

# AHHA THINK TANK: LOOKING OVER THE HORIZON

## Changing demographics and emerging technologies: Where to next for dementia care?

Kathy Bell, Alzheimer's Australia

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# Dementia – *the* public health challenge of the 21<sup>st</sup> century

- Worldwide there are nearly 47 million people with dementia
- There are now more than 353,000 people with dementia in Australia – will be nearly 900,000 by 2050
- Second leading cause of death
- Enormous personal, social, and economic impact

# Some of the challenges

We will be challenged to deliver high quality care and support for people with dementia into the future:

- Growing numbers of people with dementia
- Relative reduction in the working population
- Pressure on health and aged care budgets
- Workforce constraints
- Potential constraints on informal care

# What do people with dementia and their carers want and need?

- What we all want – a meaningful life
- Dignity, social inclusion, enablement, engagement
- The ability to remain independent and live in the community for as long as possible
- Quality residential care when it's needed
- The ability to die with dignity

# What can technology contribute?

Improved technologies will be a part of what's needed. But only a part.

And not just high end, futuristic technology...

There are already many examples of current technology which can make a big difference for people with dementia and their carers.

# Current technology – for better care

We have the technology already to deliver better diagnosis and care for people with dementia – we just need to use the technology better.

- Dementia guidelines embedded in clinical information systems
- Electronic health record/advance care plans

# Current technology – to help people live safely at home

There is already a range of equipment and technology available, that is helpful for people with dementia and their carers.

(<http://www.innovationsindementia.org.uk/Getting%20equipped%20to%20tackle%20forgetfulness.pdf>;  
<https://wa.fightdementia.org.au/wa/about-dementia-and-memory-loss/resources/resources-wa/assistive-technology-product-information-sheets>)

This equipment can help people live safely at home for longer – which is what most people with dementia want. 70% of people with dementia currently live in the community, with only 30% in residential aged care.

# “Smart homes”

CNN report, October 2014: Mary Lou doesn't know she's being tracked. The 77-year-old is in the middle stages of Alzheimer's and though she lives on her own, her family keeps close tabs on her. If she leaves her home between 9 pm and 6 am, a silent sensor on her front door texts her daughter an alert. There is a sensor on each of Mary Lou's two key chains that detects when she goes outside her condo's grounds. A motion sensor in the kitchen helps monitor her eating habits, and another in the bedroom notes when she wakes up in the morning and catches any sleeping issues. There is even a flood sensor in the laundry room. The sensors relay the information back to a small wireless hub. Her two daughters, who act as her caretakers, can monitor it all on a smartphone app and set up special notifications. "It's kept her to the point where we haven't even had to have in-home care yet. Our goal is to keep her in her home for as long as possible," said her daughter.

<http://edition.cnn.com/2014/08/25/tech/innovation/alzheimers-smart-home/>

# Current technology – music therapy

Another simple use of technology to improve the lives of people with dementia is music therapy.

Music can shift mood, manage agitation, stimulate positive interactions, facilitate cognitive function, and coordinate motor movements.

# Pushing the boundaries – the Virtual Dementia Experience

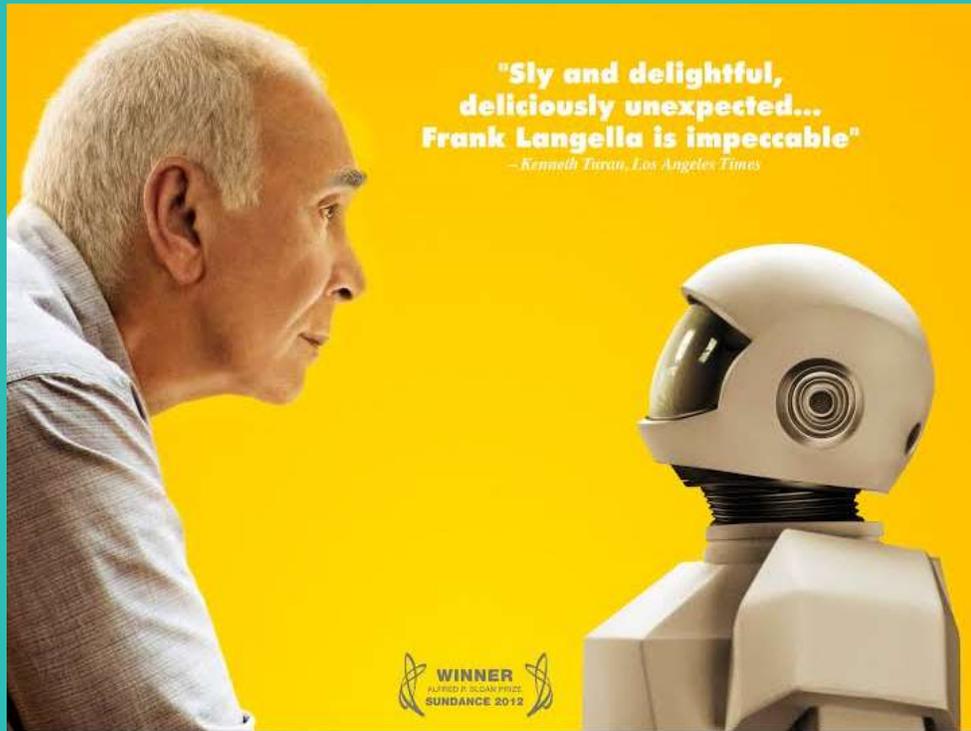


# Emerging technologies: Robotics

A couple of key areas where robotics are already being used for people with dementia, and have further potential:

- Robots for companionship
- Robots for care and safety.





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deliciously unexpected...  
Frank Langella is impeccable"  
- Kenneth Turan, Los Angeles Times

WINNER  
ALFRED P. SLONIM PRIZE  
SUNDANCE 2012

# ROBOT & FRANK

FRIENDSHIP DOESN'T HAVE AN OFF SWITCH.



# Ethical questions

- How to ensure the dignity of the person with dementia is maintained
- How to ensure that mechanized or robotic interactions don't replace human interactions  
Watching for safety purposes without invading privacy
- How to ensure that technology serves the person with dementia and improves their life

# Conclusion

The growing prevalence of dementia, and the increasing need for quality care will present challenges into the future.

Improved technologies will be a part of what's needed. But only a part.

And not just high end, futuristic technologies, which carry both benefits and risks... but better uptake and use of simple and readily available technologies.