Healthy Life Expectancy and quality of life in old age

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Outline

• Challenges of an ageing population
• Quality of life in very old age
  – frailty
  – level of care needed
• Inequalities in Healthy Life Expectancy
  – local areas in UK
  – ethnic groups
  – EU countries
• What might the future hold?
Challenges

- 51% ↑ in 65+ 2010-30
- 101% ↑ in 85+ 2010-30
- 10.7m can expect inadequate retirement incomes
- 50+% ↑ in people with 3 or more long-term conditions 2008-18
- 80% ↑ in 65+ with dementia 2010-30

Main barriers to improving health

- Income inequalities
- Early onset of chronic disease
- Comorbidity at older ages
- Growth in dementia
- Growth in mental illness

*Les Mayhew (2010)*
The clock is ticking…. 

- Life expectancy in the UK is increasing at the rate of two years every decade, or around five hours each day
- Historically LE main indicator of population health
- Health expectancies combine quality and quantity of life and address whether extra years of life are
  - healthy ones (compression of morbidity)
  - unhealthy ones (expansion of morbidity)

“Increased longevity without quality of life is an empty prize. Health expectancy is more important than life expectancy.”

Dr Hiroshi Nakajima, Director-General WHO 1997

Health expectancies
- More info in Longevity Bulletin Issue 4
Why focus on very old ages?

• Population aged 85+ fastest growing section
• Their health and care needs impact not only on health services but on their families
  – Next generation down are the ones who will care but who are being required to work longer
• The health profiles of the very old are different – much higher prevalence of
  – Dementia
  – Frailty
  – Multimorbidity
Prevalence of dementia doubles every 5 year increase in age


Frailty-free life expectancy - methods

- SHARE wave 4 (2010-11)
  - Austria, Belgium, Czech Republic, Denmark, Estonia, France, Germany, Hungary, Italy, Netherlands, Poland, Portugal, Slovenia, Spain, Sweden

- Sullivan’s method
  - Life table for each country and sex from www.eurohex.eu

- Combined SHARE Frailty Index (SHARE-FI) and Global Activity Limitation Indicator (GALI) to create 4 states
Frailty-free life expectancy

- At all ages, women spend more absolute years and greater proportion of remaining life pre-frail, frail and with severe disability
- Relatively short time spent frail and not severely disabled
- Short window of opportunity pre-frail for prevention
- This does not tell us how much care is needed

Source: SHARE wave 4

Newcastle 85+ Study

A 5-year prospective study of 1042 individuals born in 1921 of the biological, clinical and psychosocial factors associated with healthy ageing
Multimorbidity is the norm

Source: Newcastle 85+ Study: Collerton et al (2009)

Interval-need dependency*

• Critical-interval dependent (requires 24-hour care)
  – SMMSE < 10/ severe or profound urinary incontinence with inability to
dress or undress without help/ unable without help to perform:toilet/chair/feeding

• Short-interval dependent (requires help at regular times daily)
  – Unable without help to perform : bed/dressing and undressing/ hot
  meal/medication/washing face and hands

• Long-interval dependent (requires help less than daily)
  – Unable without help to perform: washing all over/shopping/light
  housework/heavy housework/managing money/toenails

• Independent

Source: Isaacs and Neville (1975)
Projected numbers in E&W aged 80+ by interval-need dependency, 2010-2030

Source: Jagger et al (2010)

Years with interval-need dependency from age 85

- Multistate analysis of baseline and follow-up at 1.5, 3 and 5 years
- Assumption of no recovery from help daily or 24-hr care
- Most years spent needing help < daily
Inequalities in Healthy Life Expectancy

Male LE at birth by local area, 1991

Life expectancy (LE) & Disability free life expectancy (DFLE) across local areas in E&W

1991 (top) and 2001 (bottom) Women (left) and Men (right)

Change in LE vs DFLE between 1991 and 2001 UK LAs

Ideal for compression of disability

6 June 2013
Inequalities within Newcastle

Expected age at disability onset for 55 yr old

Courtesy Prof Peter Gore/Prof Carol Jagger/ONS

6 June 2013

LE and DFLE at birth by ethnic group, 2001

Differences compared to White British

LE and DFLE at birth by ethnic group, 2001

Differences compared to White British
Ethnic differences in DFLE

• Variation in DFLE at birth: men 12.7 years, women 13.9 years
  – double that of life expectancy
  – greater than variation by socioeconomic status
• DFLE at birth highest for Chinese men & women
• Lowest DFLE in Bangladeshi men & Pakistani women
• Over half of ethnic groups (men:10, women:9) significantly lower DFLE than White British
• Indian women LE similar to White British, but low DFLE

Healthy life years (HLY)

• EU committed to improving the health of its population
• Preferred measure is Healthy Life Years (HLY) measuring remaining years free of activity limitation
• HLY are based on the Global Activity Limitation Indicator (GALI) question in the EU Statistics on Income and Living Conditions (SILC) survey
• In 2004 Healthy Life Years (HLY) added to the list of EU structural indicators

“Increasing healthy life years will be a crucial factor in achieving this objective (of modernising social protection systems and strengthening pensions and healthcare).”

(2005 Spring Council)
LE and HLY at 65 by gender, 2008-10 average

- EU27 LE
  - 6.5 yrs (M)
  - 20.1 yrs (F)
- EU27 HLY
  - 8.4 yrs (M)
  - 8.6 yrs (F)
- Range LE
  - 5.5 yrs (M)
  - 6.3 yrs (F)
- Range HLY
  - 10.3 yrs (M)
  - 11.9 yrs (F)

Source: OECD Health at a Glance (2012)

Potential to increase working life – HLY at 50, 2005

Source: EHLEIS
What might the future hold?

Monitoring population ageing

- Main goal for the European Active and Healthy Ageing Partnership (EIPon-AHA) is to increase HLY at birth by 2 years over the next 10 years (2.4 months per year)
- If current trends (2005-10) continue will EIPon-AHA target be met?
- Will target be met by individual Member States?
HLY projections 2010-2020 men, sample of countries

Projected increase in HLY (years)

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<th>Country</th>
<th>LE increase</th>
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<th>Scenario 3</th>
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</table>

Scenario 1: current trends in %HLY/LE continue
Scenario 2: HLY gap closed in 20 years (50% reduction of gap in 10 years)
Scenario 3: As Scenario 2 + each MS increase of 2 HLY over decade
Scenario 4: As Scenario 2 + each MS has no increase in UnHLY (LE-HLY)

What does the future hold for Europe?

• If current trends continue
  – 9 countries will reach EIPon-AHA target of an increase in 2 HLY over the next decade
  – Countries reaching target include Eastern European countries
  – Romania unlikely to reach target as HLY decreasing
  – EU27 overall will not reach EIPon-AHA target
  – Inequity between countries will increase

• Improving the health of European people will need action on many fronts and measures to address **level** and **distribution** of HLY
Challenges and solutions

- Doubling of numbers aged 85+
- Growing numbers of older people from ethnic minorities with generally worse DFLE
- Inequality in healthy life expectancy seems to be increasing across UK
- But LE is still increasing!

The Government should help people be better informed about healthy life expectancies, pension projections, the likelihood of needing social care and its cost, and how best to use their own assets, so that individuals and families can analyse their own situations and make their own informed choices.

Acknowledgements

- Newcastle 85+ Study (see www.ncl.ac.uk/iah/research/areas/biogerontology/85plus/ for more details of study and publications
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The views expressed in this presentation are those of the presenter.