



# Types of Technology in Aged Care: Smart Homes

Aged care services are increasingly embracing innovative digital technologies to improve the care experiences of older people and to enable care workers to do more, even with fewer resources (e.g., staff, financial). This information sheet on smart homes is part of a series covering types of technology currently used in aged care. These information sheets are available on the [ARIIA website](#).

## What is a smart home?

A smart home is a place of residence with integrated technology to assist the people who live there to remain independent, safe, and improve their quality of life. [1] Smart homes are set up with sensors, actuators, and intelligent software which can be integrated into furniture, walls, and everyday objects. Using computers, people can then monitor what is going on inside the home even when external to it. This makes it possible to control the internal environment (e.g., adapting the light). If monitoring an occupant's behaviour, family members can automatically warn an emergency service if the observed behaviour deviates from the normal pattern. [2]

Smart homes may include:

- Systems that automate household tasks and optimise homes to suit individuals' living habits
- Smart locks, doorbells, and security systems
- Motion sensors
- Mobility assistance
- Medication reminders
- Voice-activated smart home assistants (e.g., Alexa, Google Home).



## How is smart home technology used in aged care?

Smart home technology is often used by people who wish to continue living independently. However, not all older people find these technologies useable, and barriers to the introduction of these technologies are sometimes high. [3, 4]

Automated functions or smart home assistants may reduce risk of falls or injury (e.g., if a light can be switched off after leaving the room instead of walking through a dimly lit room), [5] and smart locks may be useful if someone from the care team needs to access the home and the older person is unable to let them in. [4]

## How can smart home technology benefit the aged care sector?

Smart homes may:

- Enable people to live in their own home for longer
- Increase safety
- Prevent injury
- Allow people to remember, take, and track their medications
- Bring peace of mind to family and loved ones. [1]

## Examples of smart home technology in aged care

Some commonly used, and easily accessible, smart home technologies include:

- **Smart locks:** A technology that allows for easy locking and unlocking, it can be used for older adults to control who can access their homes.
- **Google Home:** An app that can be used to support a personalised smart home for older adults, and help with household tasks, such as turning on the lights and setting reminders for medication.
- **Alexa:** A voice-activated technology that can be used to support smart homes and can provide personalised social interactions.





## Types of Technology in Aged Care: Smart Homes

### References

1. Aggar C, Sorwar G, Seton C, Penman O, Ward A. Smart home technology to support older people's quality of life: A longitudinal pilot study. *Int J Older People Nurs.* 2023;18(1):e12489.
2. van Hoof J, Wouters E, Demiris G. *Handbook of smart homes, health care and well-being.* Switzerland: Springer International; 2017.
3. Ghorayeb A, Comber R, Gooberman-Hill R. Older adults' perspectives of smart home technology: Are we developing the technology that older people want? *Int J Hum Comput Stud.* 2021;147:102571.
4. Sorwar G, Aggar C, Penman O, Seton C, Ward A. Factors that predict the acceptance and adoption of smart home technology by seniors in Australia: A structural equation model with longitudinal data. *Informatics for Health and Social Care.* 2023;48(1):80-94.
5. Pech M, Sauzeon H, Yebda T, Benois-Pineau J, Amieva H. Falls detection and prevention systems in home care for older adults: Myth or reality? *JMIR Aging.* 2021;4(4):e29744.

[www.ariia.org.au](http://www.ariia.org.au)

For more information email [ariia@ariia.org.au](mailto:ariia@ariia.org.au) or call 08 7421 9134

ARIIA - Level 2, Tonsley Hub, South Rd, Tonsley SA 5042

ARIIA was established as an independent, not-for-profit organisation, set up to lead the advancement of the aged care workforce capability by promoting and facilitating innovation and research to improve the quality of aged care for all Australians.

Cite as: ARIIA Knowledge & Implementation Hub. *Types of Technology in Aged Care: Smart Homes.* Adelaide, SA: ARIIA; 2023.