EU and UK targets for healthy life expectancy – can they be reached?

Carol Jagger

Wittgenstein Centre Conference 2019
“Demographic aspects of human wellbeing”
Measuring healthy ageing


Health expectancy (HE):
• Combines information on health and mortality
• Is independent of age structure and size of population

Many measures of health = many health expectancies!
Healthy life expectancy as target for Healthy Ageing

From Newcastle. For ageing.

European Innovation Partnership on Active & Healthy Ageing

+2 Healthy Life Years by 2020

Specific Actions

- Improving prescriptions and adherence to treatment
- Better management of health: preventing falls
- Preventing functional decline & frailty
- Integrated care for chronic conditions, including telecare
- ICT solutions for independent living & active ageing
- Age-friendly cities and environments

Ageing society
We will harness the power of innovation to help meet the needs of an ageing society.

Mission: Ensure that people can enjoy at least 5 extra healthy, independent years of life by 2035, while narrowing the gap between the experience of the richest and poorest

- Is it feasible in the light of
  - the experience of the EU?
  - current trends
  - future trends
- What is the solution?
EU Healthy Life Years

Caveat
• Underlying GALI question not perfectly harmonised across MS
• But trends over time may be less susceptible to this

<table>
<thead>
<tr>
<th></th>
<th>EU28 2008</th>
<th>EU28 2017</th>
<th>DIFF</th>
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<tr>
<td><strong>HLY at birth</strong></td>
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<tr>
<td>Men</td>
<td>61.1</td>
<td>63.5</td>
<td>2.4</td>
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<tr>
<td>Women</td>
<td>62.2</td>
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<td><strong>LE at birth</strong></td>
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<tr>
<td>Men</td>
<td>76.3</td>
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<tr>
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<td>83.5</td>
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<td><strong>Gap in HLY</strong></td>
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<tr>
<td>Men</td>
<td>17.8</td>
<td>22.6</td>
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<tr>
<td>Women</td>
<td>19.6</td>
<td>21.4</td>
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<td><strong>Gap in LE</strong></td>
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<tr>
<td>Men</td>
<td>13.3</td>
<td>11.0</td>
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<tr>
<td>Women</td>
<td>7.8</td>
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Mind the gap

To reach EIP-AHA target by 2020 for all countries and reduce the inequalities between Member States:

• Requires EU27 HLY increase of 6.4 years for a 50% reduction in the gap

• Reducing the gap by 50% alone would result in all but two Member States (Malta and Sweden) increasing their HLY by two years
Change in HE at age 65:1991 to 2011

Healthy Life Expectancy (HLE)

- Men: LE65 = 4.5, HLE65 = 3.8, unHLE65 = 0.7
- Women: LE65 = 3.6, HLE65 = 3.1, unHLE65 = 0.6

Disability Free Life Expectancy (DFLE)

- Men: LE65 = 4.5, DFLE65 = 2.6, DLE65 = 1.9
- Women: LE65 = 3.6, DFLE65 = 3.1, DLE65 = 1.9

HLE increase of 43% (men) 28% (women)

DFLE increase of 25% (men) 5% (women)

Source: Jagger et al Lancet 2015
UK Healthy Life Expectancy at birth

Healthy life expectancy at birth, years lived in “Not Good” health and the proportion of life spent healthy, by sex

Between 2009-11 and 2015-17

- HLE at birth increased for men and reduced for women
- LE increased more rapidly than HLE
- For both men and women years lived in “Not Good” health has increased in relative and in absolute terms
- The gender gap (F-M) in years lived in good health has reduced (from 1.1 years to 0.5 years)
- The gender gap in years lived in “Not Good” health has increased (from 2.8 to 3.2 years)

Source: ONS
### Socio-economic inequalities in LE and HLE

<table>
<thead>
<tr>
<th></th>
<th>2012 to 2014</th>
<th>2015 to 2017</th>
<th>SII* difference</th>
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<td><em><em>SII</em> (years)</em>*</td>
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<td><strong>Males at birth</strong></td>
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<tr>
<td>LE</td>
<td>9.1</td>
<td>9.4</td>
<td><strong>0.3</strong></td>
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<td>HLE</td>
<td>18.8</td>
<td>19.1</td>
<td><strong>0.2</strong></td>
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<td><strong>Men at age 65</strong></td>
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<tr>
<td>LE</td>
<td>4.7</td>
<td>4.9</td>
<td><strong>0.2</strong></td>
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<tr>
<td>HLE</td>
<td>6.7</td>
<td>7.0</td>
<td><strong>0.4</strong></td>
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<td><strong>Females at birth</strong></td>
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<tr>
<td>LE</td>
<td>6.9</td>
<td>7.4</td>
<td><strong>0.5</strong></td>
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<td><strong>-0.3</strong></td>
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SII = Slope Index of Inequality calculated by taking the difference between the extremes of a population weighted regression line of best fit. Significant difference in SII between 2012 to 2014 and 2015 to 2017 shown in red.

**Source:** Office for National Statistics
Years with multimorbidity at age 65 by deprivation

Years spent with (positive) or without (negative) multimorbidity (MM) at age 65 by IMD 2007 quintile

Gap between Q1 and Q5 in LE without MM: 2.3 years (men) 2.7 years (women)
Gap between Q1 and Q5 in LE with MM: 1.3 years (men) 0 years (women)

Source: Chan et al IJE 2019
What is likely to happen in the future?
Population Ageing & Care Simulation

PACSim is a dynamic microsimulation model which simulates future health of set of real individuals (base population) aged 35 years and over based on:

- their baseline characteristics
- change from transition models of longitudinal data
Between 2015 and 2035
• Numbers of 65+ with 4+ diseases will double
• Most of gain in LE at age 65 between 2015 and 2035 will be in years with 4+ diseases

Source: Kingston et al Age and Ageing 2018
PACSim: change in years independent at age 65

Men

- Total life years: 3.6
- Independent: 4.2
- Low: 0.1
- Medium: -0.4
- High dependency: -0.3

Women

- Total life years: 2.9
- Independent: 0.8
- Low: 1.3
- Medium: 0.7
- High dependency: 0.7

Independent free LE increase of 38% (men) and 8% (women)

Source: Kingston et al Lancet Public Health 2018
The solution

• Most years are spent independent or with low dependency – aim to stay here longer to reduce time spent more dependent?

Source: Kingston et al Lancet Public Health 2018
Not all risk factors have the desired effect on HLE

- Not smoking increases DFLE but does not reduce LE with disability (LWD)
- Obesity increases LWD but has little effect on LE overall

Source: Majer et al Obesity 2012
Can the UK reach the target of HLE+5?

- EU appears to be close to reaching its target of HLY+2 by 2020
  - But inequalities between countries has increased
- For UK change 1991 to 2011 in HLE at age 65 suggest target could be reached and for male DFLE at age 65 but not for women
  - But more recent changes from 2009-11 to 2015-17 in HLE at birth show small increases for men (0.4 year) but reduction for women
- Inequalities in HLE and DFLE both geographically and by socio-economic status are large
  - Inequalities in HLE at birth and age 65 have seen only small non-significant reductions and in women only – inequalities in LE have increased recently
- A focus on prevention of disease in early adulthood and reduction in the disabling effects in mid and later life are needed
• REVES is the French acronym for the International Network on Health Expectancy and the Disability Process
• Holds an annual meeting – next meeting Hangzhou, China May 26-28, 2020
• An update of the HE book due 2020
Acknowledgements

• Colleagues in Newcastle University Institute of Health & Society
• Australian Centre of Excellence in Population Ageing Research (CEPAR)

MODEM
modelling outcome and cost impacts of interventions for dementia
Thank you