

Types of Technology in Aged Care: Robots



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 robots is part of a series covering types of technology currently used in aged care. These information sheets are available on the [ARIIA website](https://www.ariia.org.au).

What are robots?

A robot is a type of automated machine often designed to carry out tasks performed by humans. They have been used in the manufacturing industry for many years to prevent humans entering hazardous environments. There is now a range of different robots that aim to improve the wellbeing of older adults residing in residential aged care or their own homes. [1]

How are robots used in aged care?

In aged care, robots have several different uses. They can direct exercises, [2] provide emotional support, [3] and encourage social interactions. [4] Examples of robotic technology used in aged care include robopets such as PARO, care robots such as the Care-O-bot or Zora, assistive walking robots, and robots used to manage medication.

Socially assistive robots (that assist humans to interact) can be used in aged care to support older adults to interact with others and prevent social isolation and feelings of loneliness. [5]



How can robots benefit the aged care sector?

Robots have the potential to improve quality of life for individuals receiving aged care. Robots can assist with daily functional tasks such as bathing, [6] which can support care workers, and assist older adults to maintain their independence and dignity. Robots can provide mobility support for older adults and can assist individuals to get out of bed or stand up from a chair and walk, reducing the risk of falls. [7]

Socially assistive robots that encourage older adults to interact socially with others can increase social interactions and reduce depression, loneliness, and agitation for older adults (especially for those living with dementia). [5] Robots can assist aged care workers by monitoring the health of older adults and supporting the safe distribution of medications. [8]

Examples of robots in aged care

Some robotic technologies include:

- **PARO:** A robopet that can be used to stimulate interaction and engagement for older adults, especially those living with dementia.



Image source: www.parorobots.com

- **Care-O-bot:** A domestic robot that can carry meals and drinks, enabling older adults to mobilise safely with their hands free.



Image source: www.care-o-bot.de

- **Zora:** A software solution designed to assist nurses and aged care workers in the support the elderly. It is compatible with the robot Nao (pronounced now).

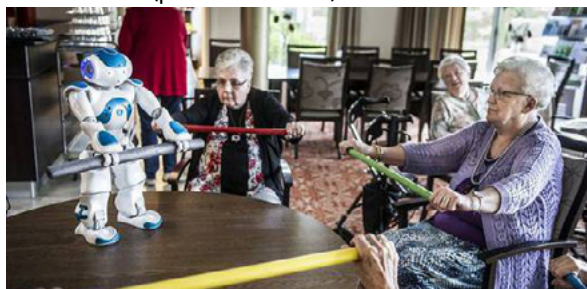


Image source: www.robotlab.com



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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.

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