



THE UNIVERSITY  
OF QUEENSLAND  
AUSTRALIA

CREATE CHANGE

# Examining the economics of healthy longevity

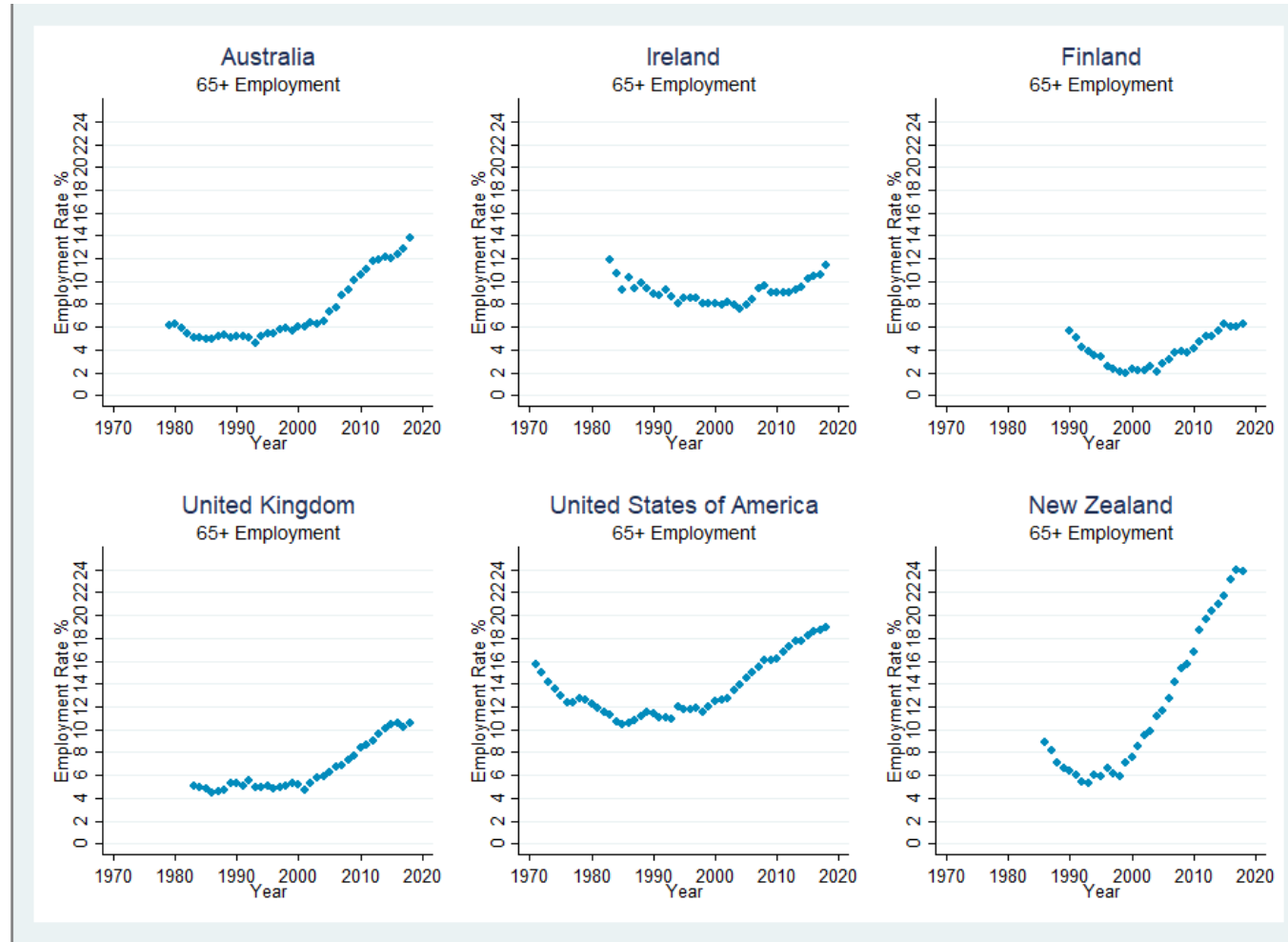
Professor Brenda Gannon



## Opportunity cost is key in economics of healthy aging and economic contribution of older people

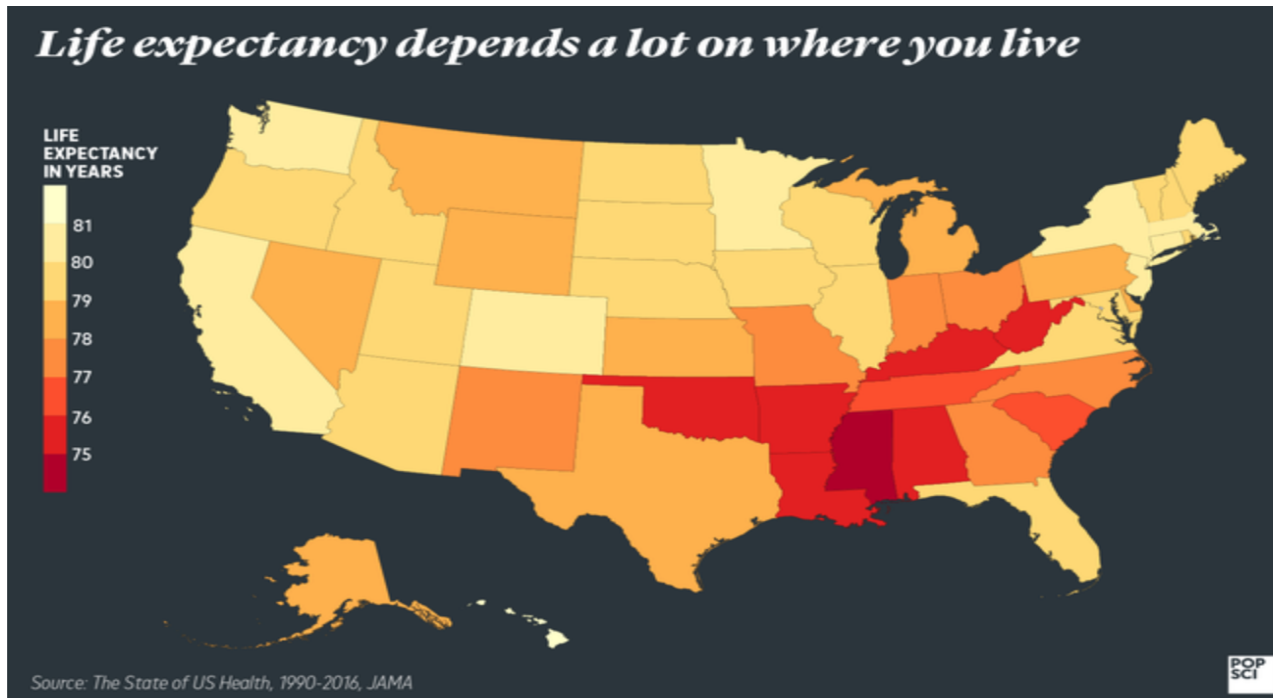
- Opportunity cost and trade-offs
- Producers of goods – still working after age of 65-67..
- Consumers of goods – trade-off now between leisure consumption and hours worked... leans more toward leisure
  - Push (discrimination?) and/or pull (desired consumption)?
- Intergenerational wealth and poverty - in both directions!
- Uncertainty and asymmetry of information means market forces are not always appropriate

# Employment rates age 65+ (ILO data)



# Economic implications of aging - How has longevity/life expectancy changed?

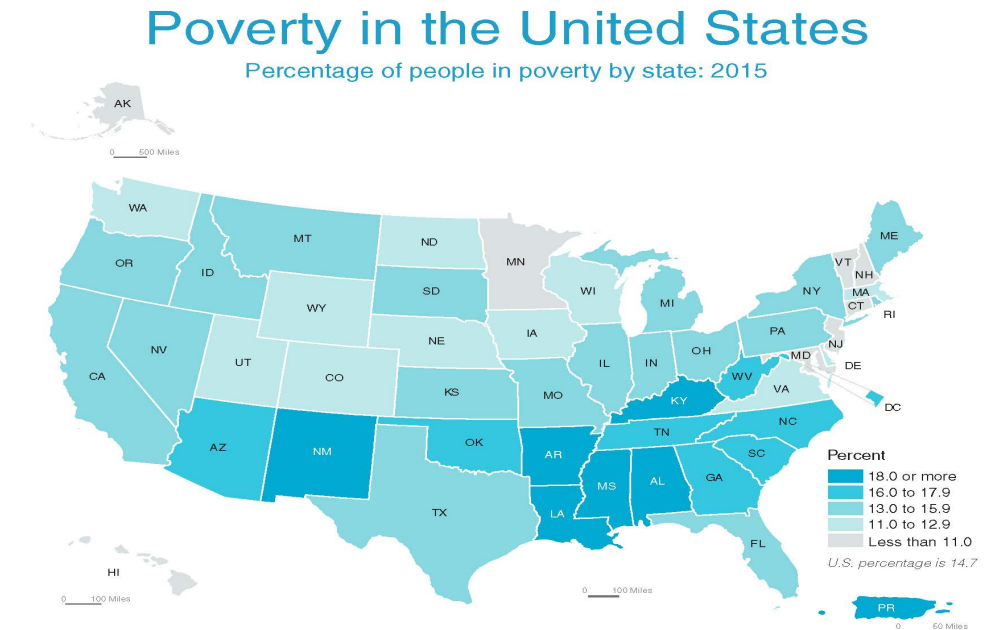
The health-income gradient is very relevant...



Americans living in much of the South have much shorter lives than those in the rest of the country.

Infographic by Sara Chodosh

[https://www.popsoci.com/sites/popsoci.com/files/styles/655\\_1x\\_/public/images/2018/11/lifeexp\\_geo.png?itok=BBM\\_JGRw&fc=50,50](https://www.popsoci.com/sites/popsoci.com/files/styles/655_1x_/public/images/2018/11/lifeexp_geo.png?itok=BBM_JGRw&fc=50,50)



Note: U.S. percentage does not include data for Puerto Rico.

United States<sup>™</sup>  
Census  
Bureau

U.S. Department of Commerce  
Economics and Statistics Administration  
U.S. CENSUS BUREAU  
[census.gov](https://www.census.gov)

Source: 2015 American Community Survey  
and 2015 Puerto Rico Community Survey  
[census.gov/acs](https://www.census.gov/acs)

# Definitions and appropriateness...

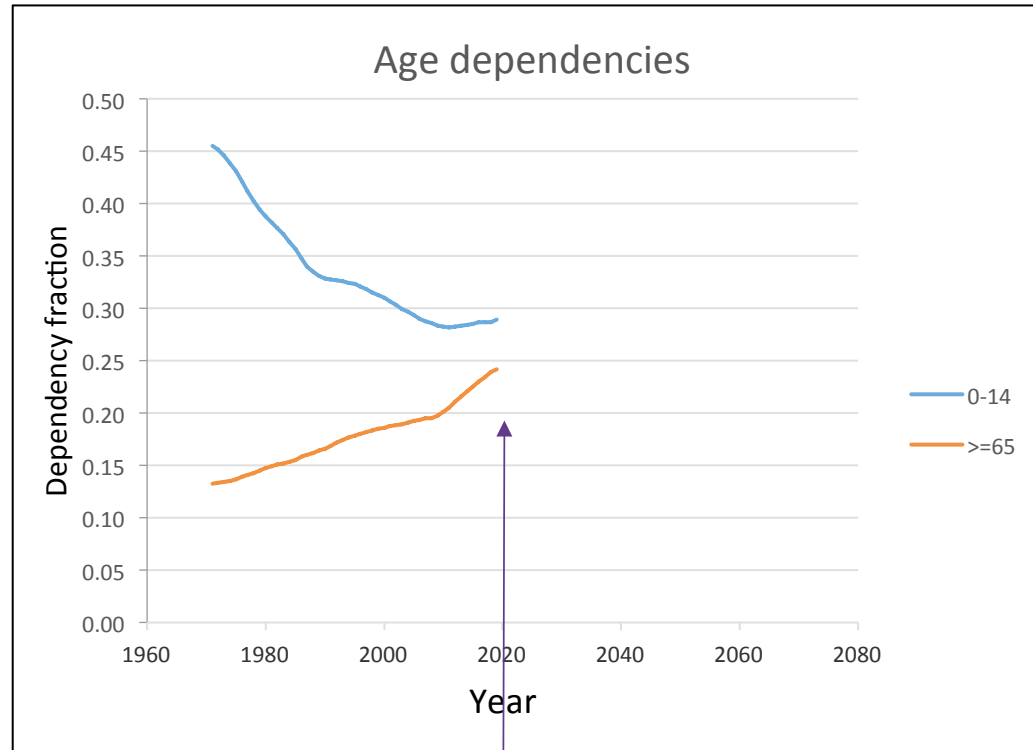
- Old age and young dependency....
- Under 15 and 65+....not relevant to today's populations in developed countries but as a whole, still used across the whole OECD in order to provide comparability across the world
- Therefore, we continue to use this and in next slides show dependency ratios
- Is there potential to explore new dependency ratios within countries?

# Population Structure - Is the OECD definition of Age dependency appropriate?

Dependency Ratios:

Population under 15/(15-64)

Population 65+/(15-64)



Currently Total

ABS data: 3222.0 Population Projections, Australia, 2017 (base)-2066, 0.53

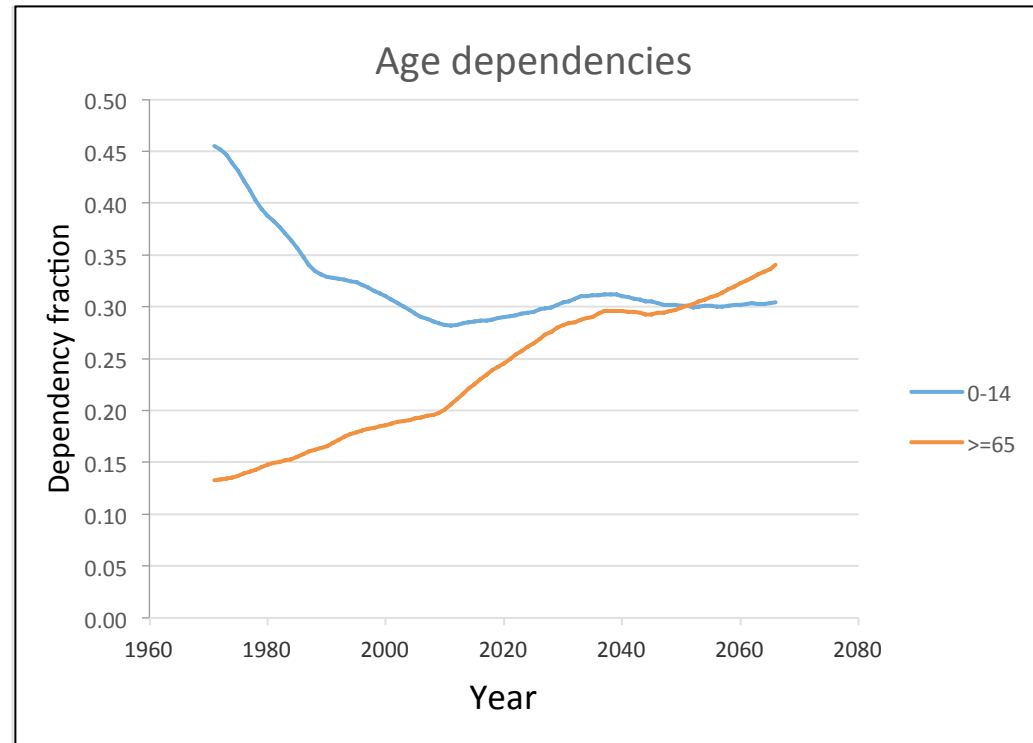
3101.0 Australian Demographic Statistics Table 59.

Population Structure shows a stark trend towards a higher older age dependency over time...

Dependency Ratios:

Population under 15/(15-64)

Population 65+/(15-64)



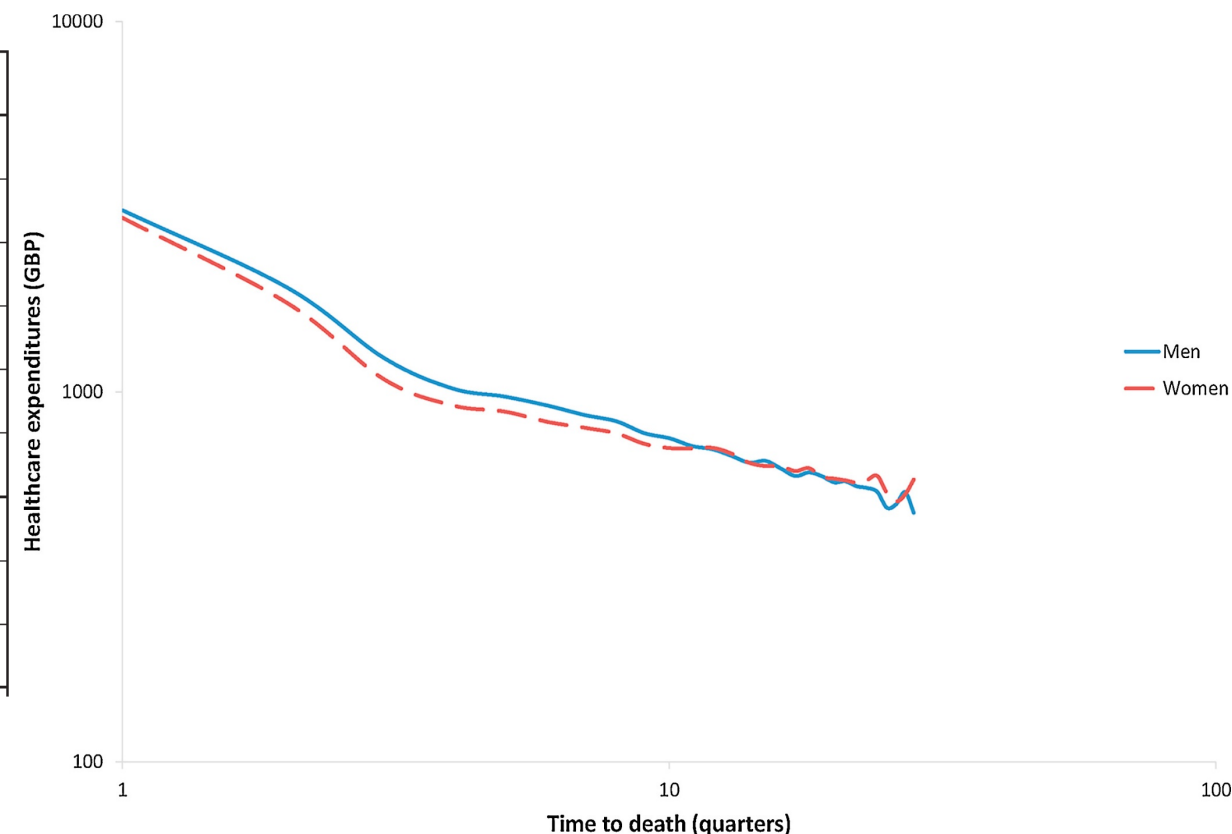
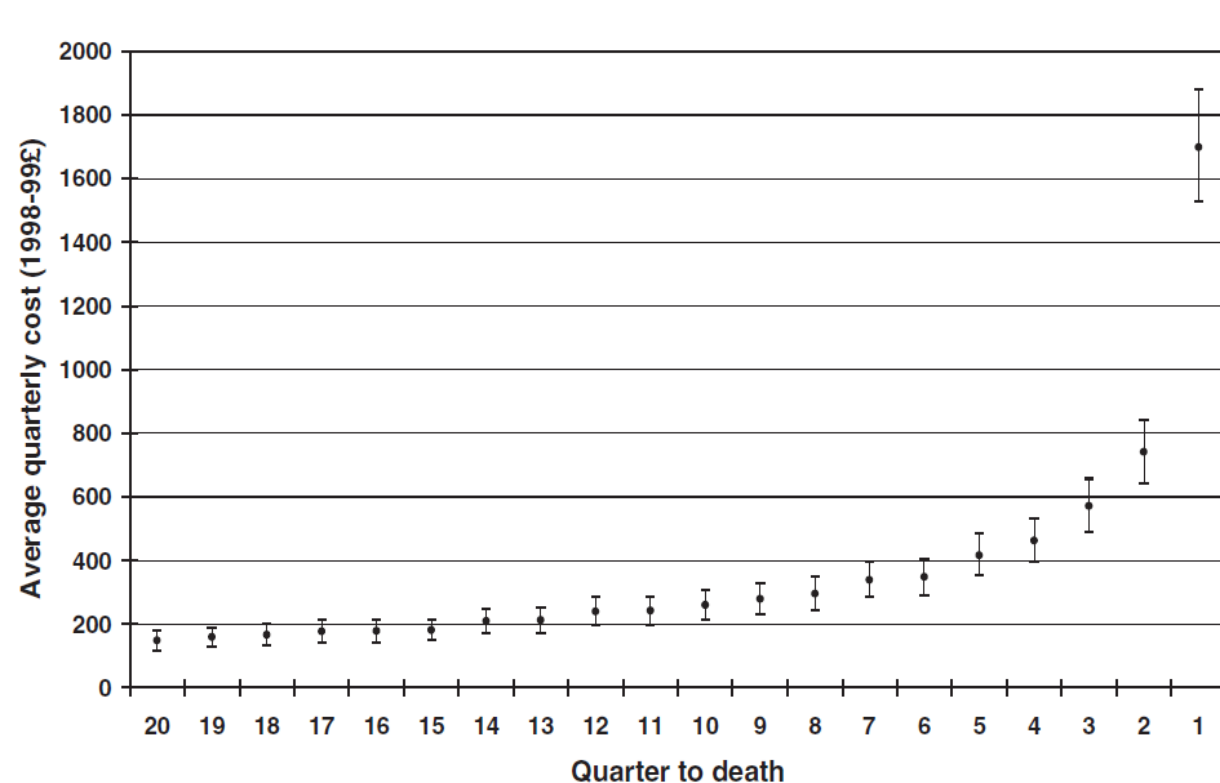
ABS data: 3222.0 Population Projections, Australia, 2017 (base)-2066,  
3101.0 Australian Demographic Statistics Table 59.

## Emerging questions?

- What costs are likely to be incurred?
- Starting with health care resource utilisation (health care perspective)
- Care pathways – analyse from societal perspective also (consumer costs, productivity costs)
- Health shock effects? e.g. acute onset of a condition, or recurring chronic condition - how do these impact on work decisions? *Reverse causation will bias correlations found in data!*
- Is it aging *per se*, or more simply end-of-life expenditure??



# End-of-life and direct health care costs



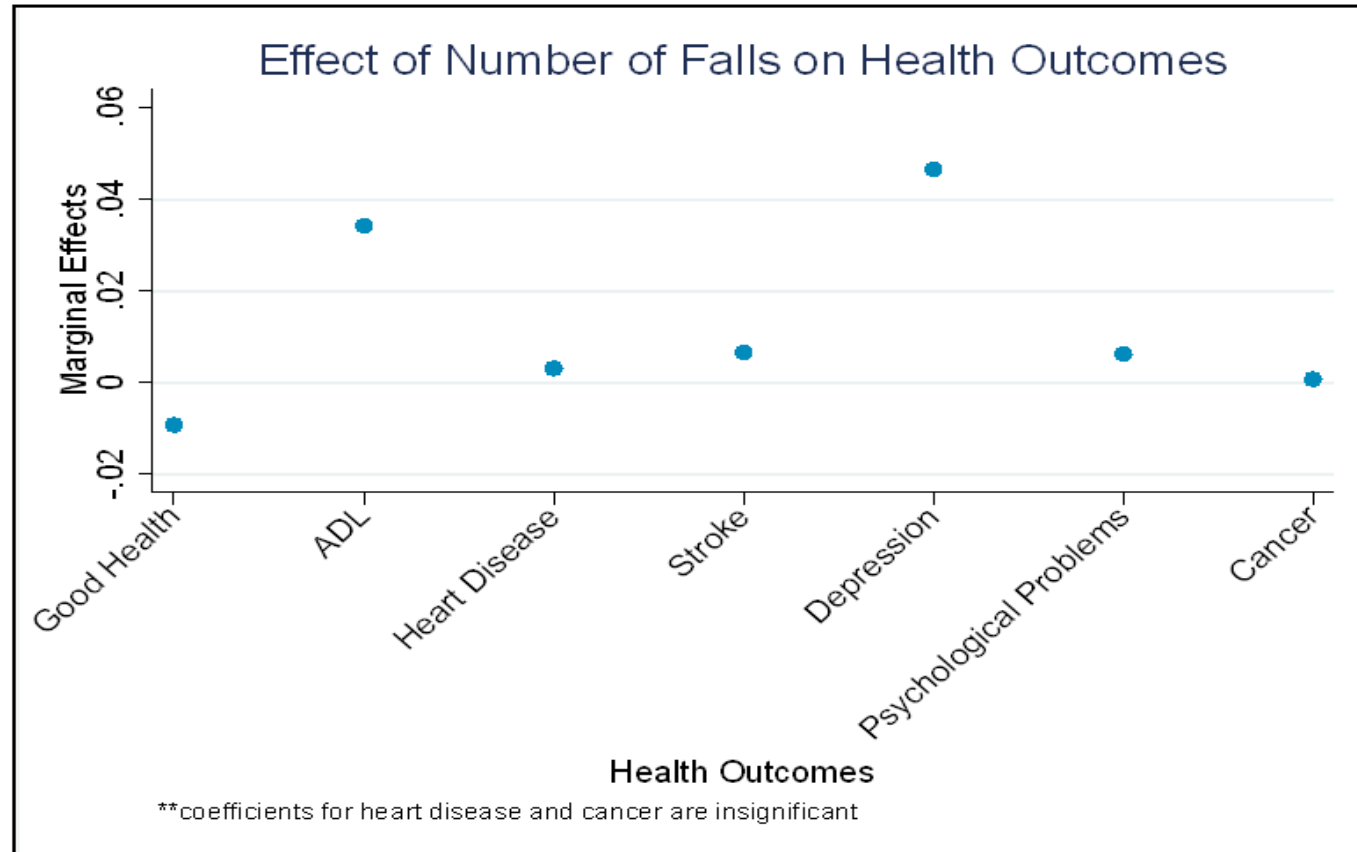
Zweifel, P., Felder, S., Markus, M. (1999) Ageing of population and health care expenditure: a red herring? *Health Economics*, 8:485-496

Howdon, D. and N. Rice (2018) Health care expenditures, age, proximity to death and morbidity: Implications for an ageing population. *Journal of Health Economics*, 57:60-74.

## How can we use economics, data and metrics to answer these questions?

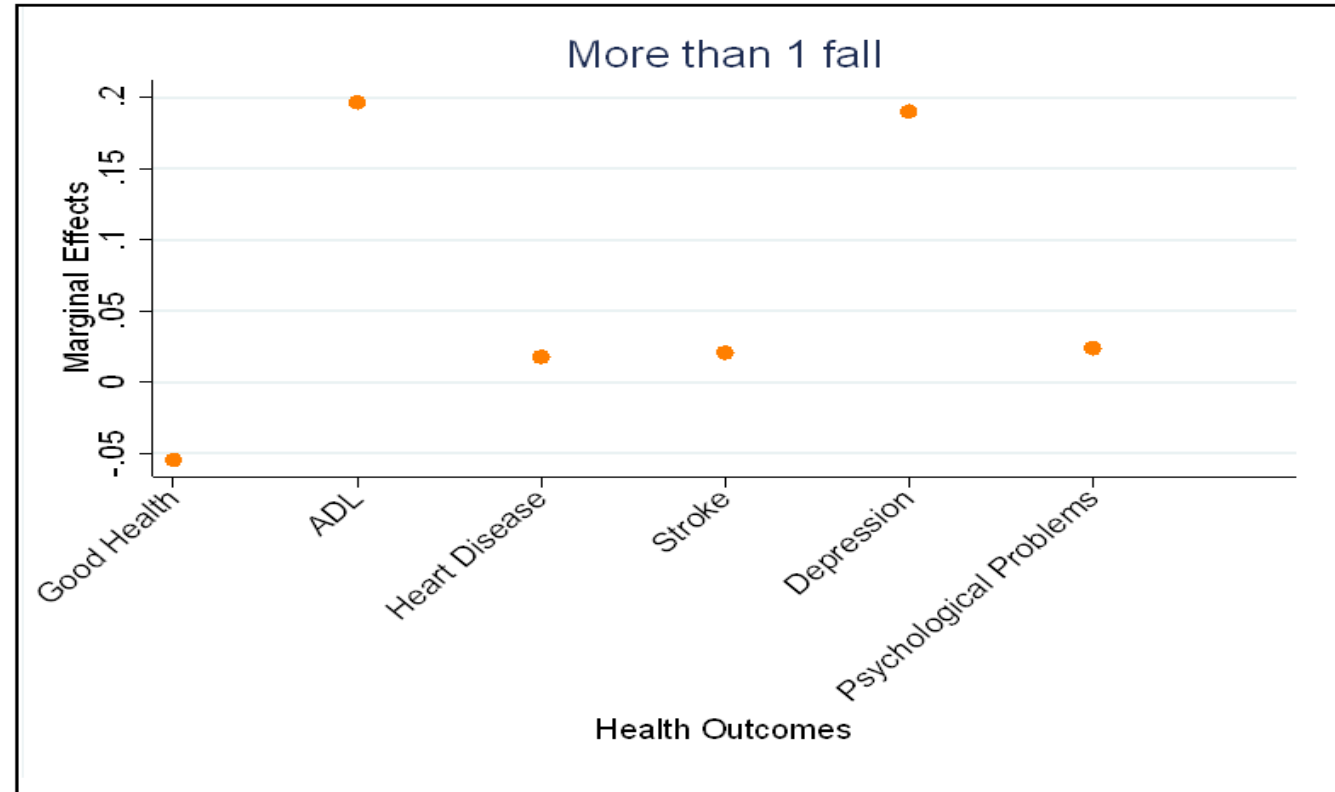
- Administrative data, Cohort studies, Longitudinal data
  - Connect and link data across Government departments
  - HRS Health and Retirement Survey, US), SHARE (Survey of Health Ageing and Retirement in Europe), CHARLS (Chinese Health and Retirement Longitudinal Study), TILDA (The Irish Longitudinal Study on Ageing), ELSA (The English Longitudinal Study on Ageing)
- Focus on health care utilization, workforce planning and needs as a priority... and predict in terms of healthy longevity, rather than standard 65+
- Example: Lugo and Gannon (2017).... Impact of cognitive and sensory impairment on healthcare utilization, Kelly (2017)...impact of falls on health outcomes

# Examples of data use: Kelly (2017)



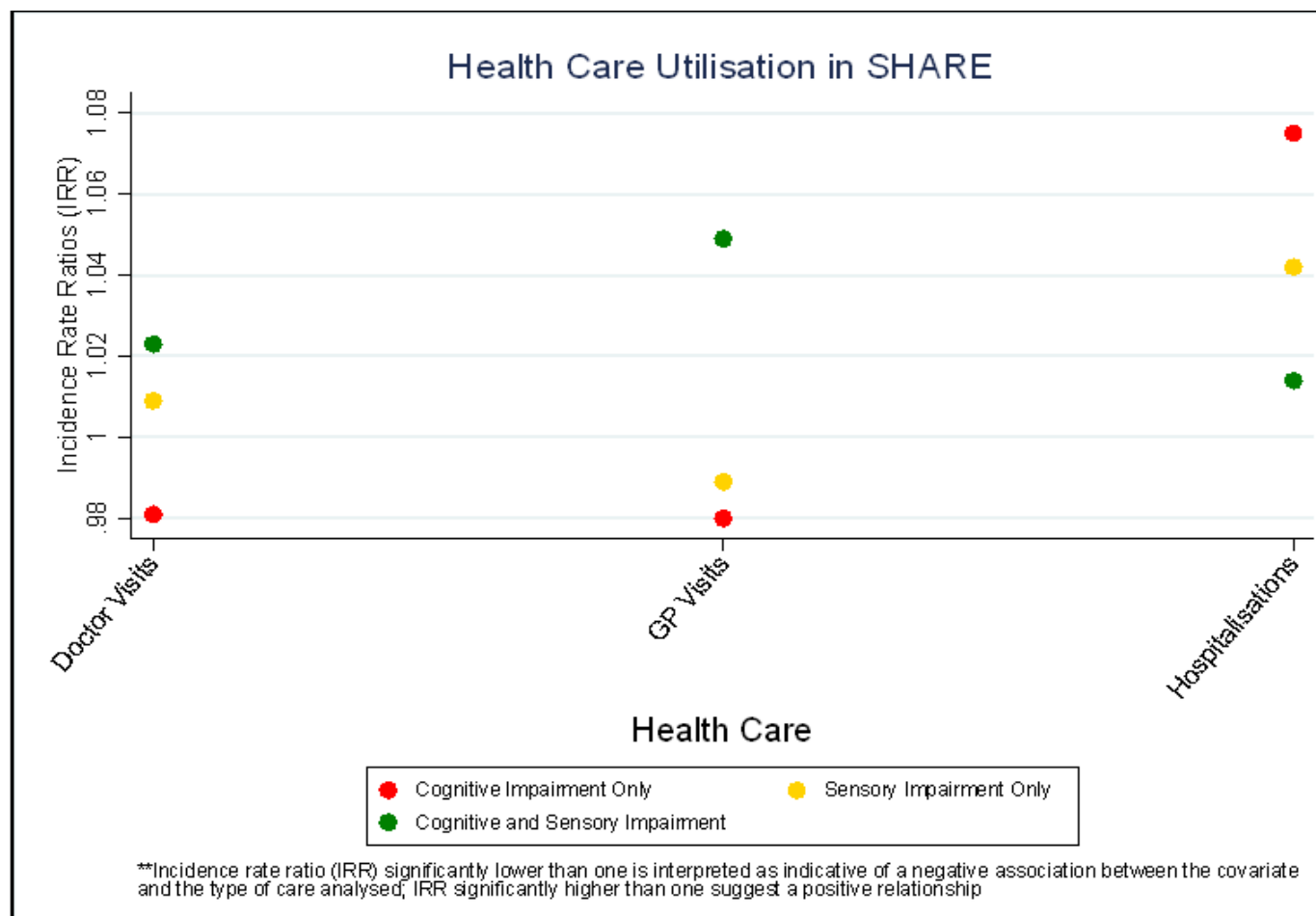
Source: Adapted from data in Kelly (2017) The shock of falling among older Americans. The Journal of the Economics of Ageing.

## Examples of data use: Kelly (2017)



Source: Adapted from data in Kelly (2017) The shock of falling among older Americans. The Journal of the Economics of Ageing.

# Examples of data use: Lugo-Palacios and Gannon (2017)



Source: Adapted from data in Lugo-Palacios and Gannon (2017) Health care utilisation amongst older adults with sensory and cognitive impairments in Europe. Health Economics Review, 7:44.

# How can we leverage the change in populations and be successful?

Embrace the rights based approach, the social model of ageing and longevity...individual *heterogeneous* pathways



Develop better understandings and language surrounding ageing and longevity... work (retirement), older people (aged!)



Realise every option has an opportunity cost and trade-off!



What would success look like?

Healthy years  
*and*  
cost-effective  
Independent living  
with sustained quality of life



## How can economics research contribute?

*'In general, does the economic research conducted on ageing match the needs of policymakers and other stakeholders?'*

*'No.'*

Quote from Feature Interview with Dr. John Beard, former Director of Ageing and the Life Course for the World Health Organisation.

*The Journal of the Economics of Ageing, 12 (2018) A1-A5*

Research partnerships are therefore key to success



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Thank you!

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- APPENDIX

# How important is GDP across countries?

Income and health care spending per person, 2009 (\$US)

