Socio-demographics introduction
Brian Ridsdale and Adrian Gallop
What can we learn from socio-demographics?

International and national data point to the same conclusions

• Social class and other demographics matter throughout the range
1974  14.0  12.6  11.6

Age 65 expectation of life
Age 65 expectation of life

2004  18.3  
1974  14.0  

17.4  
12.6  

14.1  
11.6
What can we learn from socio-demographics?

International and national data point to the same conclusions

• social class and other demographics matter throughout the range
  – it is not just an issue of poverty
• there is a gradient by social class and other factors
• class, income, education, ethnicity and postcode are all differentiators
Postcode-based reserving

Example: Towers Watson Postcode Mortality Tool

- Map shows combined effect of all four postcode clustering factors used (males, all ages)
- Map summary at postcode sector level, aggregating the postcode level results
- Red areas have average mortality 200% that of blue

Source: Matthew Edwards, Towers Watson
Socio-demographic risk factors for mortality worldwide

are related to:
• living conditions
• relative poverty
• social class behaviours
• smoking and drinking

WHO and individual countries are aiming to drive change

Mortality improvements may depend more on social change than medical advances
Leading risk factors worldwide

- high blood pressure
- tobacco use
- alcohol abuse
- high cholesterol
- high blood glucose
- physical inactivity
- overweight and obesity

quite a lot of interaction here
How do actuaries use the information?

Making the best of the data that is available with proxies for unobtainable risk factors: eg

- Traditionally –
  - Blood tests for smoking and alcohol
  - Height and weight for obesity
  - Benefit amount for wealth

- Recently
  - Postcode for socio-economic status
How do actuaries use the information?

Life assurance: a few examples
- Underwriting and reserving by gender, smoker category, age and rating class
- USA - preferred life underwriting
- UK - postcode underwriting and reserving

Annuities and pensions: a few examples
- UK: substandard annuity underwriting
- UK: postcode-based annuity and pensions reserving
Where else is this of interest?

Medicine
Health policy
Social policy
Population studies
How can we get best value from this symposium?

Interaction

• Internationally
• Inter-professional
• Practitioners and researchers

Outcomes

• Learning and personal development
• Contribution to discussion and knowledge
• Highlighting future areas for research and development
Socio-demographic contributions

Mortality trends
• Europe
• UK
• Disease-based
• Inequalities
Plenary 2: Mortality trends in recent decades in Eastern and Western Europe: contrasts, correlates and consequences

Professor Michael Murphy, London School of Economics
A1: Overview of known patterns and trends in longevity
Myer Glickman, Office for National Statistics
B1: Examining disease based incidence and mortality rates within the UK by socioeconomic and smoking status: using a Markov-Chain model and data from the General Practice Research Database

Hande Love, Legal & General

Madhavi Bajekal, University College London
D1: From fast food to fast runners: changing mix, clouding conclusions

Greg Becker and Garth Lane, RGA UK
Questions or comments?
Socio-demographics
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