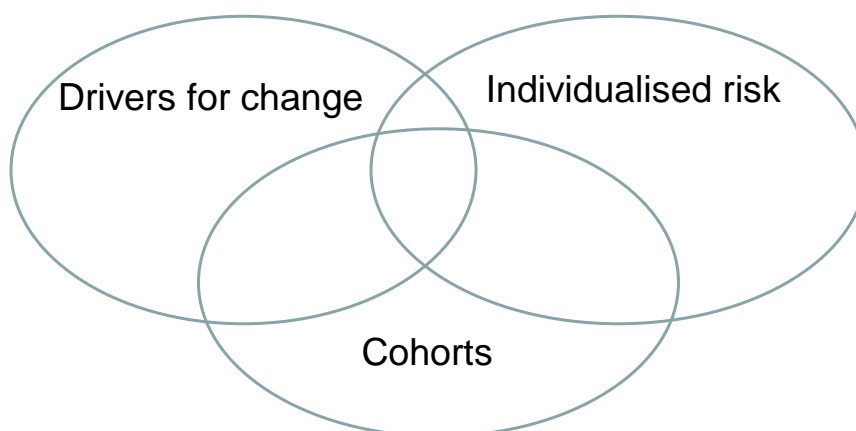


## Introduction to Cohorts theme

Carol Jagger

### Conference themes



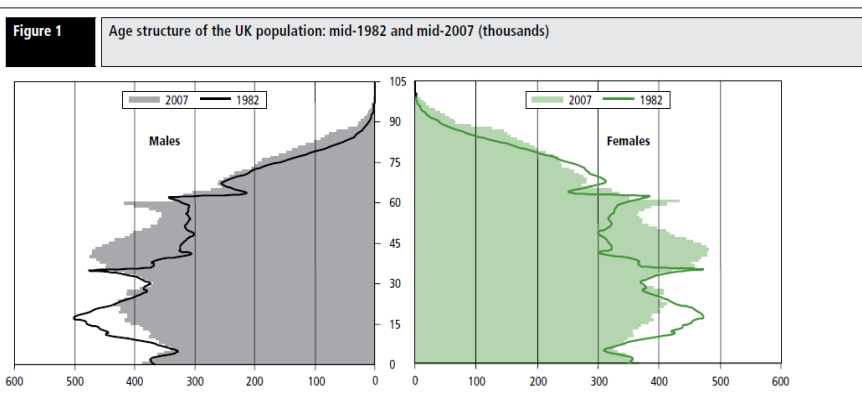
## Cohorts theme

### Key questions to be explored:

- Are new elderly different to previous?
  - How do successive cohorts differ and why?
- What does this mean for the future?

## ARE NEW ELDERLY DIFFERENT TO PREVIOUS?

## Changing population structure



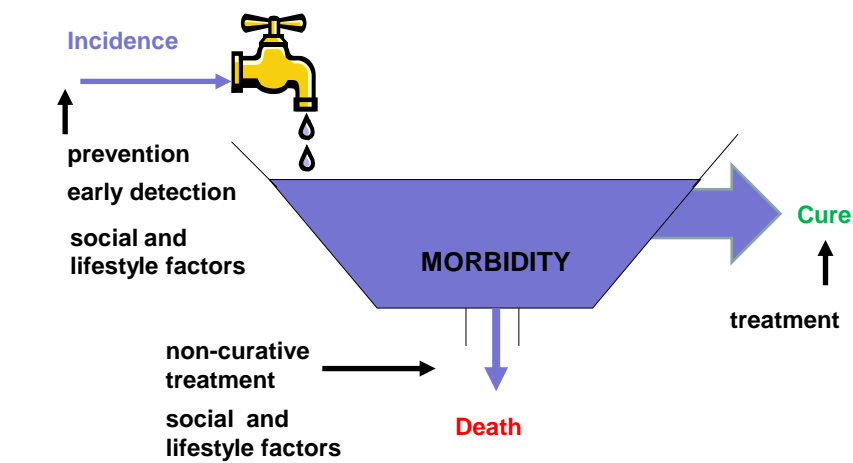
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## Changing experiences

- **Medical advances**
  - Welfare state
  - Immunisation
  - Medical treatments
- **Social factors**
  - Education
  - Housing
  - Environment
  - Diet and nutrition in early life
- **Lifestyle**
  - Smoking
  - Alcohol
  - Obesity
  - Diet

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## What affects morbidity and mortality?

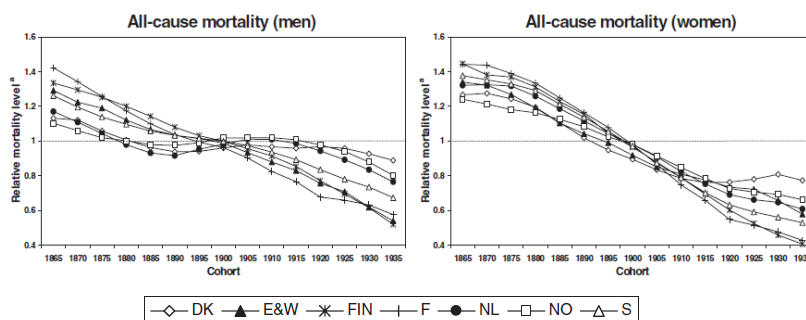


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## HOW DO SUCCESSIVE COHORTS DIFFER AND WHY?

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## Cohort patterns in mortality



Source: Janssen and Kunst, International Journal of Epidemiology 2005;34:1149–1159

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## Cohort patterns in mortality

### Key messages

- Cohort patterns identified in all 7 European countries
  - both the sexes and virtually all causes of death.
- Parallel unfavourable trends observed among Danish, Dutch, and Norwegian men born between 1890 and 1915
  - for all-cause mortality
  - mortality from lung cancer, COPD, IHD
- Mortality increased among cohorts born before 1890, and decreased strongly thereafter
  - for infectious diseases, stomach cancer, and cerebrovascular diseases.
- May be result of childhood living conditions and smoking in adulthood.

Source: Janssen and Kunst, International Journal of Epidemiology 2005;34:1149–1159

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# Cohort patterns in morbidity

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## Getting Older—Feeling Younger: The Changing Health Profile of the Elderly

CAROL JAGGER, MICHAEL CLARKE AND SUSAN J CLARKE\*

Jagger C (Department of Community Health, University of Leicester, Clinical Sciences Building, Leicester Royal Infirmary, PO Box 65, Leicester LE2 7LX, UK), Clarke M and Clarke S J. Getting older—feeling younger: The changing health profile of the elderly. *International Journal of Epidemiology* 1991; 20: 234–238.

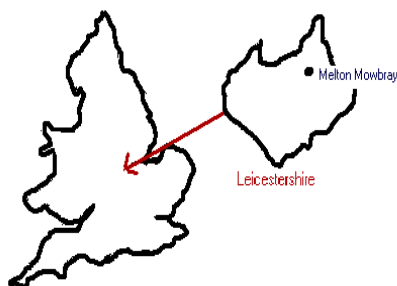
In 1981 a survey was undertaken of the physical and mental health and social status of all those aged 75 years and over belonging to a large general practice which alone served the town of Melton Mowbray and its surrounding area. Seven years later the survey was repeated. This elderly population had increased by almost 30% in number between the two surveys despite a relatively stable practice population over this time period.

After adjustment for the different age and sex distributions of the two survey populations, significant increases in independence levels were found over the time period for: getting in and out of a chair and bed, dressing, bathing and getting to and from the toilet. No differences were found for mobility around the home, feeding or continence of urine or faeces. A higher prevalence of cognitive impairment was found in 1988 than in 1981, 7.0% compared with 4.5%, but this appeared to be due to the larger number of unclassifiable respondents in 1981.

A re-analysis of the data, excluding those living in the area less than five years confirmed that the differences found in health over time were not due to a group of elderly migrating into the area. This study provides evidence that the elderly of today appear fitter than previous cohorts of elderly. Service planners will need to take this into account if sensible provision of resources for this age group are to be made.

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## Melton Mowbray, Leicestershire



### Melton Mowbray

Market town in NE Leicestershire. Popn: town 25,000 district: 46,000

Served mainly by one large general practice of 16 doctors with a list size of 32,500

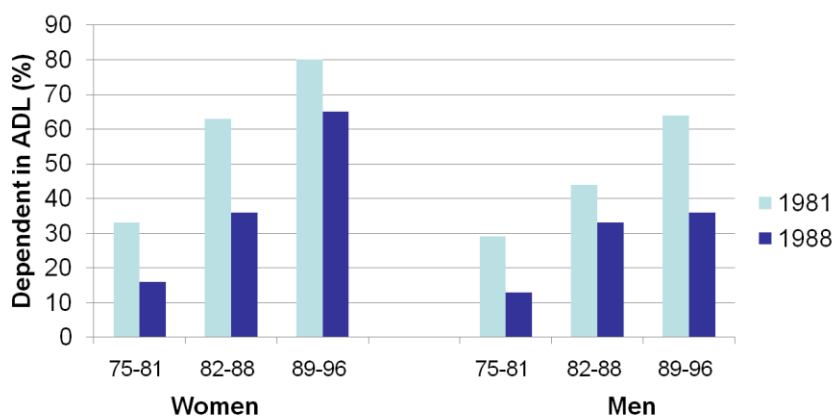
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## Are newer cohorts healthier?

Cohort	Birth years	Age 1981 (n)	Age 1988 (n)
IV	1906-1912	68-74 (-)	75-81 (1027)
III	1899-1905	75-81 (823)	82-88 (462)
II	1892-1898	82-88 (284)	89-95 (77)
I	1885-1891	89-95 (88)	96-102 (13)

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## Are newer cohorts healthier - disability?



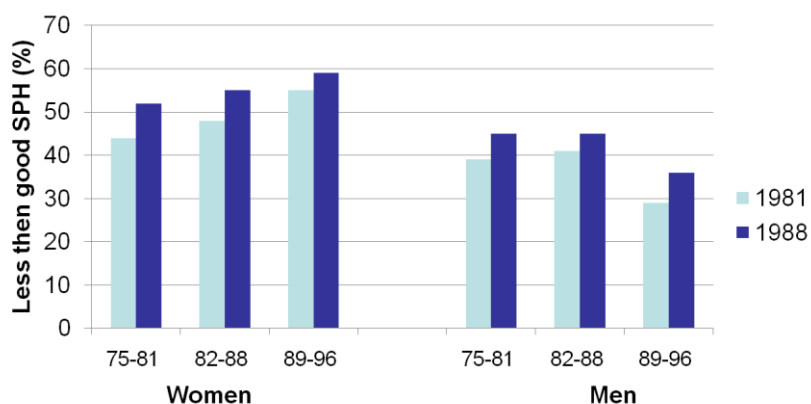
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## Cohort differences in ADL dependence

Newer cohorts were significantly **less** dependent in :

- getting in and out of bed
- getting in and out of a chair
- dressing
- toileting
- bathing

## Self perceived health





## Cohort changes in health

- Newer cohorts appeared to be
  - slightly **less** dependent in ADL than earlier cohorts
  - **more** likely to report less than good self-perceived health
- **Not** just due to increased expectations of health
  - perceived health still as strong a predictor of subsequent mortality
- May indicate increased prevalence of milder disability indexed by self-perceived health but missed by ADL dependency

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## Cohort patterns in morbidity

**BMC Public Health**

BioMed Central

Research article

Open Access

### Cohort differences in disease and disability in the young-old: findings from the MRC Cognitive Function and Ageing Study (MRC-CFAS)

Carol Jagger\*<sup>1</sup>, Ruth J Matthews<sup>1</sup>, Fiona E Matthews<sup>2</sup>, Nicola A Spiers<sup>1</sup>, Judith Nickson<sup>3</sup>, Eugene S Paykel<sup>4</sup>, Felicia A Huppert<sup>4</sup>, Carol Brayne<sup>3</sup> and the Medical Research Council Cognitive Function and Ageing Study (MRC-CFAS)

Address: <sup>1</sup>Leicester Nuffield Research Unit, Department of Health Sciences, University of Leicester, UK; <sup>2</sup>MRC Biostatistics Unit, Institute of Public Health, University of Cambridge, UK; <sup>3</sup>Department of Public Health and Primary Care, Institute of Public Health, Cambridge, UK and <sup>4</sup>Department of Psychiatry, University of Cambridge, Cambridge, UK

Email: Carol Jagger\* - [cj@leicester.ac.uk](mailto:cj@leicester.ac.uk); Ruth J Matthews - [rj14@leicester.ac.uk](mailto:rj14@leicester.ac.uk); Fiona E Matthews - [fiona.matthews@mrc-bsu.cam.ac.uk](mailto:fiona.matthews@mrc-bsu.cam.ac.uk); Nicola A Spiers - [nass@le.ac.uk](mailto:nass@le.ac.uk); Judith Nickson - [cj@leicester.ac.uk](mailto:cj@leicester.ac.uk); Eugene S Paykel - [esp10@cam.ac.uk](mailto:esp10@cam.ac.uk); Felicia A Huppert - [faht2@cam.ac.uk](mailto:faht2@cam.ac.uk); Carol Brayne - [cb105@medschl.cam.ac.uk](mailto:cb105@medschl.cam.ac.uk); the Medical Research Council Cognitive Function and Ageing Study (MRC-CFAS) - [lrb22@medschl.cam.ac.uk](mailto:lrb22@medschl.cam.ac.uk)

\* Corresponding author

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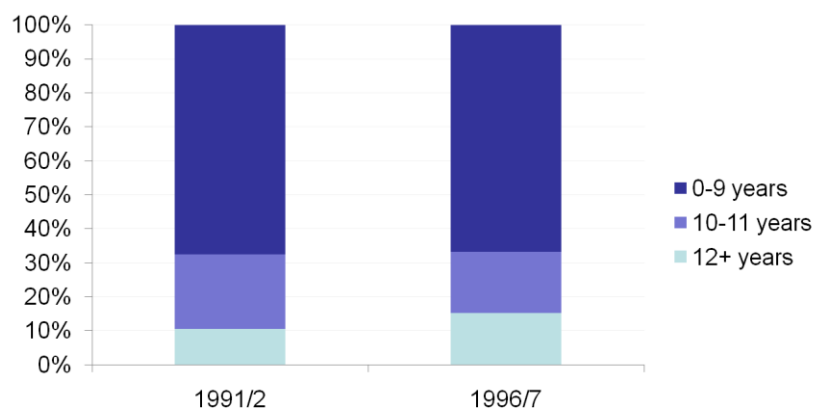
## MRC CFAS cohort substudy

- Ely (East Cambridgeshire) centre
- random sample aged 65-69 years in 1991/2 and 1996/7
- includes those in institutions
- death information from National Death Registry



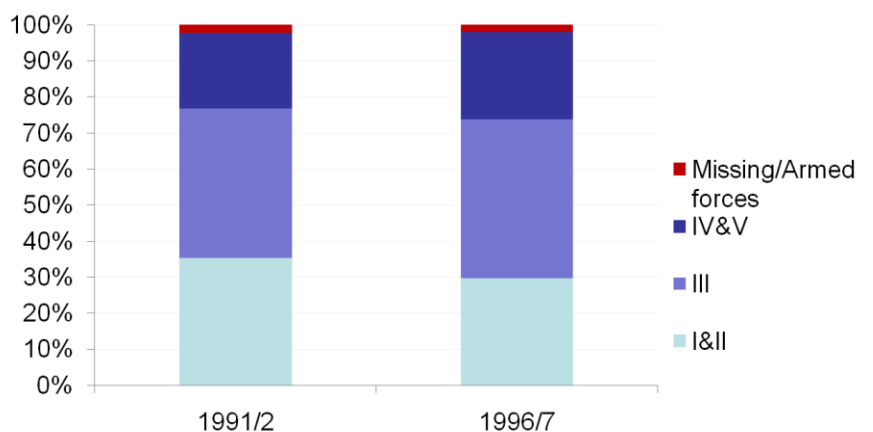
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## Education



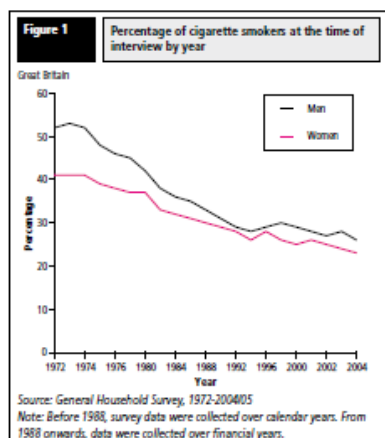
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## Social class



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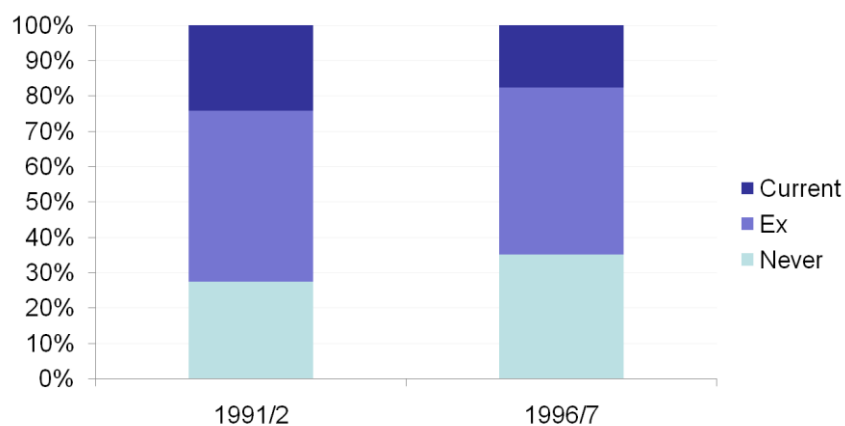
## Cohort differences in smoking - GB



Source: Davy, Health Statistics Quarterly 2006; 32:35-41

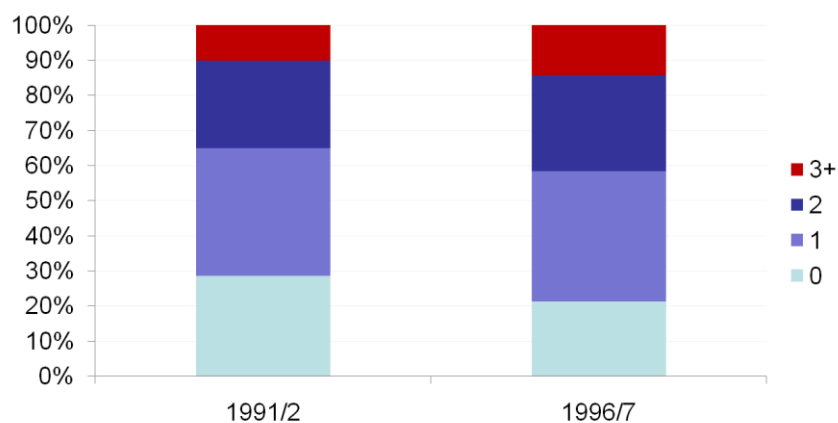
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## Smoking



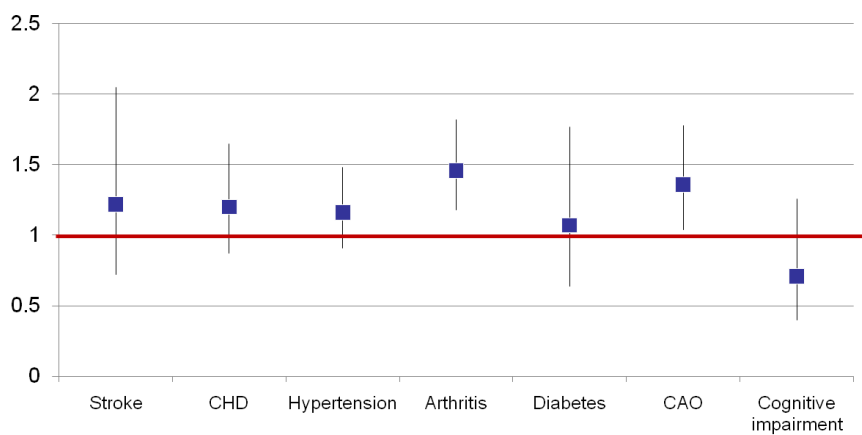
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## Comorbidity – number of diseases



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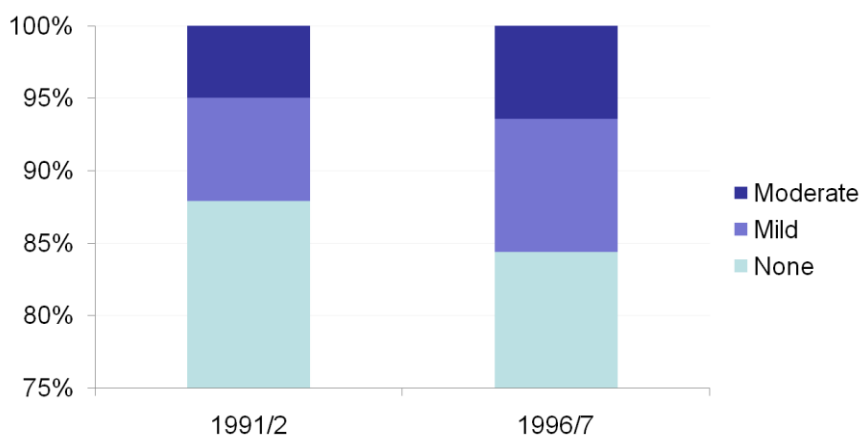
## Individual diseases



Odds ratio 1996/7 compared to 1991/2 adjusted for gender and age

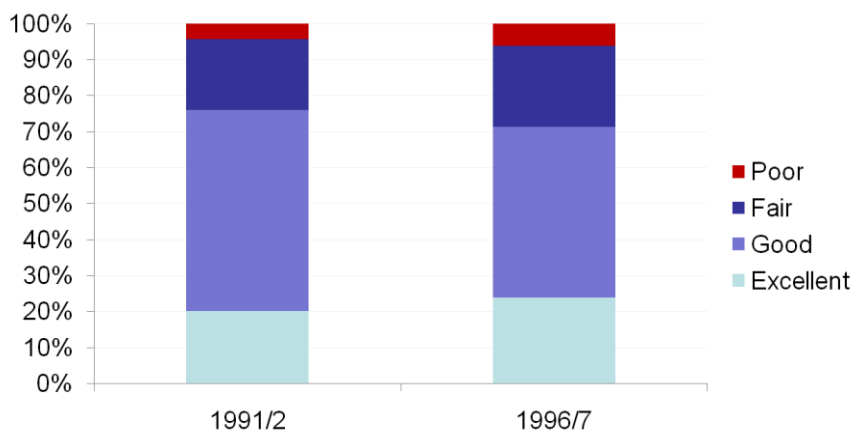
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## Disability



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## Self-Rated Health



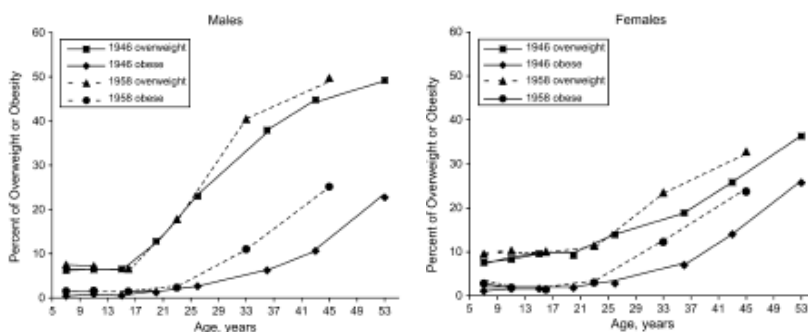
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## Living longer, feeling worse?

- No evidence of morbidity compression
- Any trend is towards worse health in the more recent cohort, despite improved survival
- Though limited in geography and timescale, this study supports concern that increased life expectancy is accompanied by declines in self-reported health

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## Cohort differences in risk factors



Source: Li et al, American Journal of Epidemiology 2008;168:1008–1015

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## WHAT DOES THIS MEAN FOR THE FUTURE?

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## Future

- “Golden” cohort now approaching their 80s
- Evidence that
  - old-old have less disability than previous cohorts
  - young-old have worse health than previous cohorts
  - risk factor profile worse in more recent young cohorts
- Ethnic minorities will form greater proportion of older population in the future
- Picture still incomplete!

## Cohort theme

### Key questions to be explored:

- Are new elderly different to previous? - MORTALITY
  - Mike Murphy (plenary)
  - Alison O’Connell (B2)
  - Stephen Baxter (F2)



## Cohort theme

### Key questions to be explored:

- Are new elderly different to previous? - MORBIDITY
  - Kaare Christensen (plenary)
  - Andrew Kingston (poster)
- What does this mean for the future?
  - Andrew Cairns (A2)
  - David Forfar (C2)

## Introduction to Cohorts theme

Carol Jagger