Economic Cost and Impact of Nervous System Disorders: Prevention and Treatment Strategies

Financial Incentives to Support Unmet Medical Needs for Nervous System Disorders: A Workshop
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Adelina Comas-Herrera
Personal Social Services Research Unit (PSSRU)
London School of Economics and Political Science
a.comas@lse.ac.uk
@adelinacohe

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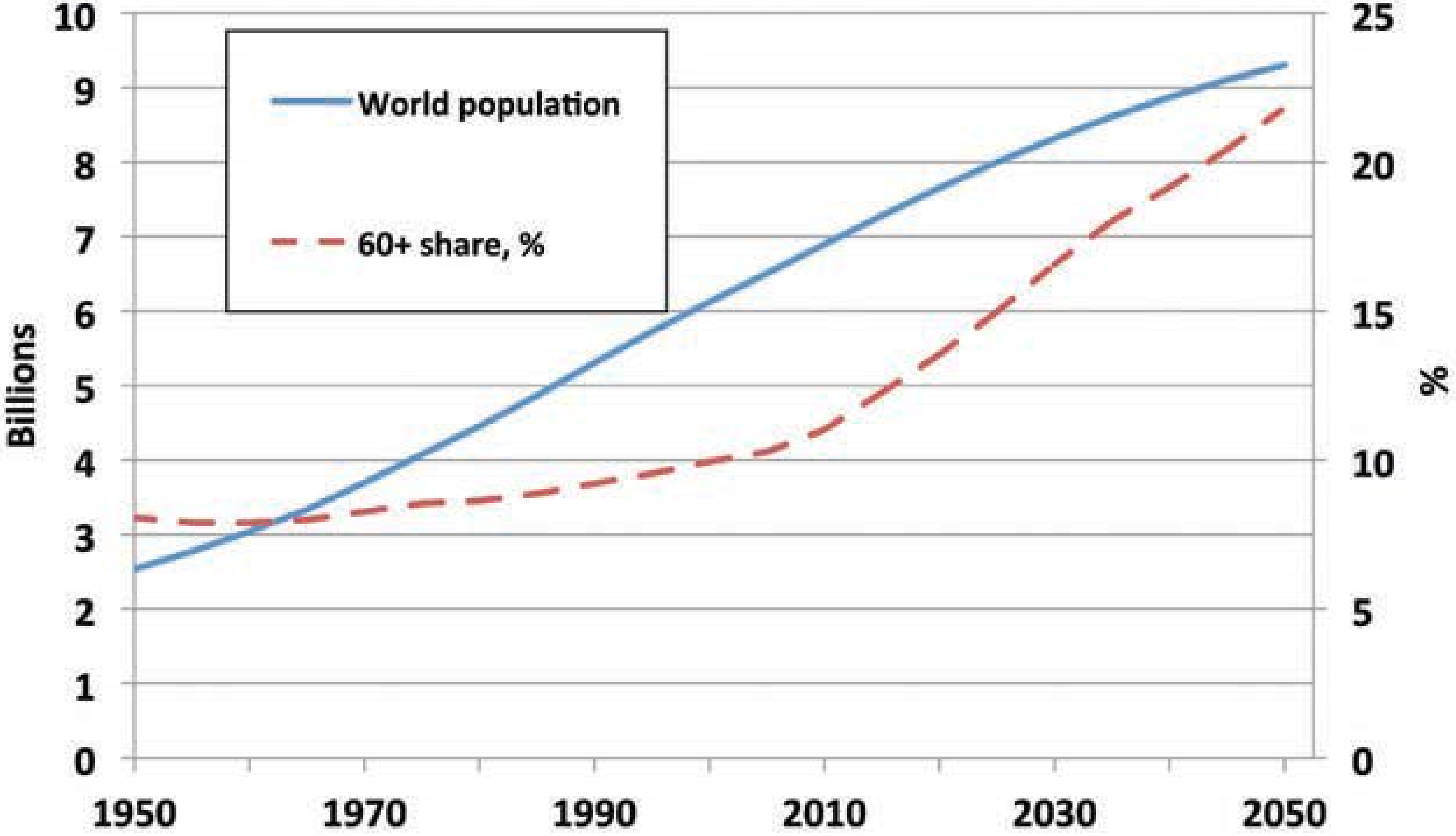
The future is by definition uncertain…

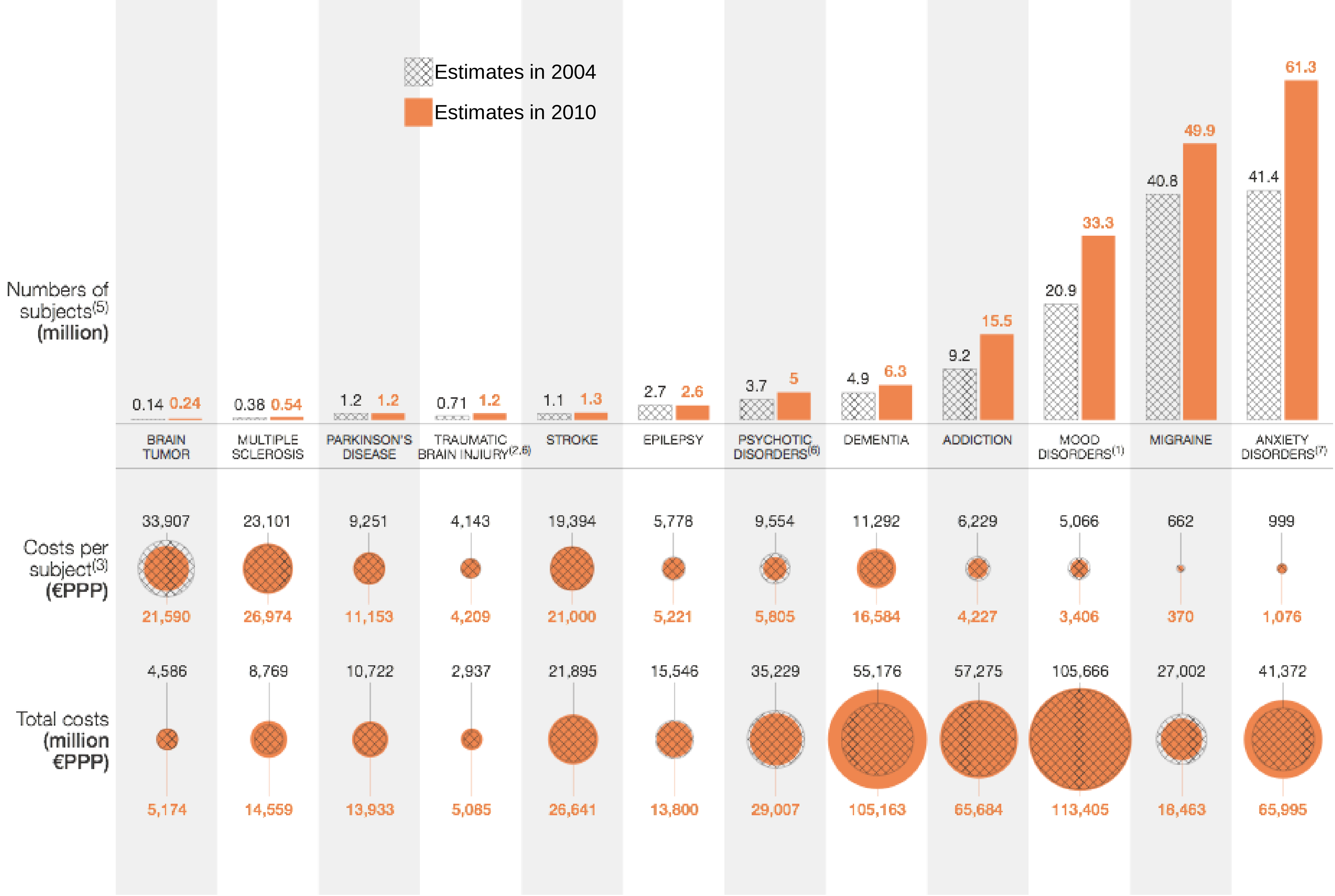
… but one thing we know is that, without new therapeutics, we’ll need to spend much more on the care of people with **dementia and other Nervous System Disorders** than we do today.

The World Population is getting larger and older



Source: United Nations Population Division, 2011, quoted in *Bloom, D.E., Cafiero, E.T., Jané-Llopis, E., Abrahams-Gessel, S., Bloom, L.R., Fathima, S., Feigl, A.B., Gaziano, T., Mowafi, M., Pandya, A., Prettner, K., Rosenberg, L., Seligman, B., Stein, A.Z., & Weinstein, C. (2011). The Global Economic Burden of Noncommunicable Diseases. Geneva: World Economic Forum.*

COST OF DISORDERS OF THE BRAIN IN EUROPE



(1) Referred to as “effective disorders” in 2005, (2) includes only incident cases in 2010, (3) weighted mean from all countries and diagnoses
(5) including also persons with zero costs, (6) excluding indirect costs, (7) excluding PTSD

(European Neuropsychopharmacology (2011) 21, 718-779)

Slide prepared by Philippe Anouyel, JPND Research

THE COSTS OF AUTISM

Lifetime cost of autism, US and UK

Lifetime cost of supporting and individual with ASD in $million:

with intellectual disability: US **2,4** UK **2.2**

without I.D.: US **1.4**, UK **1.4**

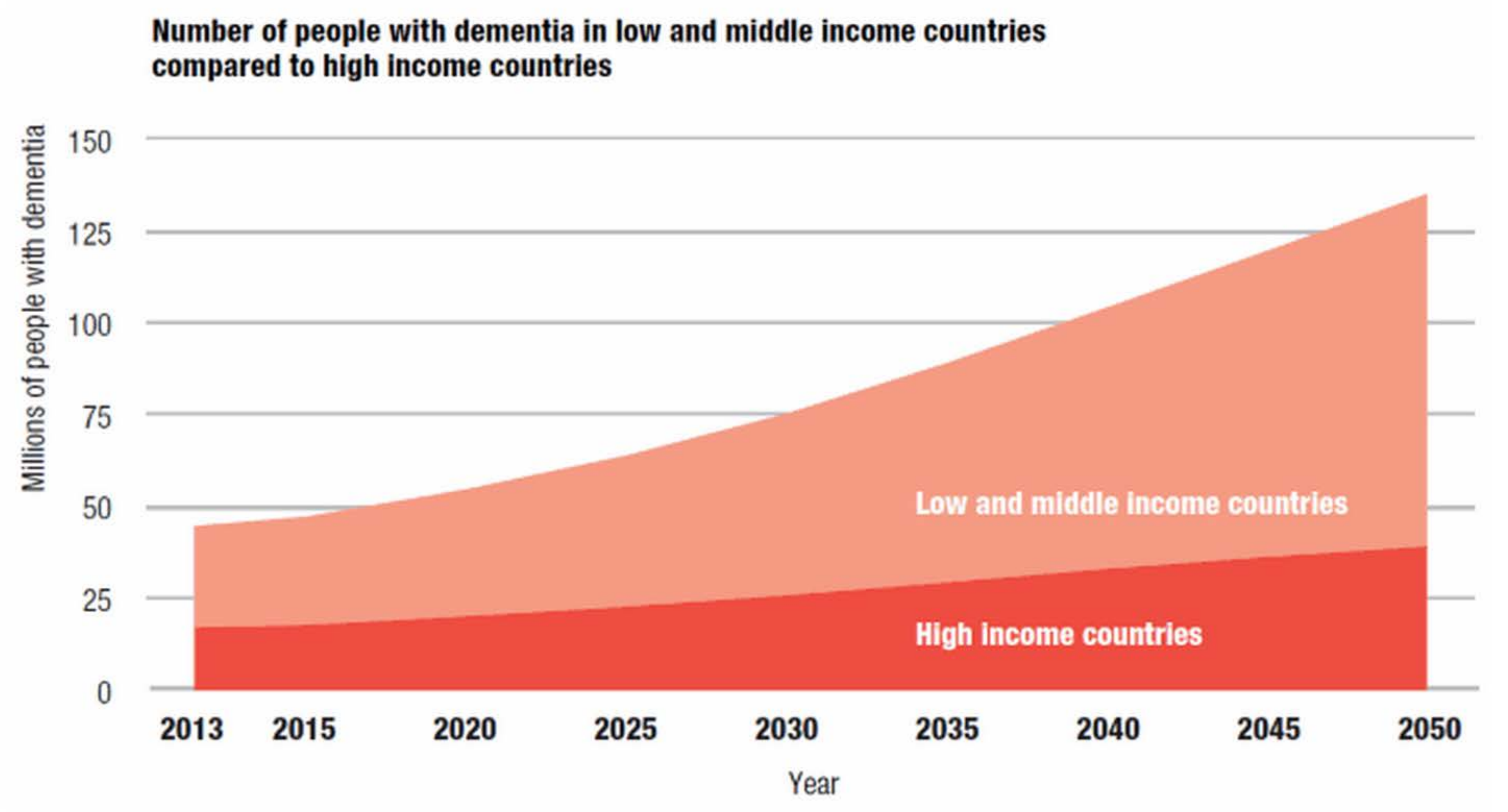
Cost composition:

	US	UK
Services	79%	56%
Lost employment	12%	42%
Caregiver costs	9%	2%

JAMAPediatr.2014;168(8):721-728.doi:10.1001/jamapediatrics.2014.210

THE COSTS OF DEMENTIA

Dementia is a global issue, growing faster in low and middle income countries



Source: Alzheimer's Disease International Policy Brief: The Global Impact of Dementia 2013-2050

Dementia costs the UK £26.3 billion a year

That's enough to pay the annual energy bill of every household in the country.


£11.6bn Unpaid care

£4.3bn Health care

£4.5bn State social care

£5.8bn Individual social care

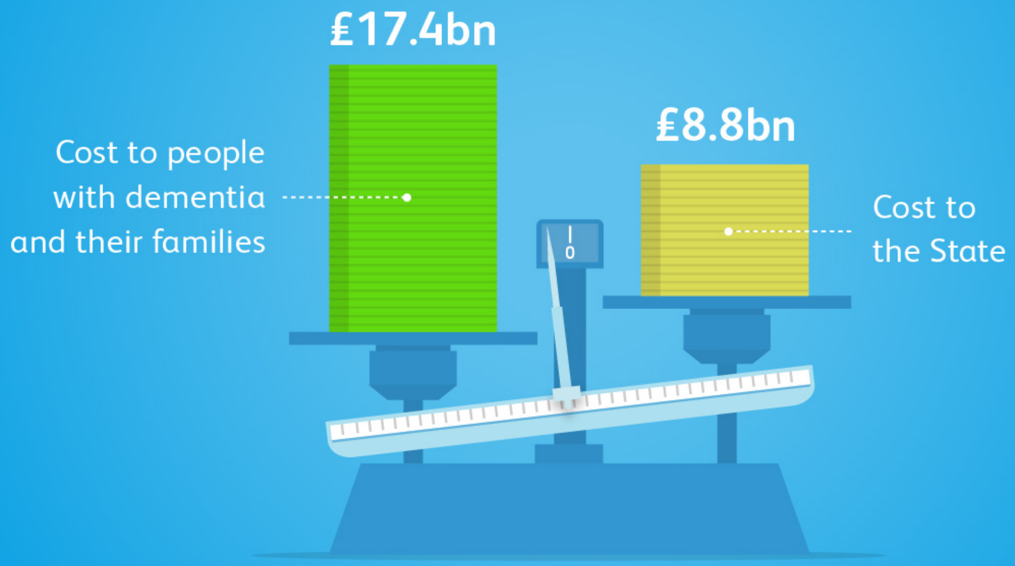
£0.1bn Other costs

Alzheimer's Society (2014a).
Dementia UK: second edition. London: Alzheimer's Society.

Alzheimer's Society
Leading the fight against dementia

Unpaid carers: overworked, under supported

Two thirds of the cost of dementia is paid by people with dementia and their families.



Alzheimer's Society (2014a).
Dementia UK: second edition. London: Alzheimer's Society.

Alzheimer's Society
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No two people with dementia are the same – services need to reflect the needs of individuals

1 out of 20

people living with dementia are under the age of 65.

Alzheimer's Society (2014a).
Dementia UK: second edition. London: Alzheimer's Society.

Alzheimer's Society
Leading the fight against dementia

No two people with dementia are the same – services need to reflect the needs of individuals

7 out of **10**

people are living with another medical condition or disability as well as dementia.

Alzheimer's Society (2014b).
Dementia 2014: Opportunity for change. London: Alzheimer's Society.

Alzheimer's Society
Leading the fight against dementia

MODEM

A comprehensive approach to modelling outcome and costs impacts of interventions for dementia

2014-2018

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Improving Dementia Care
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Research questions

1. How many people with dementia will there be from now to 2040; and what will be the costs of their treatment, care and support ***under present arrangements***?
2. How do costs and outcomes ***vary*** with characteristics and circumstances of people with dementia and carers?
3. How could ***future costs and outcomes change if evidence-based interventions*** were more widely implemented?

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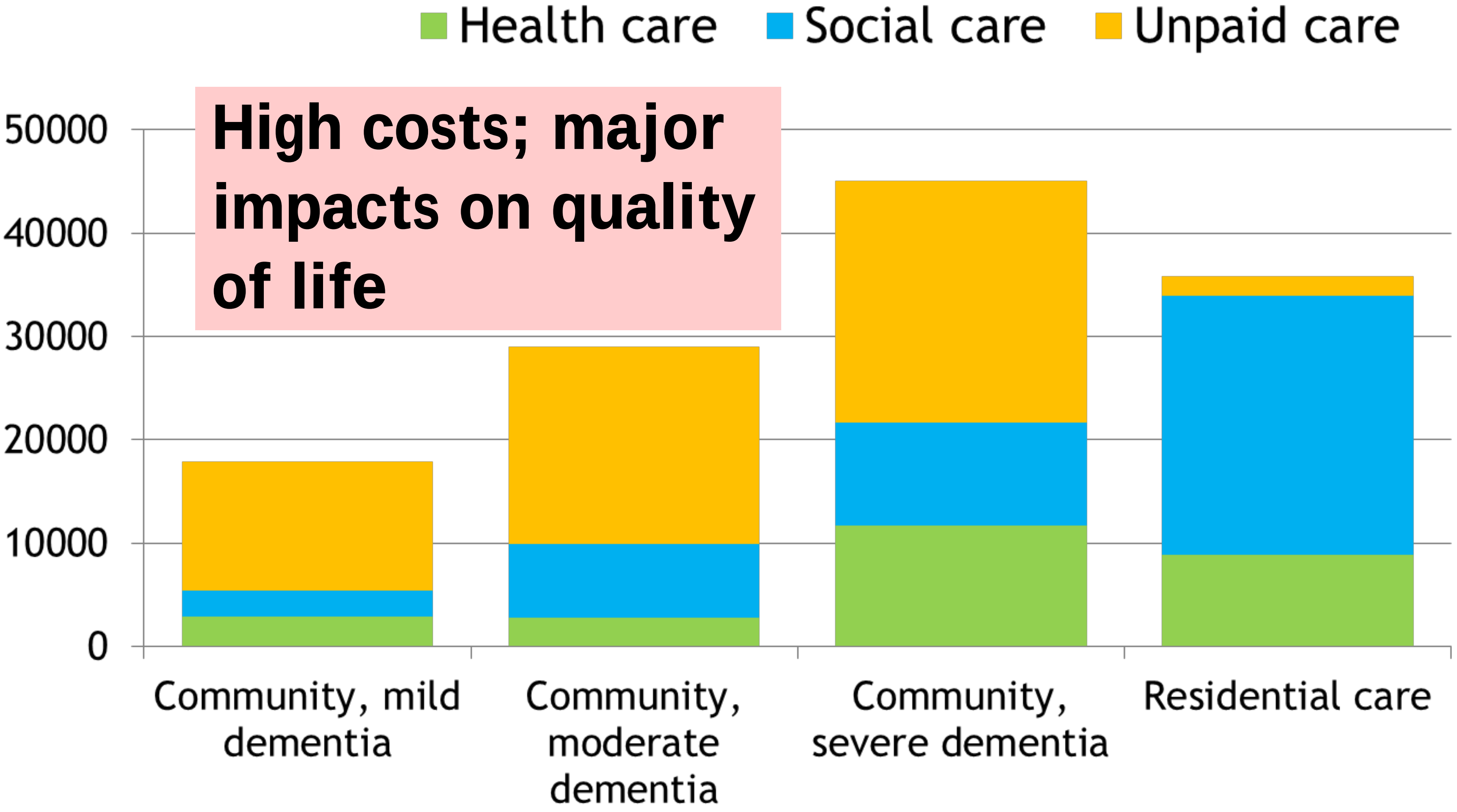
Simulation of the health and social care costs impact of a hypothetical new treatment for Alzheimer's Disease.

United Kingdom, 2020 to 2035.

The cost of dementia in the UK today – per person per year (£), 2013.



High costs; major impacts on quality of life

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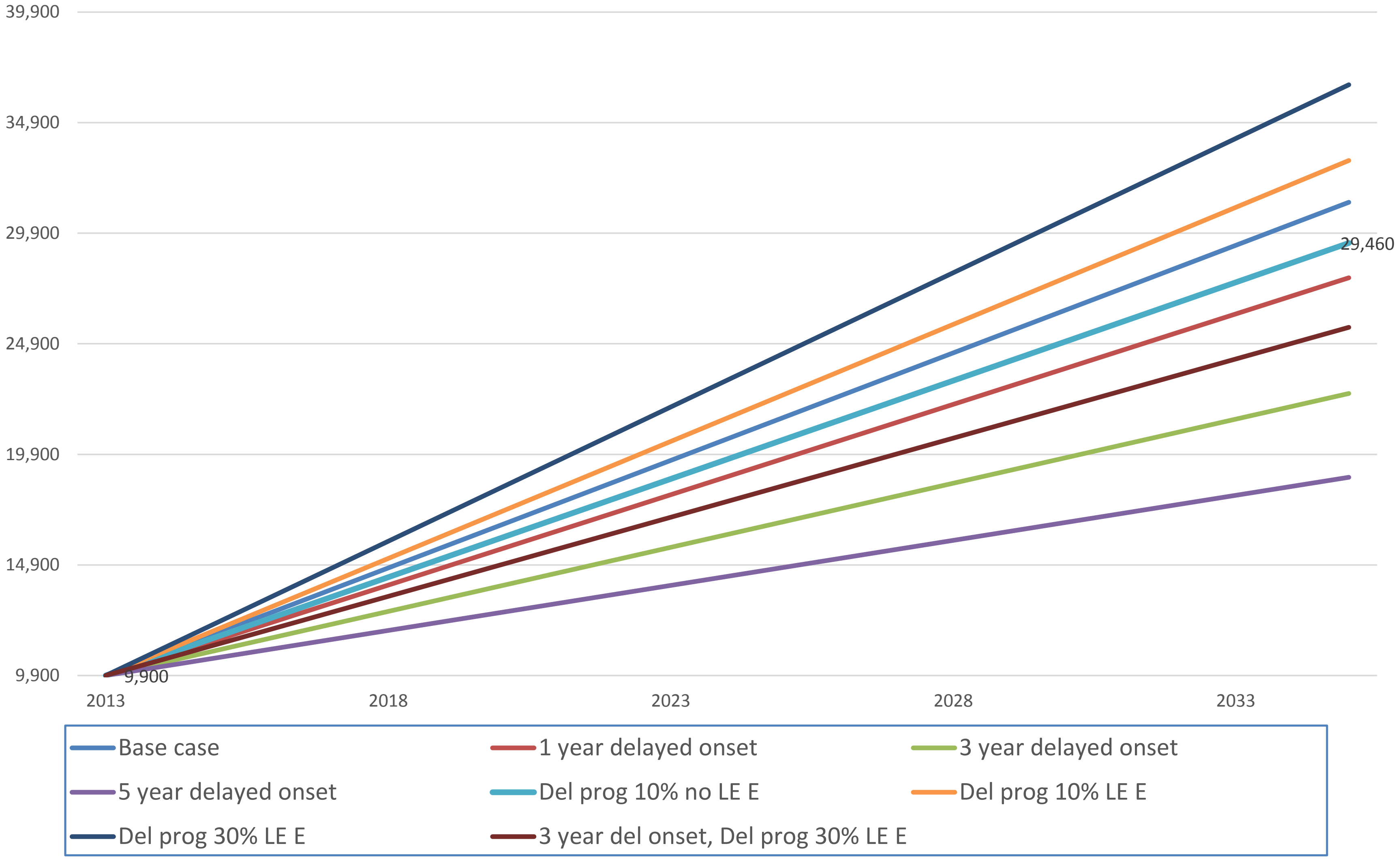
Introduction of a hypothetical new treatment for AD:

- A new drug becomes available in 2020.
- In 2020 the whole population aged 75 and over are screened (except those already diagnosed) for a biomarker that indicates high risk of developing AD.
- The new drug would be prescribed to all those who screen positive (plus those aged 65 to 74 who have already been diagnosed with the condition).
- Prescription will be for the rest of the person's life, not replacing existing symptomatic AD drugs.

What would the hypothetical new drug do? We have modelled:

- Delayed onset (by 1, 3 or 5 years).
- Slowed progression (extending the progression of the mild and moderate states by 10%, or 30%), with or without an increase in life expectancy.
- Delayed onset by 3 years and slowed progression (extending the mild and the moderate state by 30%), with and without increase in life expectancy.

Health and social care costs of AD under different assumptions about the impact of a new drug. UK, 2013-2035



Making a better case for CNS drugs: are we measuring the right outcomes to establish effectiveness?

- These diseases have a major impact on families, not just the person with the disease.
- Are the outcome measures used in clinical trials enough to make a good case for CNS treatments?
- Should trials also measure the outcomes for unpaid carers?
- Clinical trials still focus too much on “disability”, but the impact of these disease is more complex.
- In the case of dementia: unclear relationship between quality of life and severity.
  - People with dementia do not report lower quality of life when cognitive impairment increases, however proxy respondents do.
  - Carers’ own quality of life is strongly correlated to the burden of caring.

doi:10.1016/j.jval.2010.08.002

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Thank you for your attention

- http://www.modem-dementia.org.uk/
- On Twitter: @MODEMproject
- Email: a.comas@lse.ac.uk

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