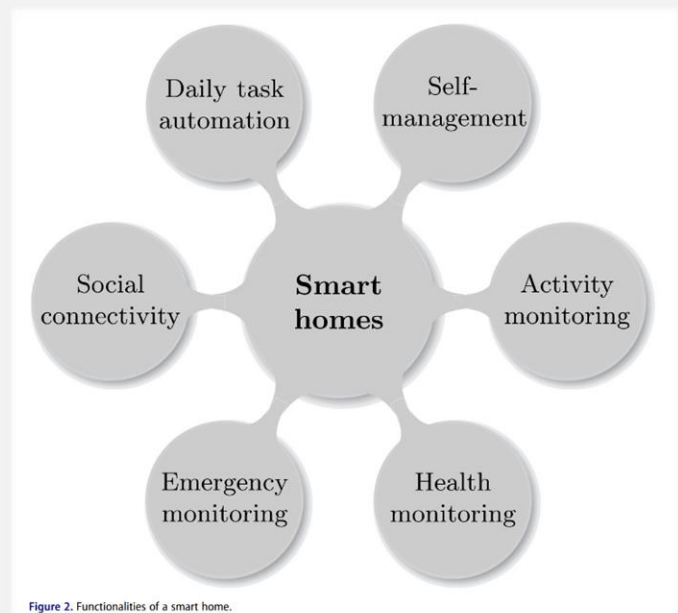
- United States legislation defines assistive technology (AT) as “Any item, piece of equipment or product system whether acquired commercially off the shelf, modified, or customized that is used to increase, maintain or improve functional capacities of individuals with disabilities” within the Assistive Technology Act of 1998. (6)

## Usefulness of AT to Promote Aging in Place

- Refer to your list of requirements for aging in place - Can you think of areas that AT could help support an older adult as they age in place?
- Activities of daily living (ADLs)
  - Sock aid, bidet, adaptive silverware
- Instrumental activities of daily living (IADLs)
  - Medication reminders or dispensers, stove sensors
- Safety and independence in the home
  - Voice control, security systems, motion detectors

## Functions of a Smart Home (7)

- Daily task automation
  - Voice activated door opener
- Self-management
  - Remote window blind opener
- Activity monitoring
  - Pedometer
- Health monitoring
  - Electronic wrist blood pressure cuff
- Emergency monitoring
  - Personal emergency response system
- Social Connectivity
  - Video chatting



### **Dan – An AT Success Story Shared with His Permission**

Dan is a retired pastor in his 70s who was diagnosed with ALS nearly 20 years ago. He is dependent on a ventilator and has severe limitations in physical function. He lives at home with his wife. He is an avid reader and enjoys composing devotions with the assistance of caregivers. At the time of referral, Dan was using an acrylic communication board, relying on caregivers to initiate conversation and interpret use of his board. He was able to blink to indicate yes/no responses. Dan was unable to initiate conversation. This limited his participation in daily life. Dan received an in-home consult with an SLP who then set up trials for a couple of different communication devices. He excelled with the Tobii eye gaze system and initial set-up was completed during his trial. Within three days of having the device, Dan was able to participate in a phone conversation with his mother who was over 100 years old, independently telling her “I love you” for the first time in years. Dan ultimately received his own device and became so proficient in communicating with it that he was able to officiate the wedding of one of his caregivers. He was left with the contact information of a SLP in his area who specialized in his device for ongoing learning and support.

### **Key Takeaways**

- The U.S. population is getting proportionately older
- Many older adults desire to stay in their home for as long as possible
- Assistive technology can promote safety and independence for seniors as they age in place

## References

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