



## **UWL REPOSITORY**

**repository.uwl.ac.uk**

Ageing and public health challenges in the age of globalization

Khan, Hafiz T.A. ORCID logo ORCID: <https://orcid.org/0000-0002-1817-3730> (2022) Ageing and public health challenges in the age of globalization. In: Gerontological workshop, 3 June 2022, Akdeniz University, Turkey. (Unpublished)

**This is the Presentation of the final output.**

**UWL repository link:** <https://repository.uwl.ac.uk/id/eprint/9153/>

**Alternative formats:** If you require this document in an alternative format, please contact: [open.research@uwl.ac.uk](mailto:open.research@uwl.ac.uk)

### **Copyright:**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

**Take down policy:** If you believe that this document breaches copyright, please contact us at [open.research@uwl.ac.uk](mailto:open.research@uwl.ac.uk) providing details, and we will remove access to the work immediately and investigate your claim.

### **Rights Retention Statement:**

# Ageing and public health challenges in the age of globalization

**Professor Hafiz Khan,** PhD, Cstat (UK)  
Professor of Public Health & Statistics

College of Nursing, Midwifery and Healthcare  
University of West London, UK

&

Associate Professorial Fellow at Oxford Institute of Population  
Ageing, University of Oxford, UK

03 June 2022

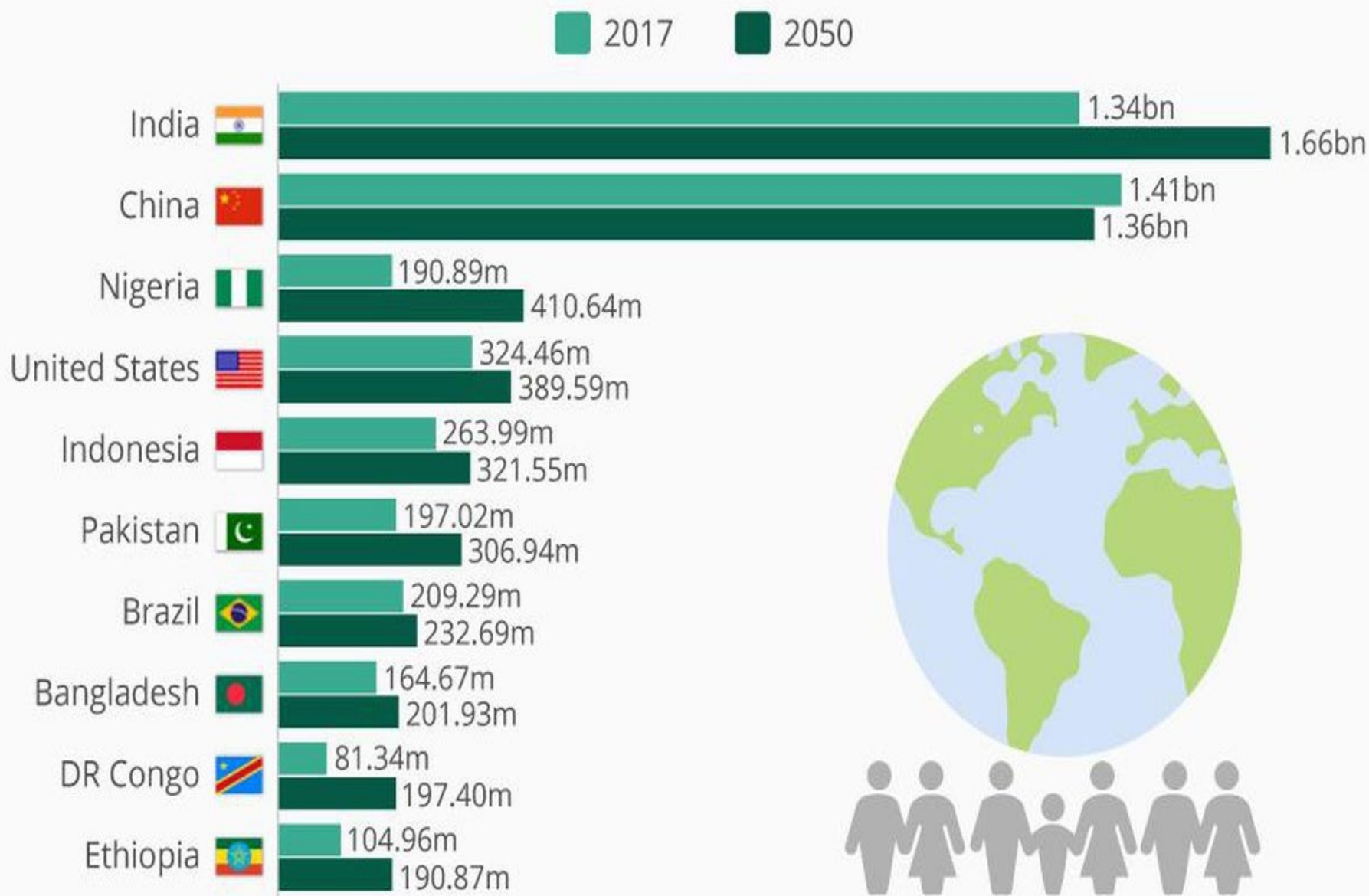
# Outline of my talk

- Global population ageing
- Drivers of population ageing
- Unequal distribution of risks in later life
- Vulnerability in old age in getting care
- Public health challenges
- The effect of globalization on healthy ageing

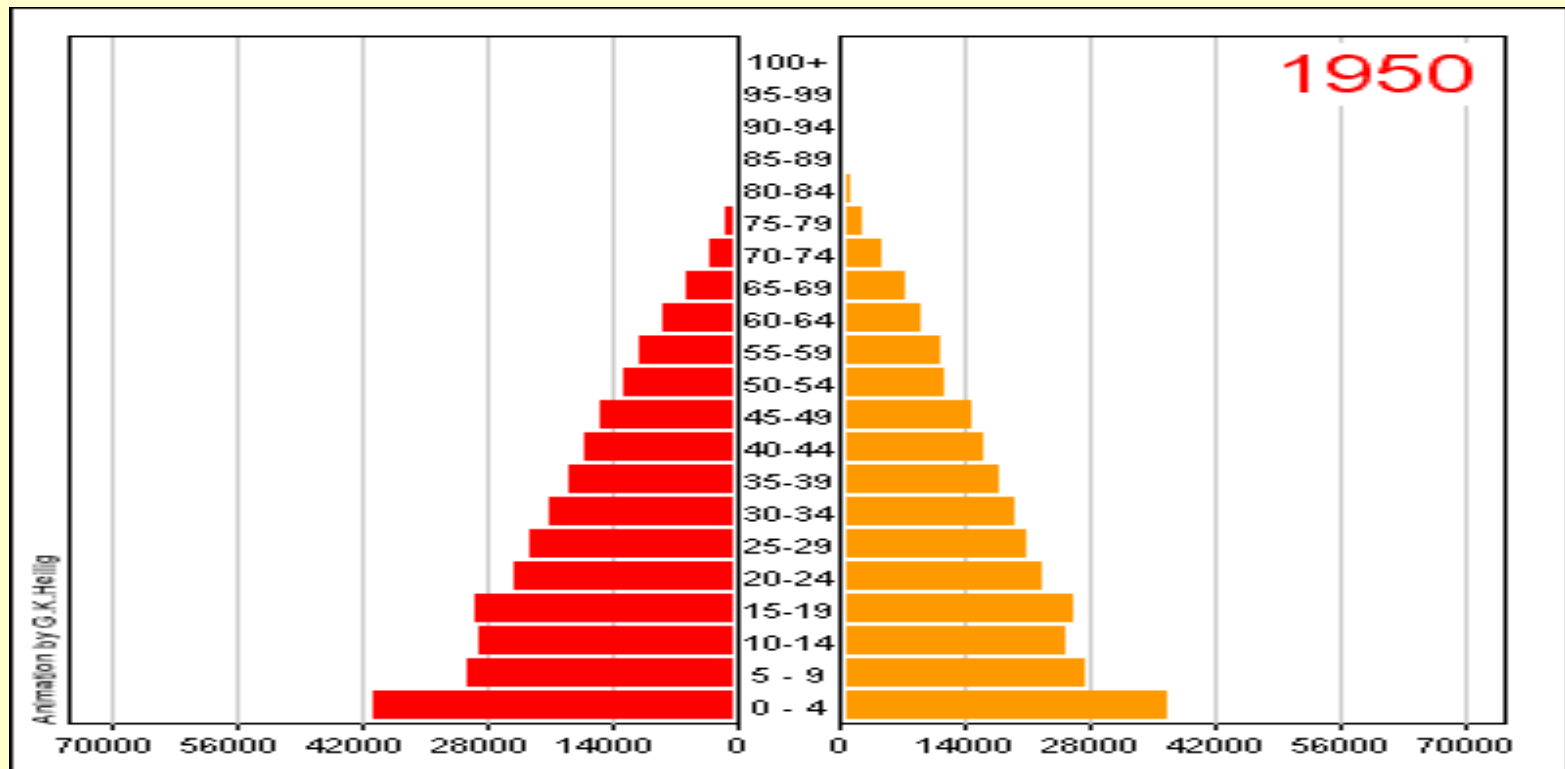
# World population

Year	Population (billions)
1950	2.5
2000	6.1
2050	9.7
2100	11.2

# The world's most populous nations



# Change of population structure (China 1950-2050)



# Population ageing

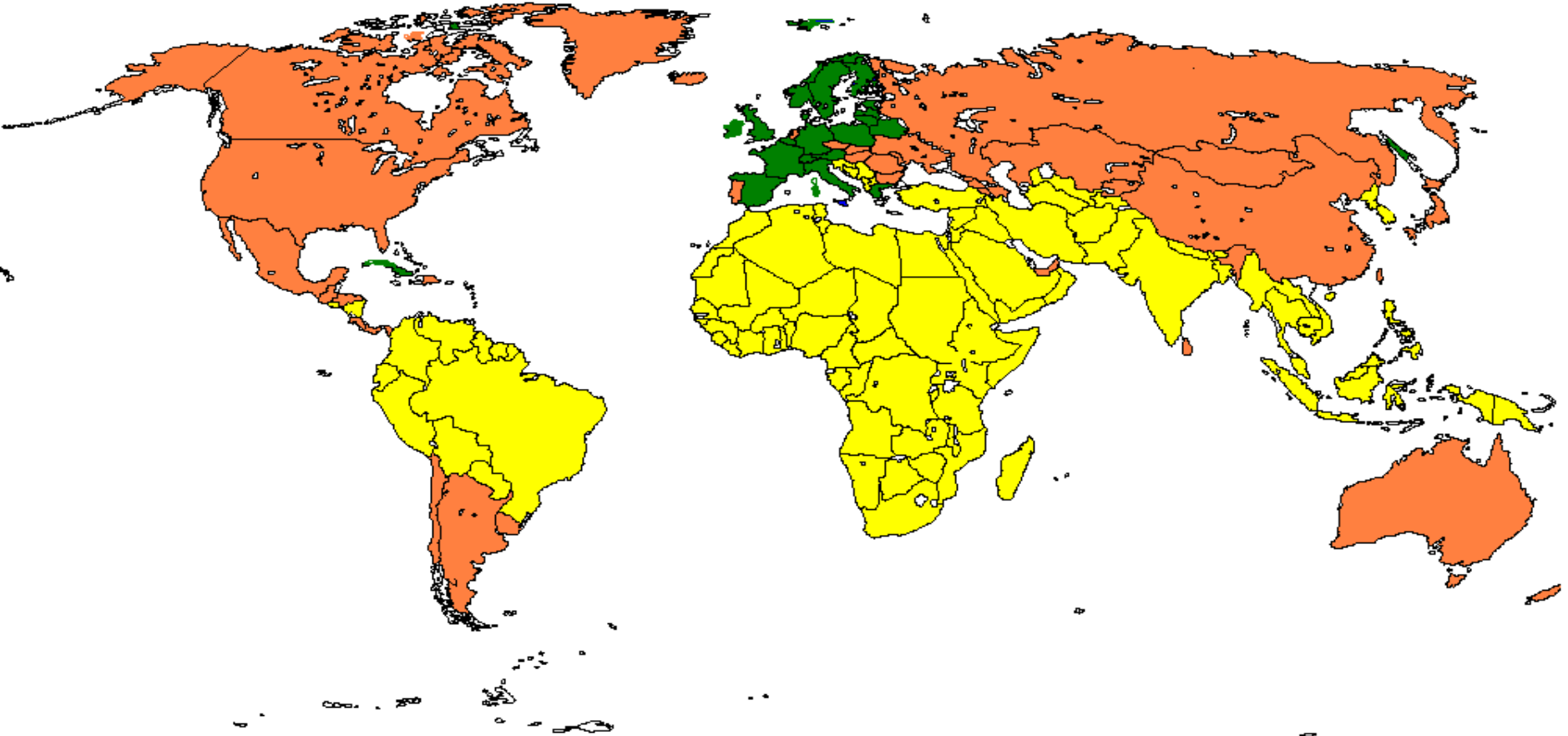
Population change is quite dramatic in many places.

The sheer number of older people is increasing faster than what we often thought.

By 2030,

- A quarter of the population in Asia will be over 60 years.
- A quarter of the population of the developed world will be over 65 years.

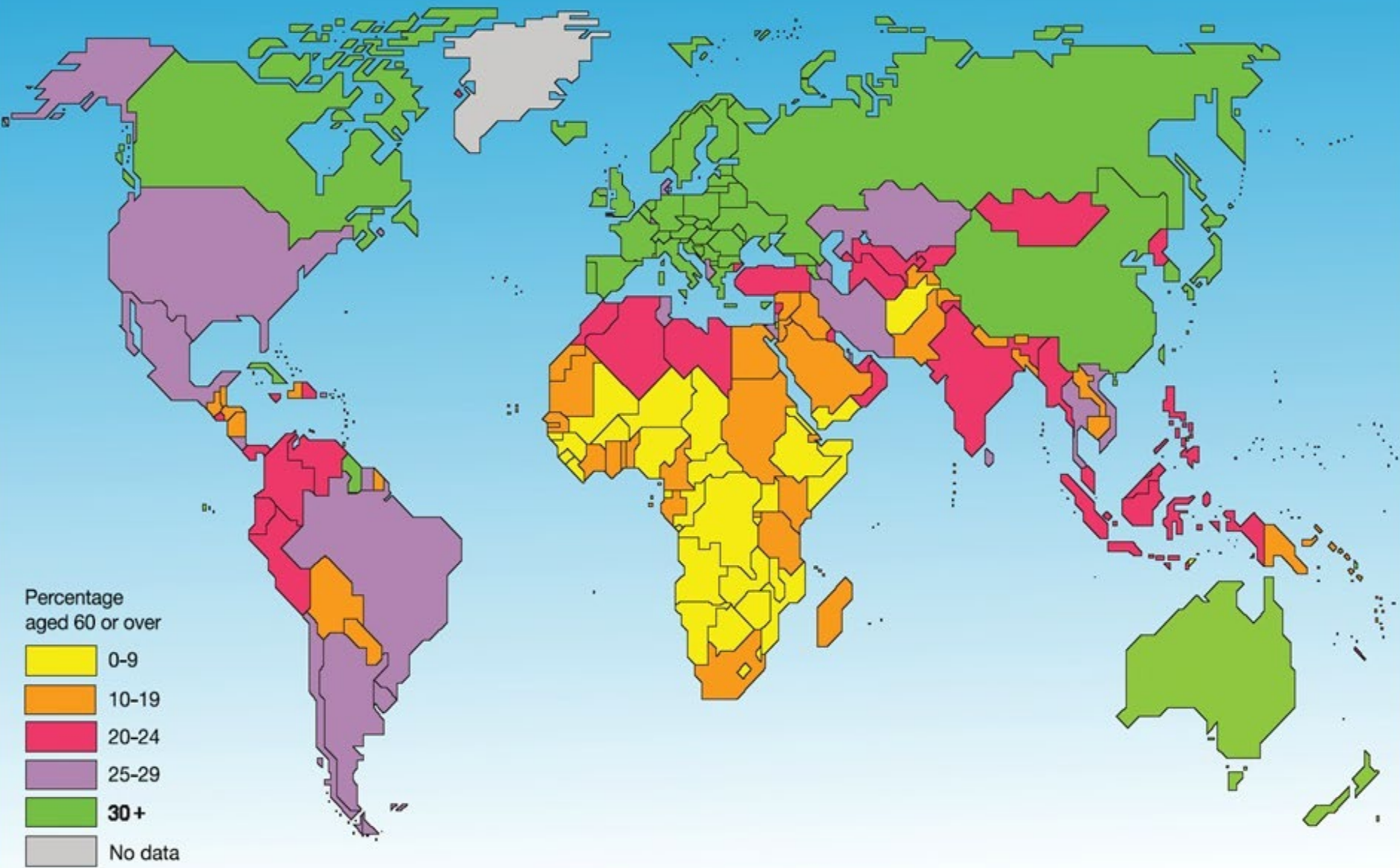
# % of population aged 60+ years, 1996



Percent of population over age 60 years

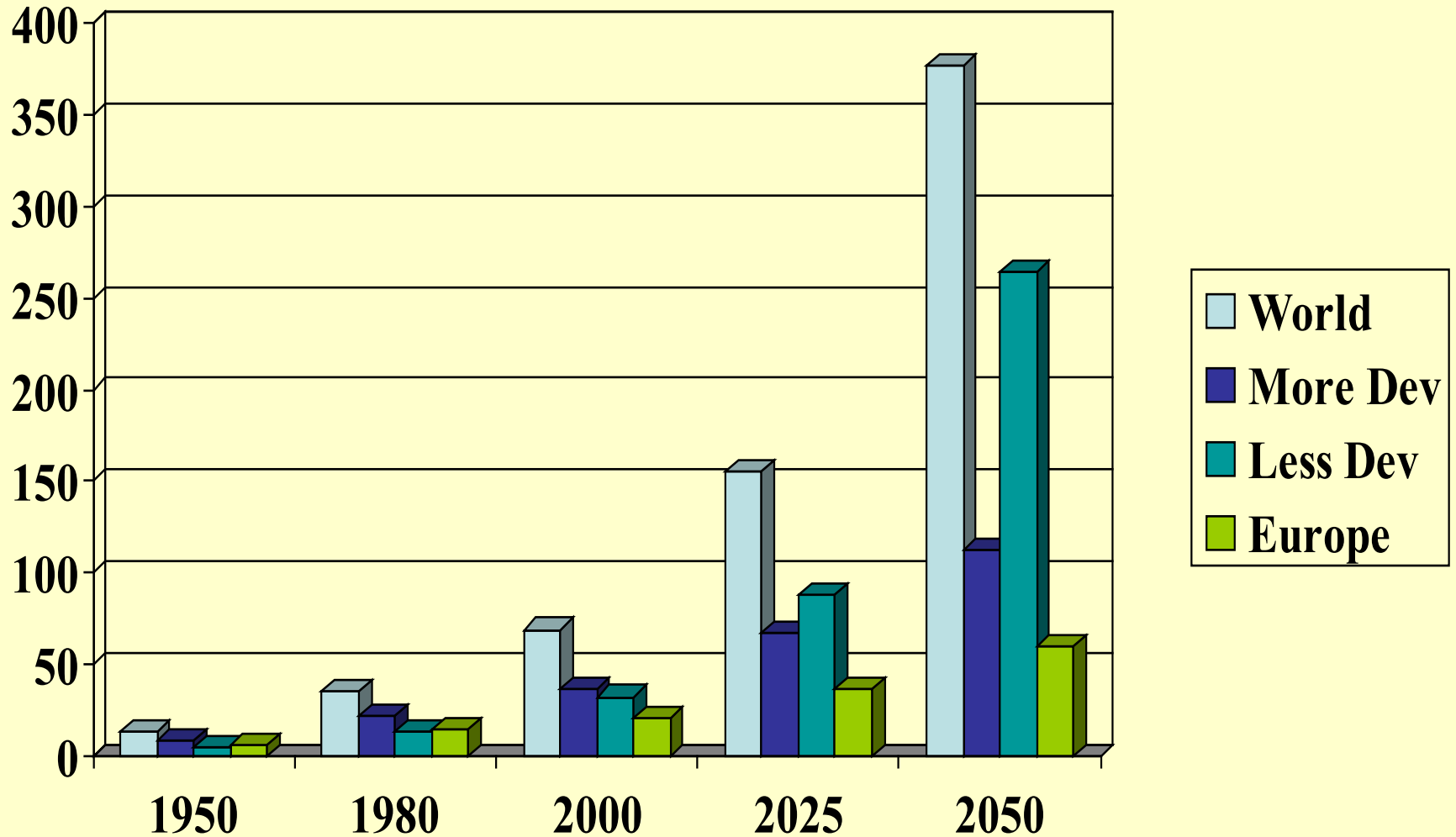
- up to 10%
- 10 to 19%
- 20 to 24%
- 25 to 30%

# % of population aged 60+ years, 2050

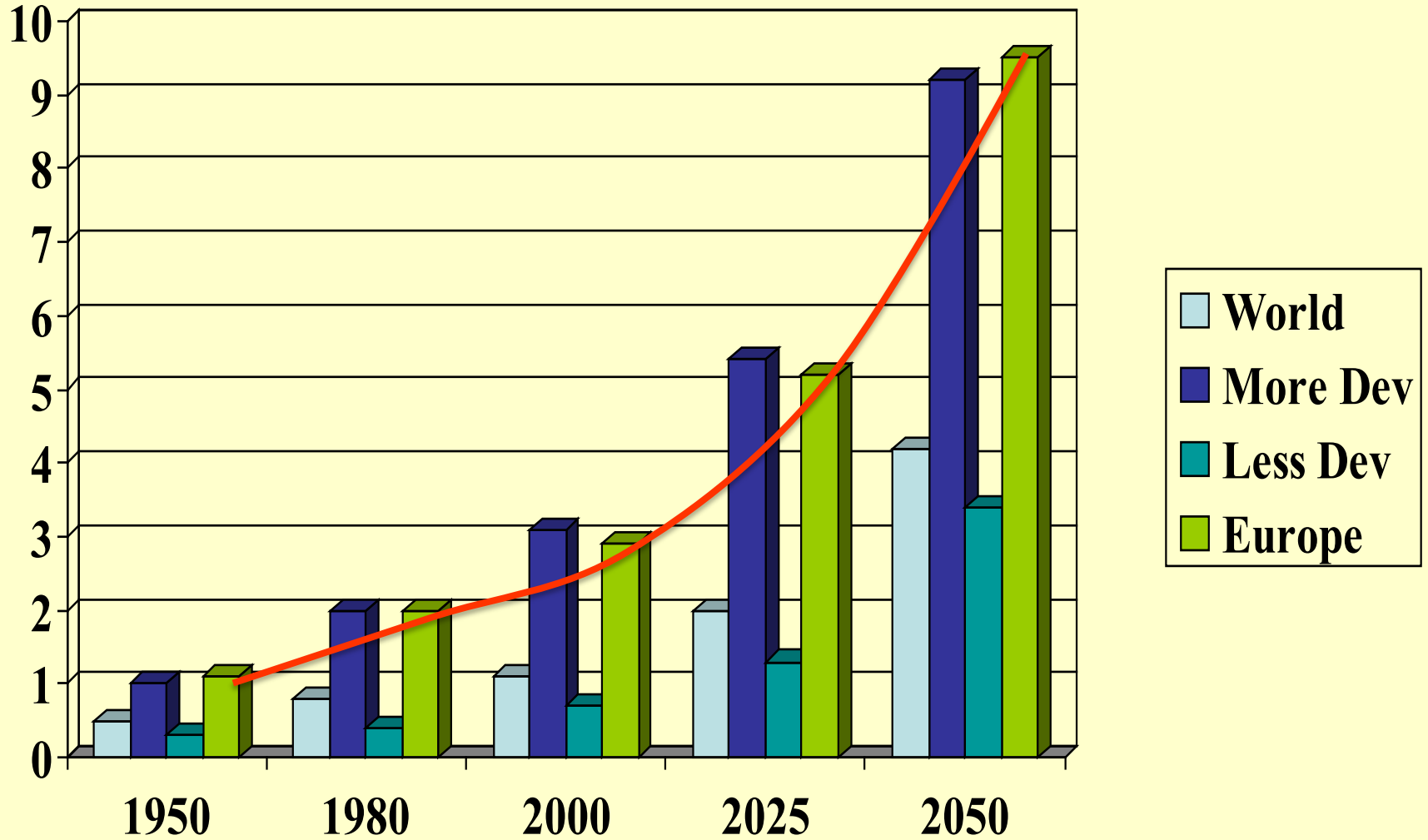


Source: UN Population Ageing 2006

# 1950-2050 population 80+ (millions)

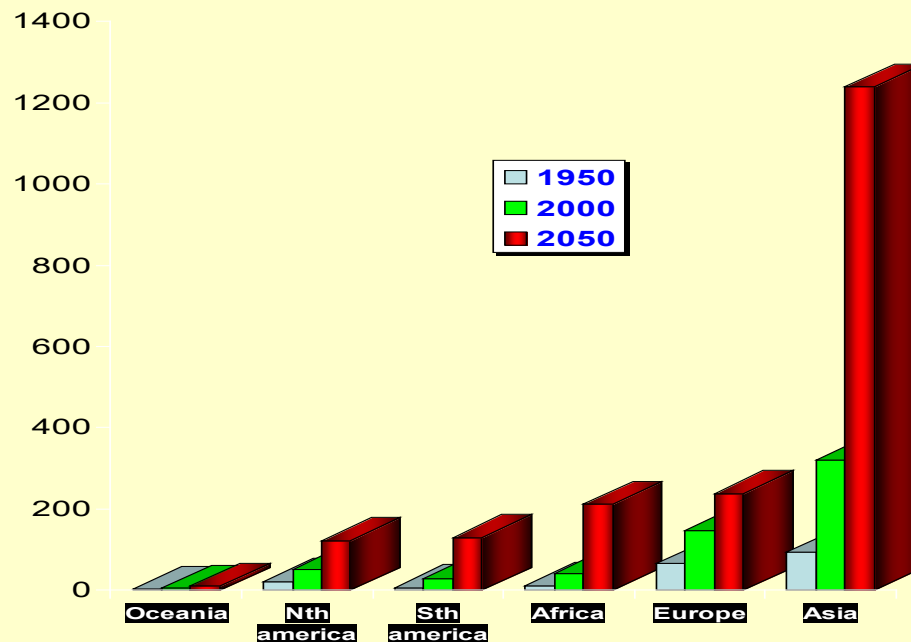


# 1950-2050 population 80+ %

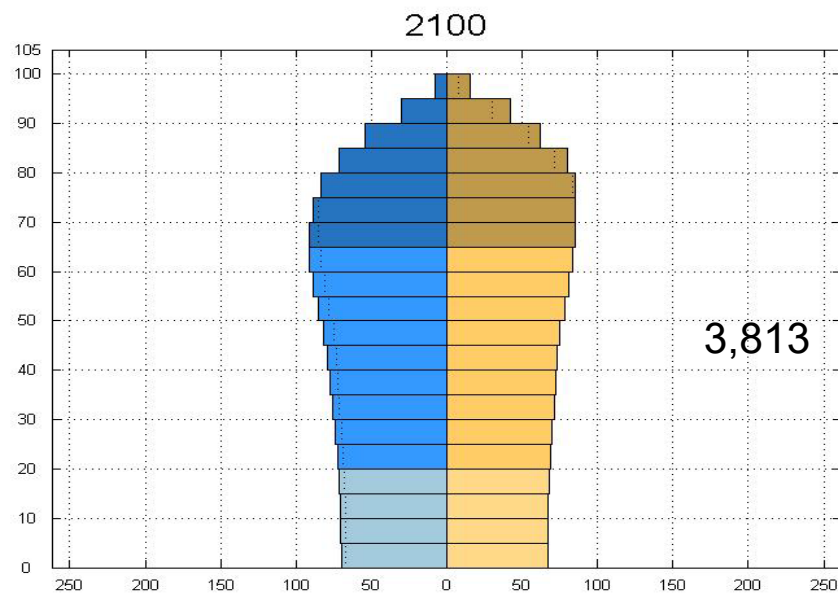
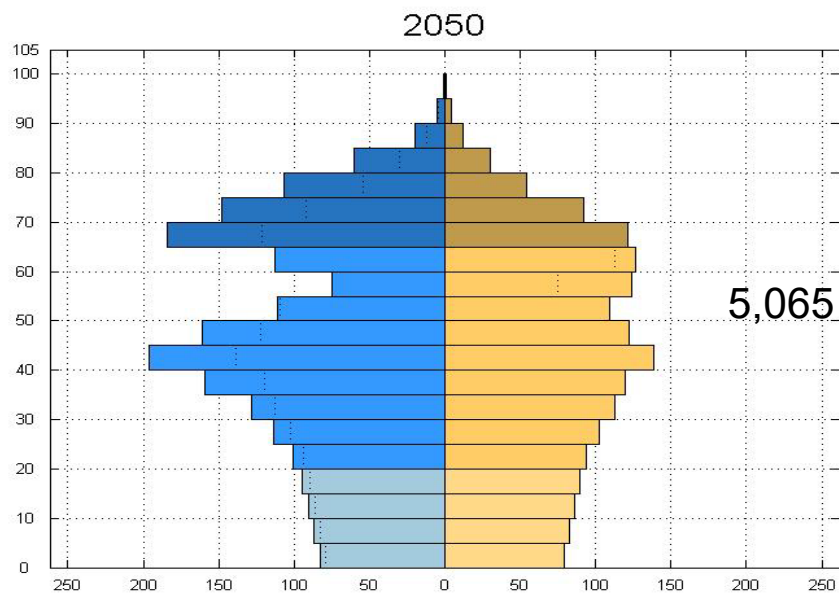
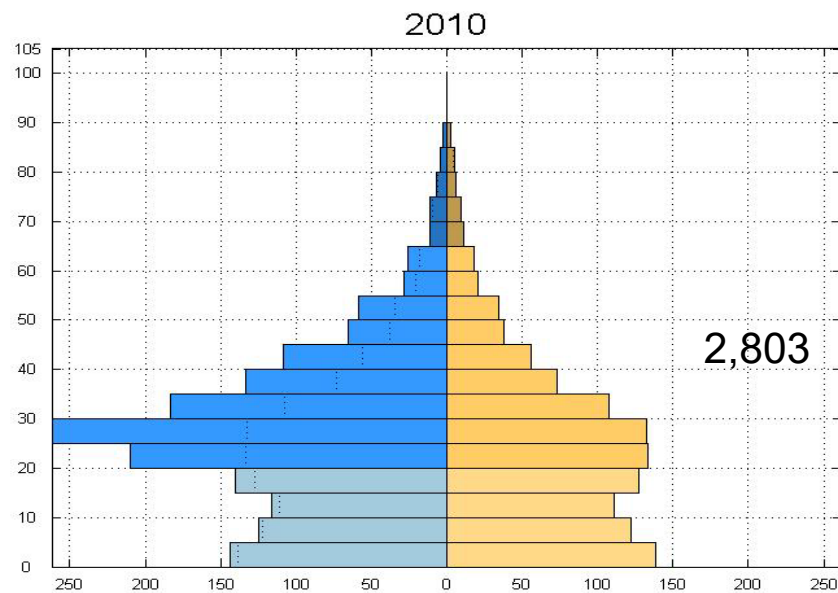
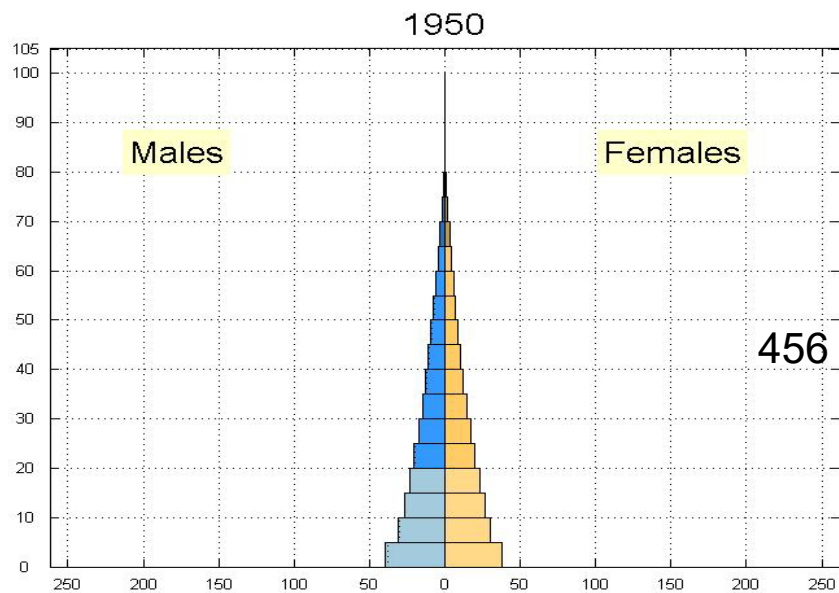


# Population 60+ in millions

**Asia has the largest, fastest growing older population**

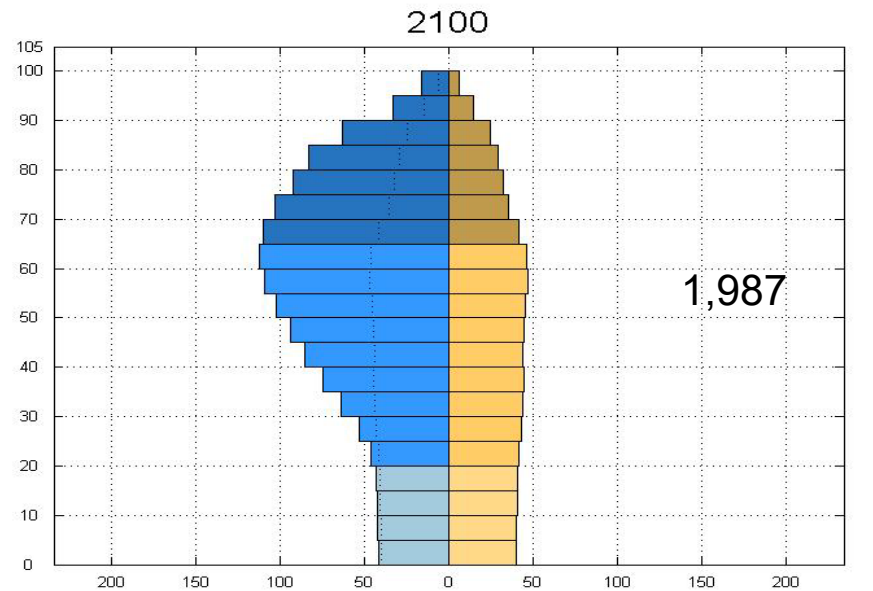
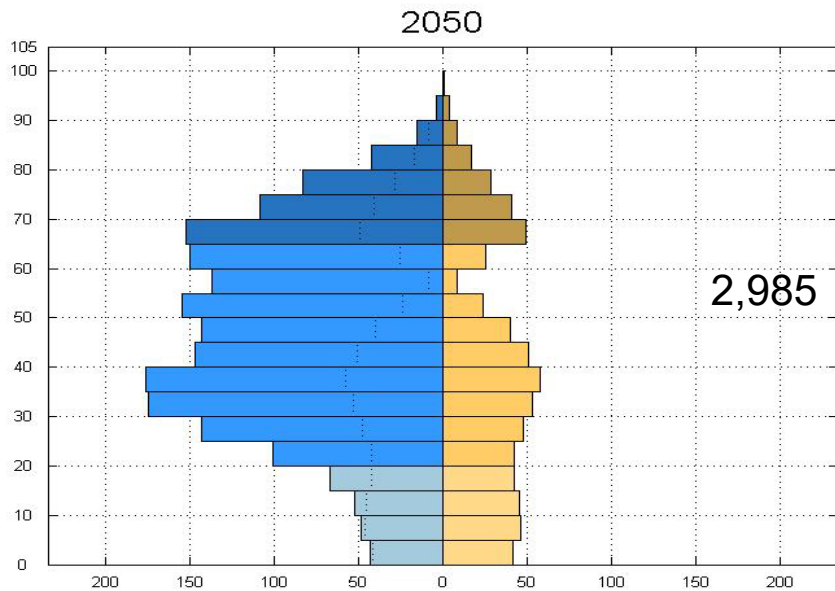
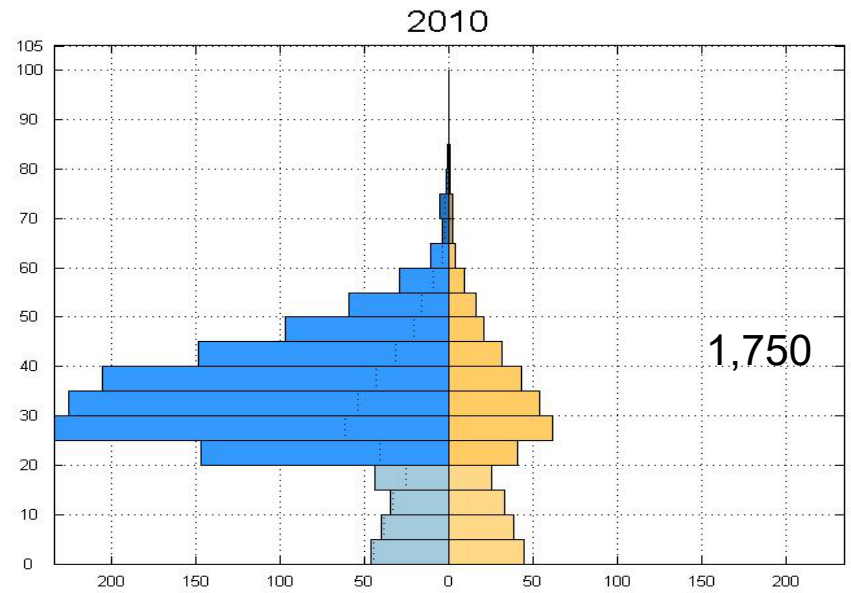
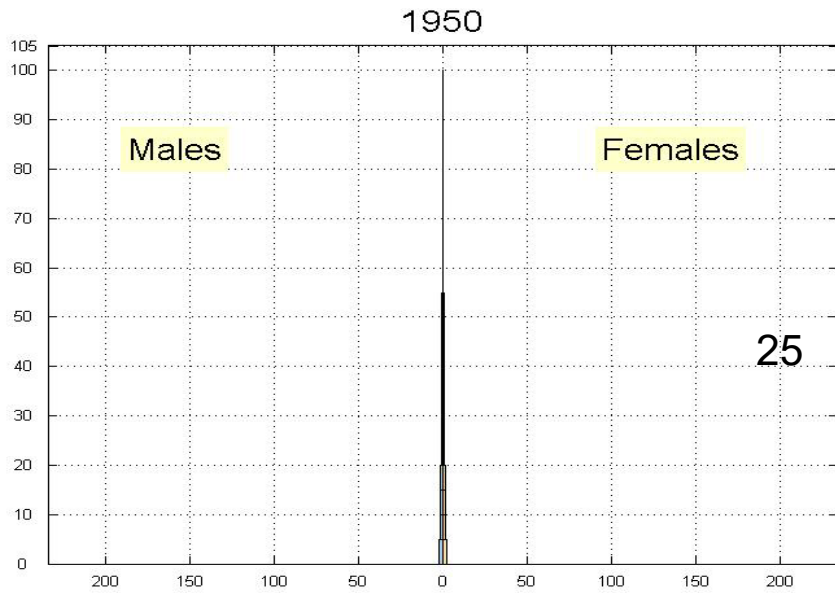


# Oman: Population Pyramid



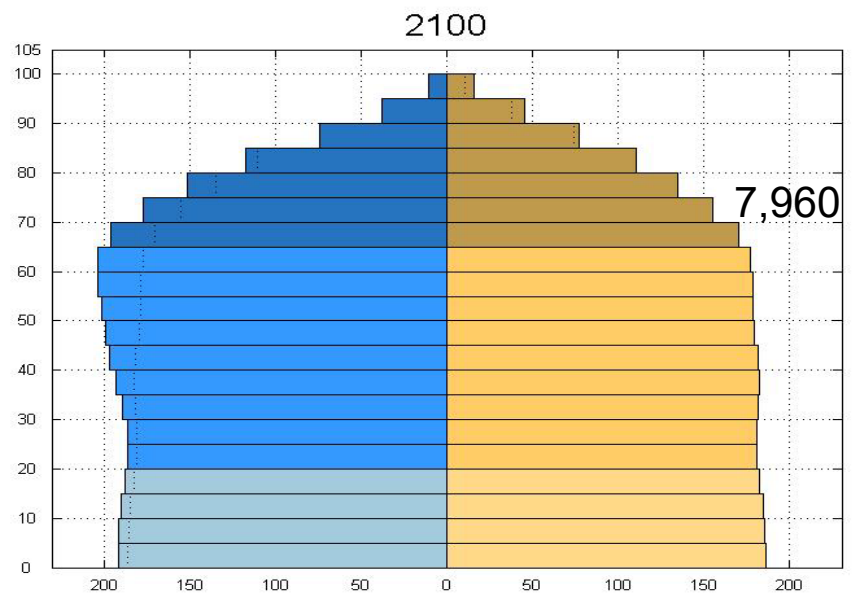
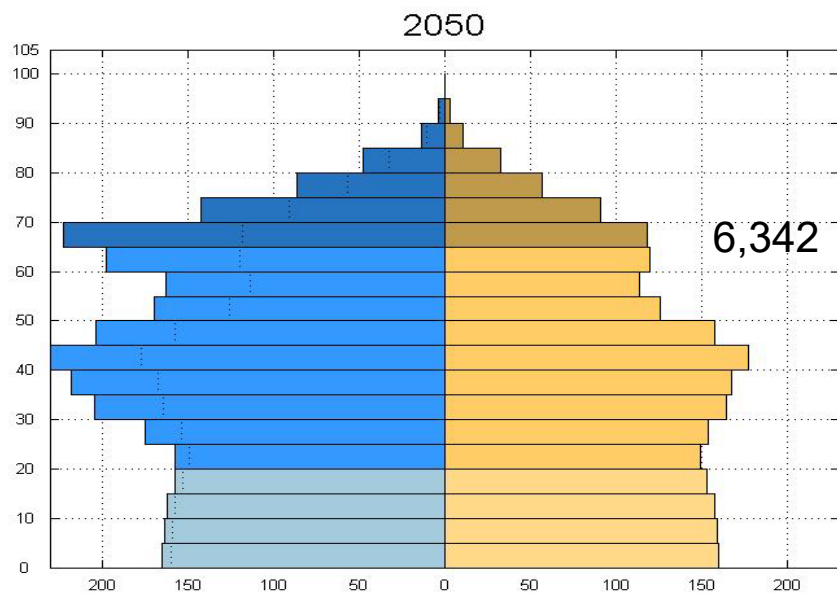
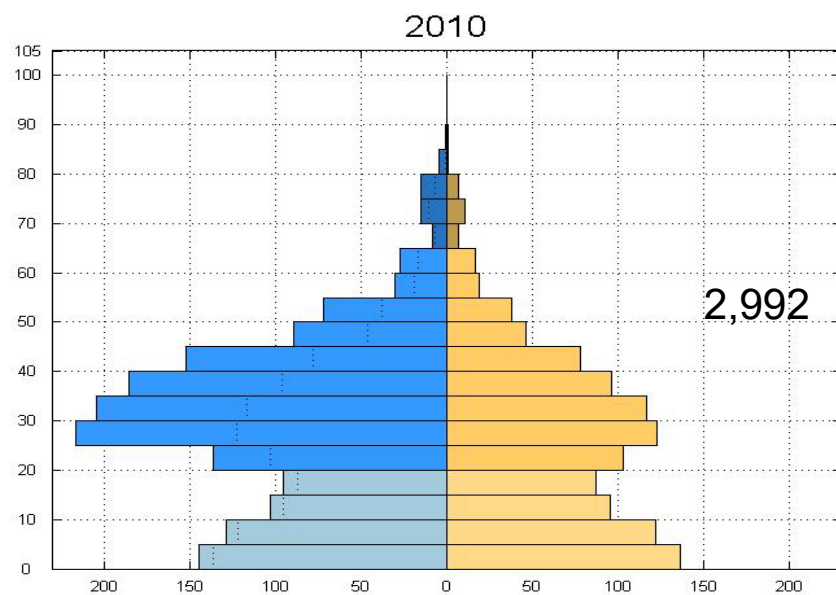
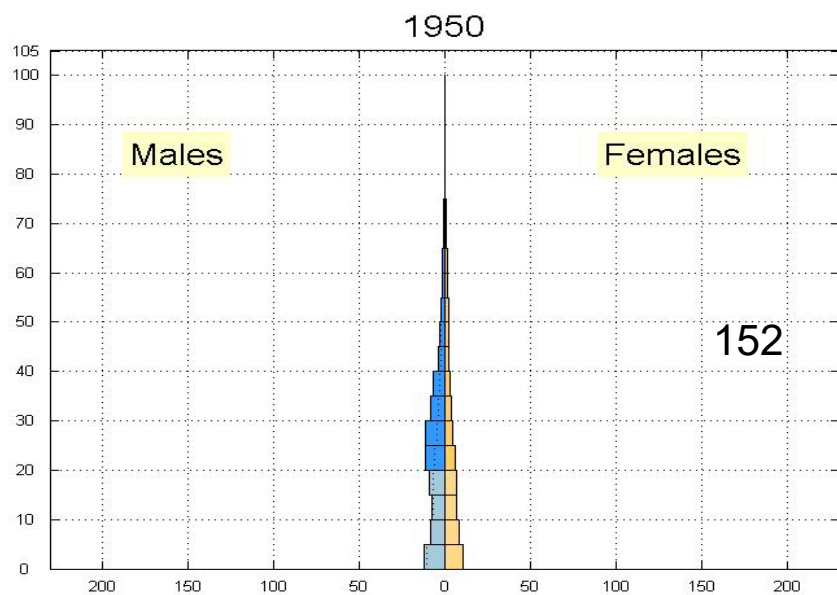
(thousands)

# Qatar: Population Structure



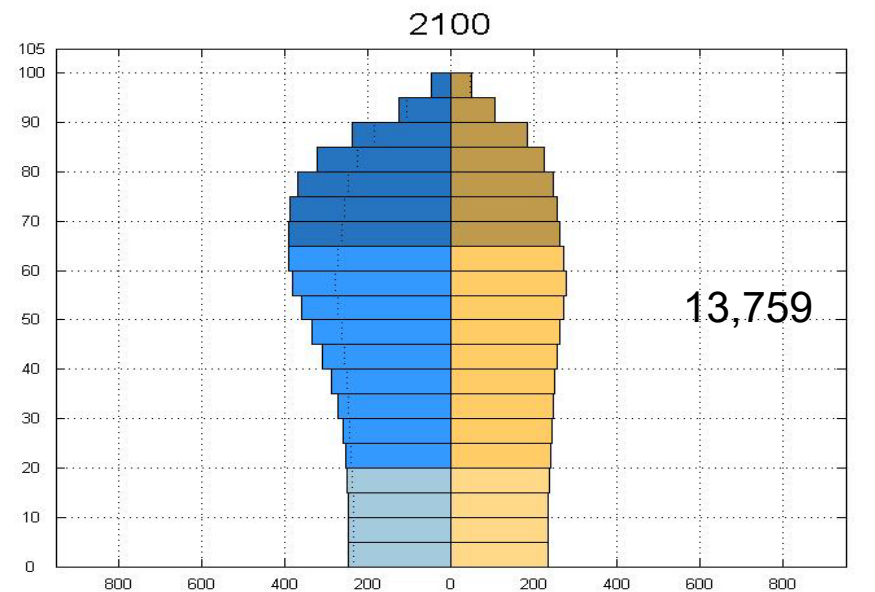
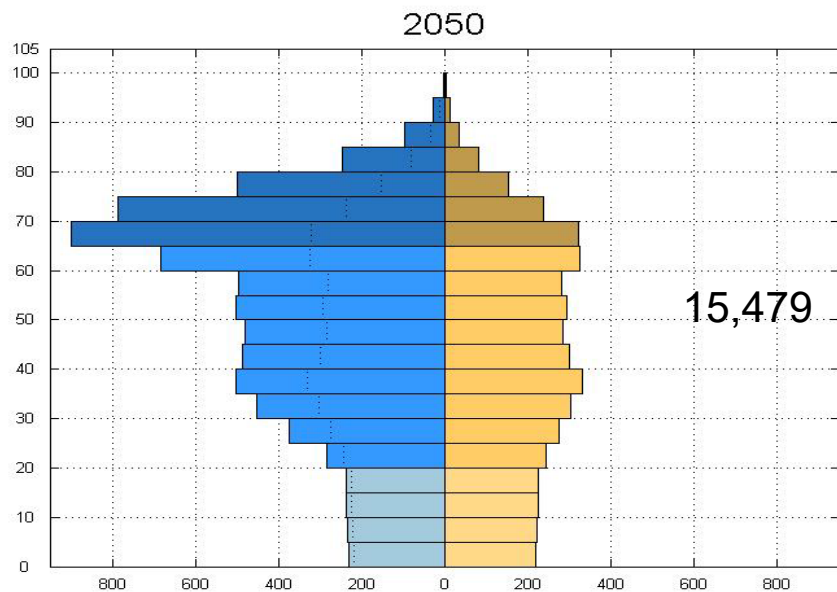
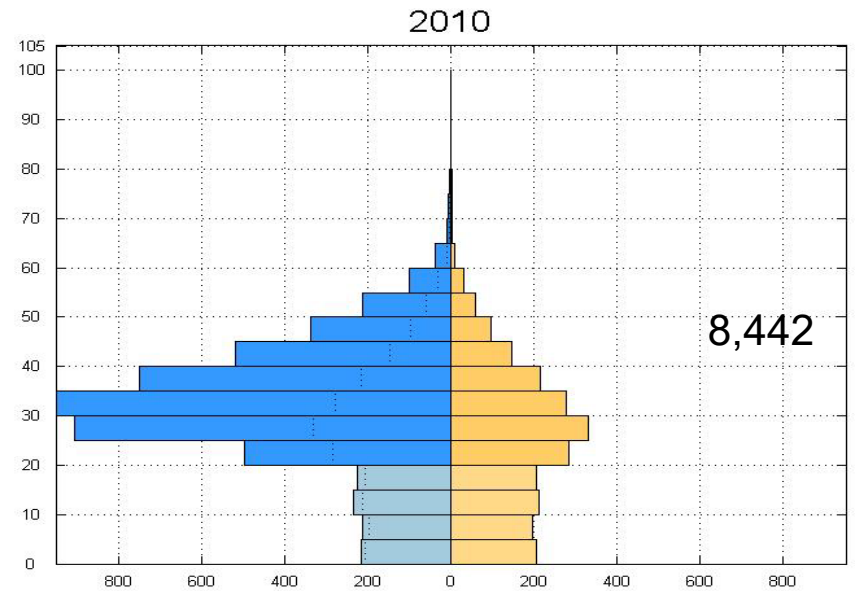
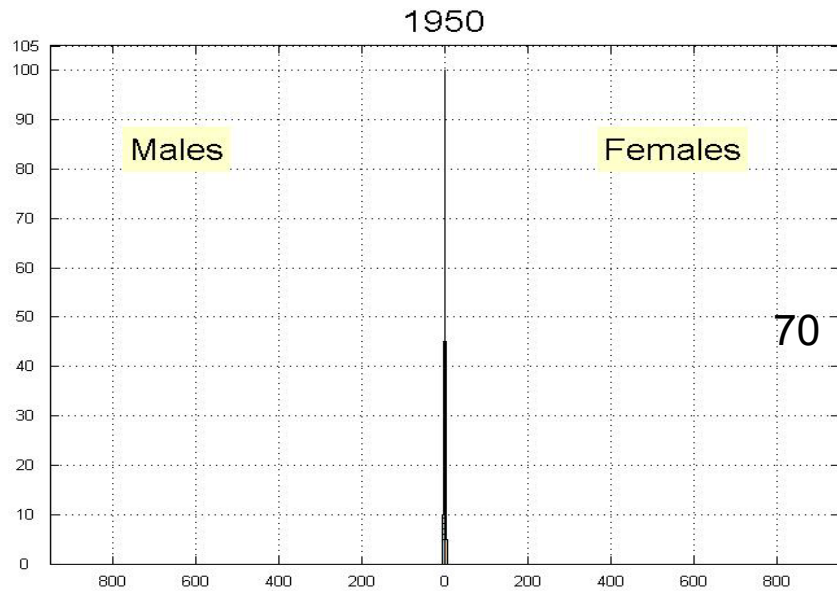
(thousands)

# Kuwait: Population 1950-2100



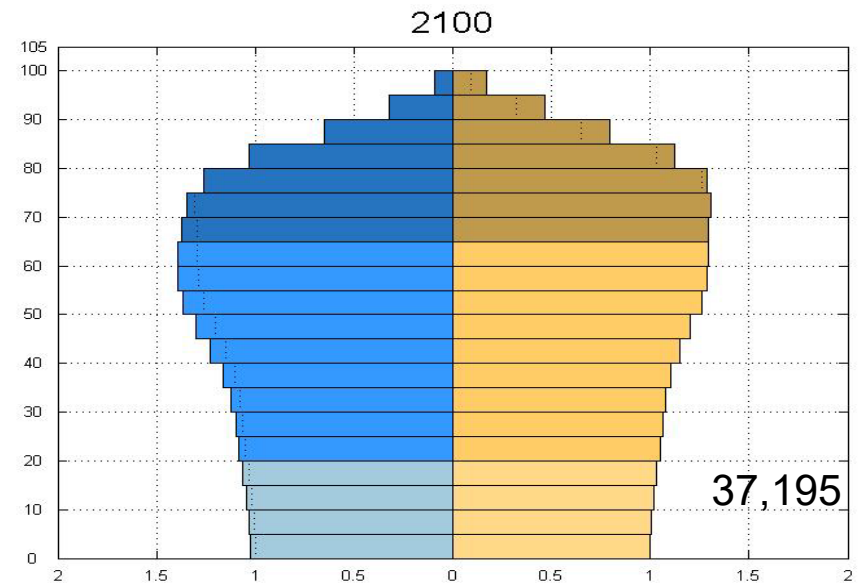
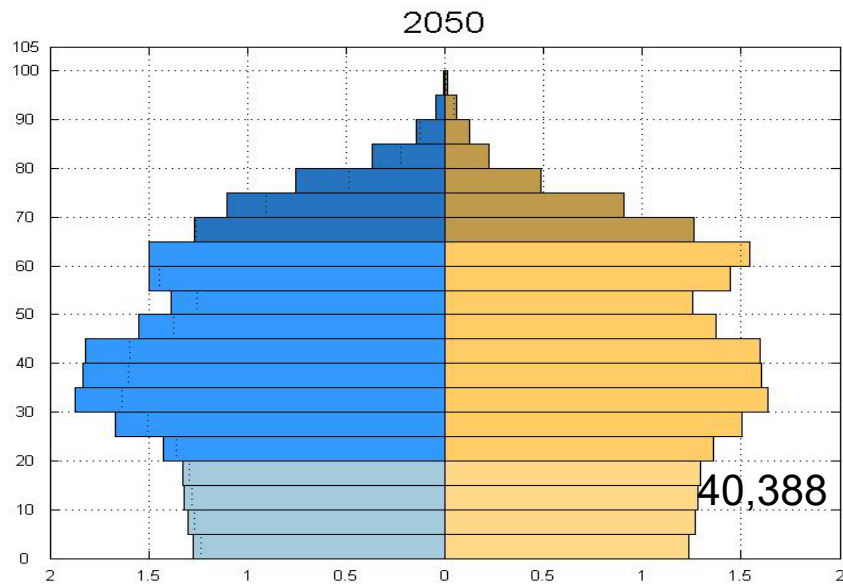
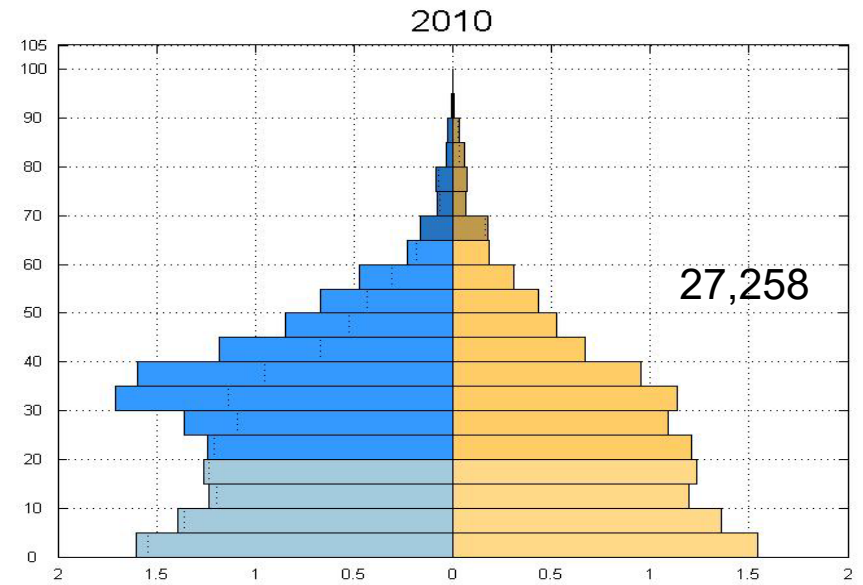
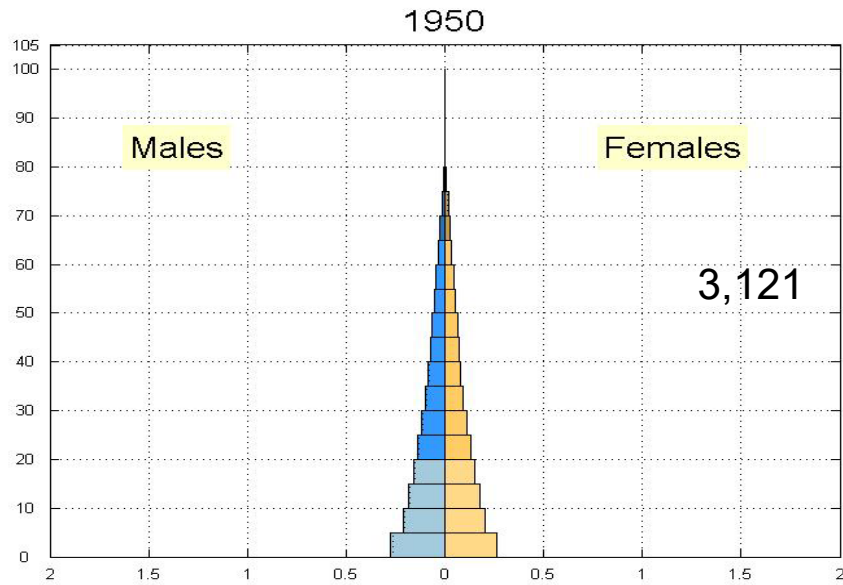
(thousands)

# UAE: Population Distribution



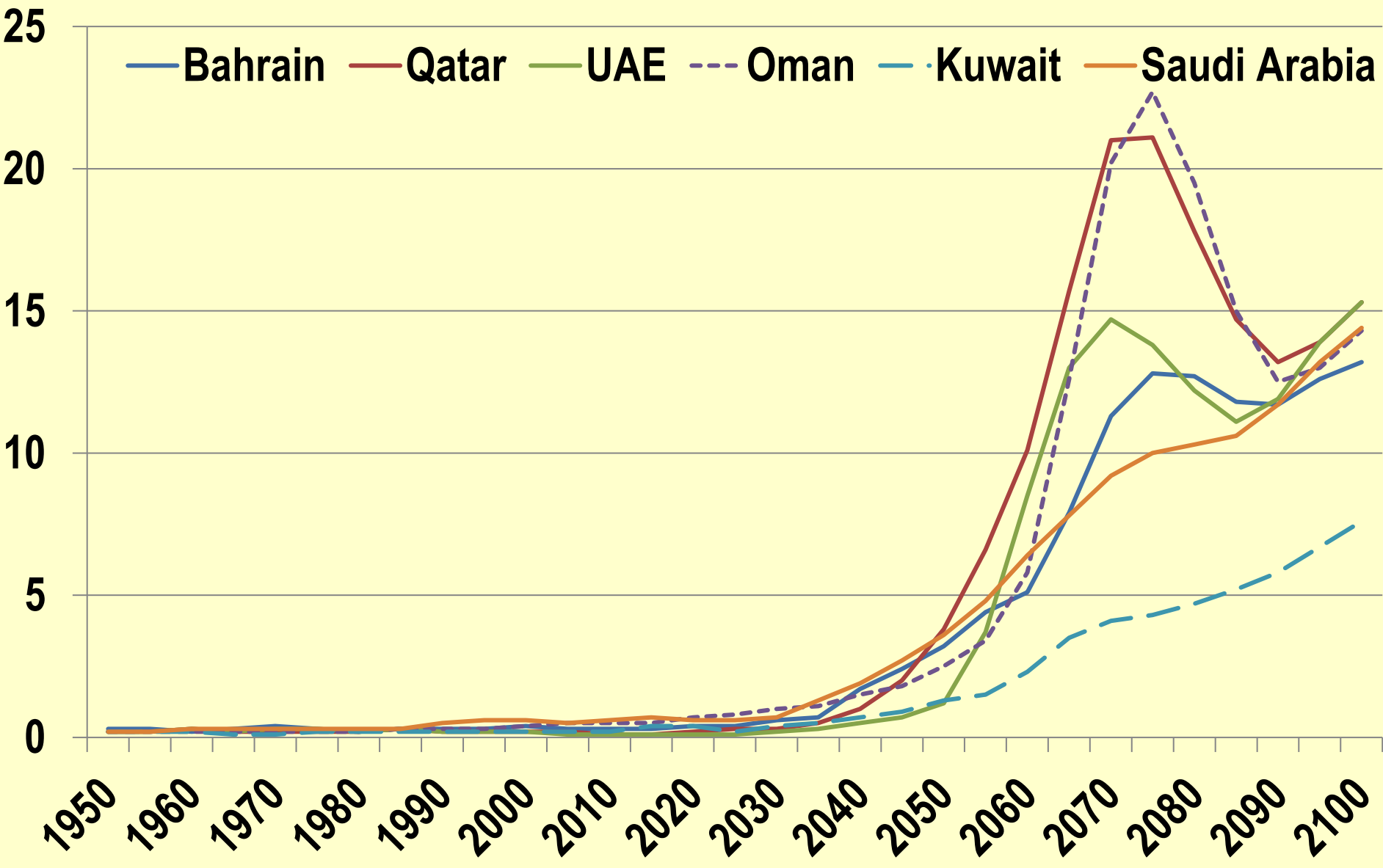
(thousands)

# Saudi Arabia: Age-Sex Distribution

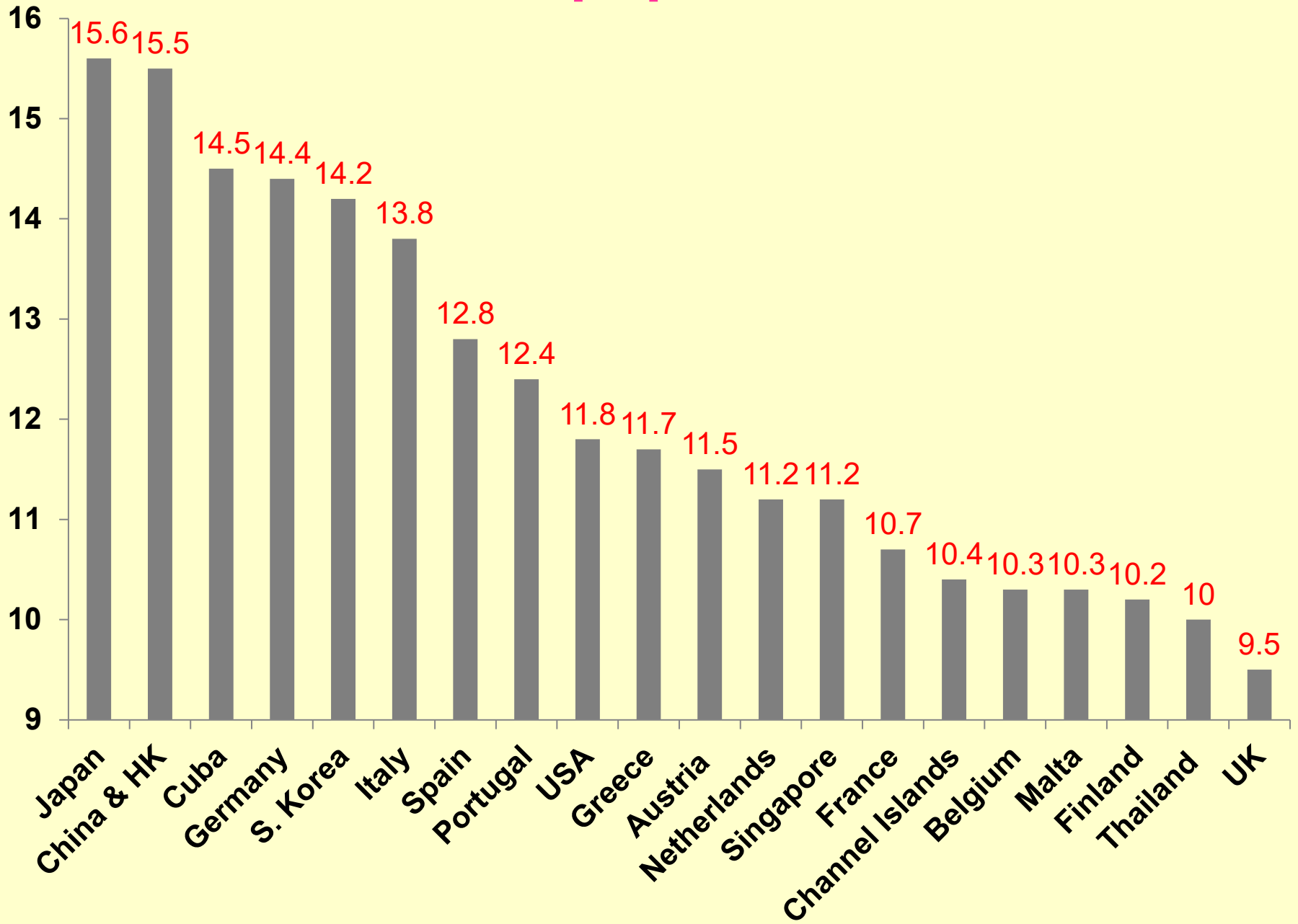


(millions)

# % Population Aged 80+ Years

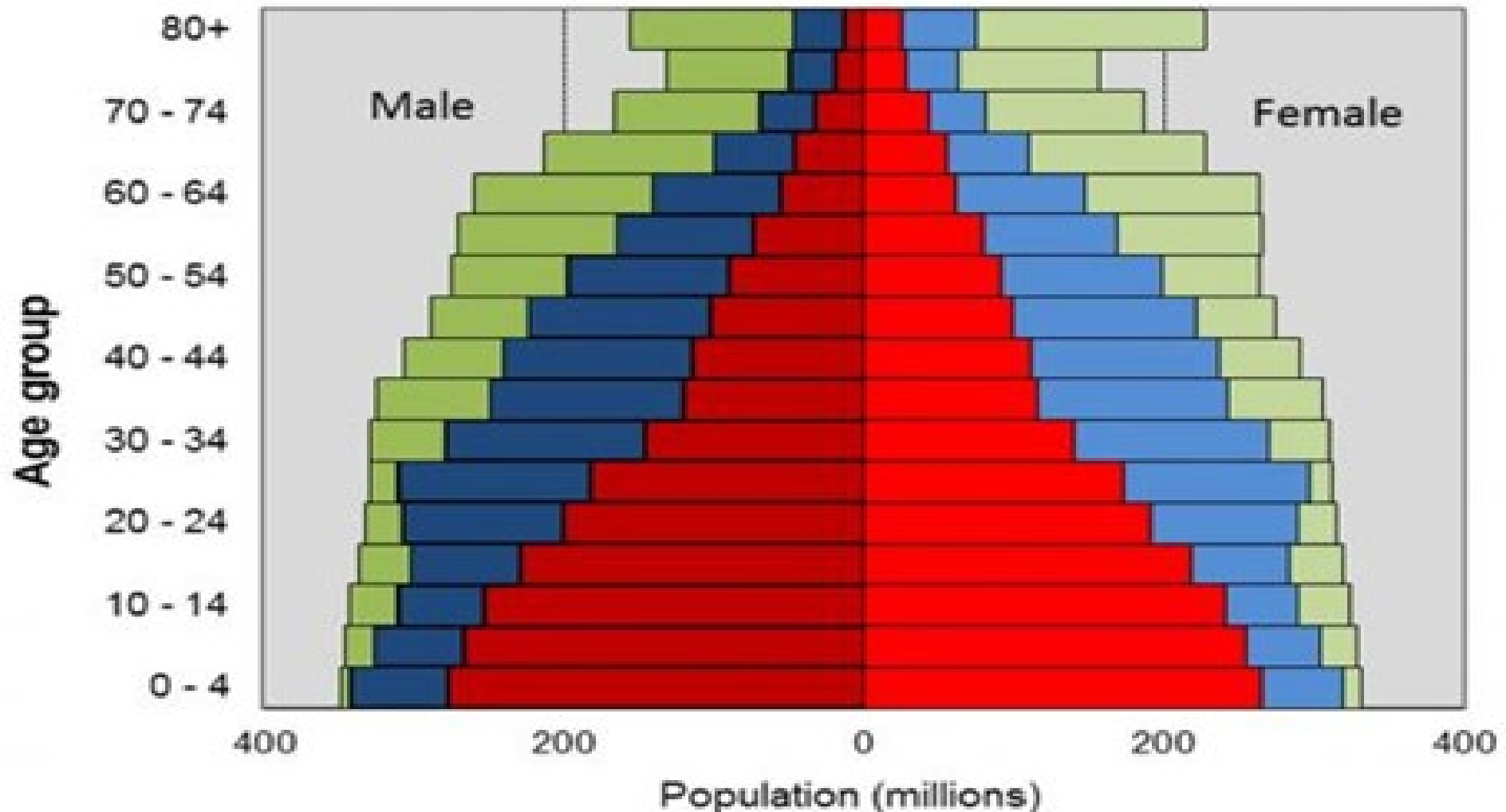


# % 80+ population, 2050

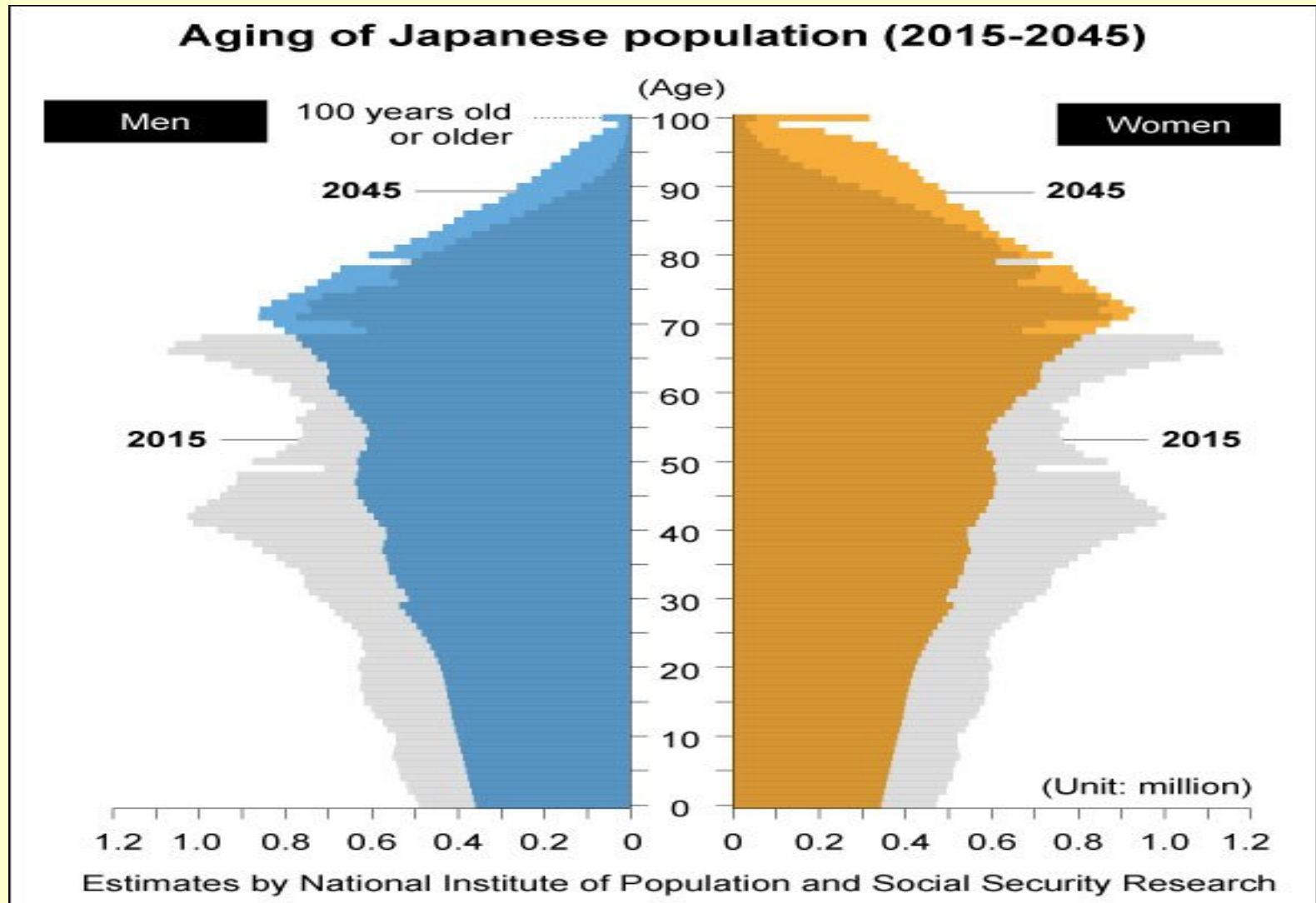


# Global ageing (1980-2050)

*From pyramid 1980 to bell 2015 to barrel 2050*



# Japan - The super ageing society



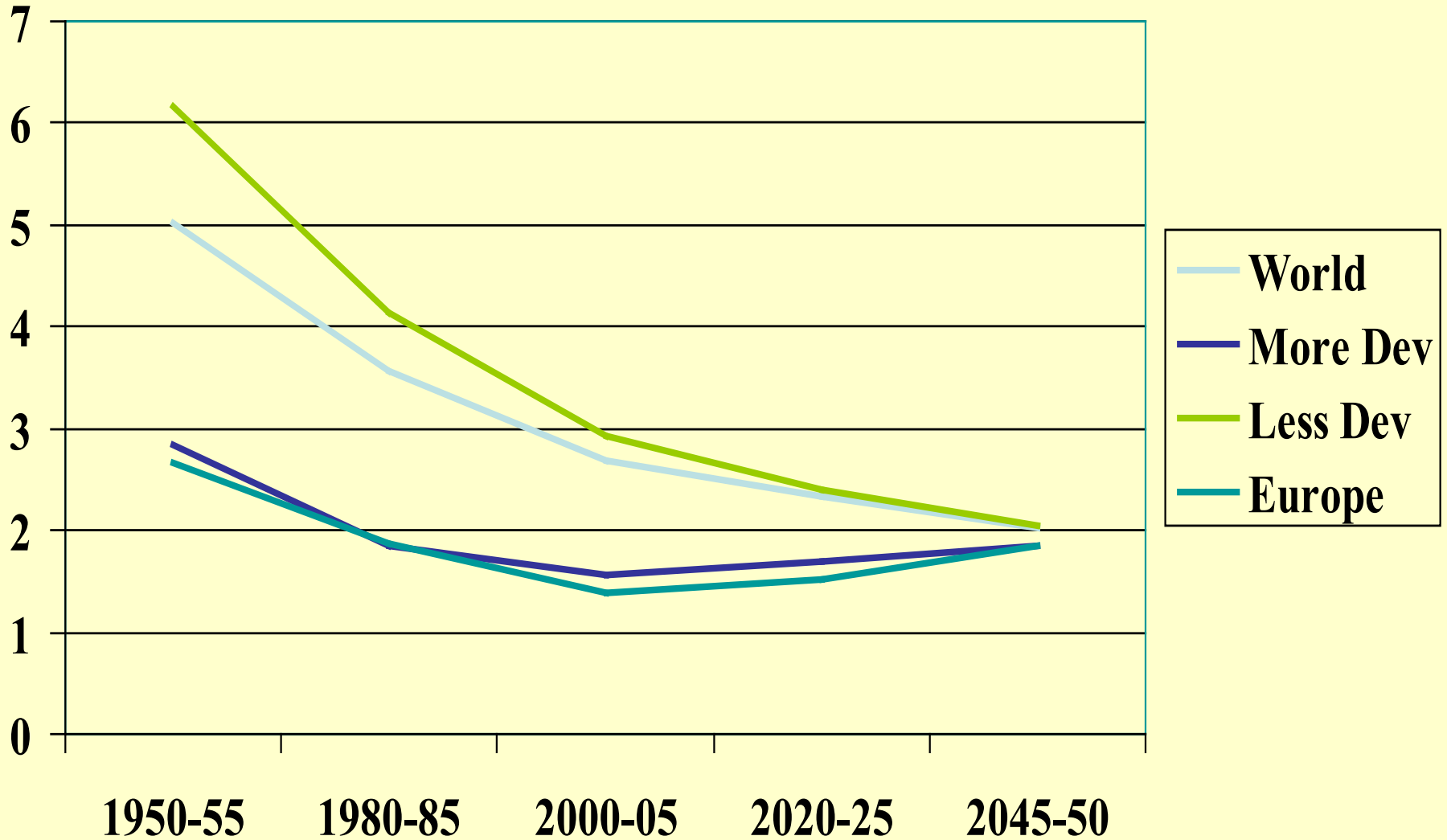
# Drivers of population change & ageing

Fertility

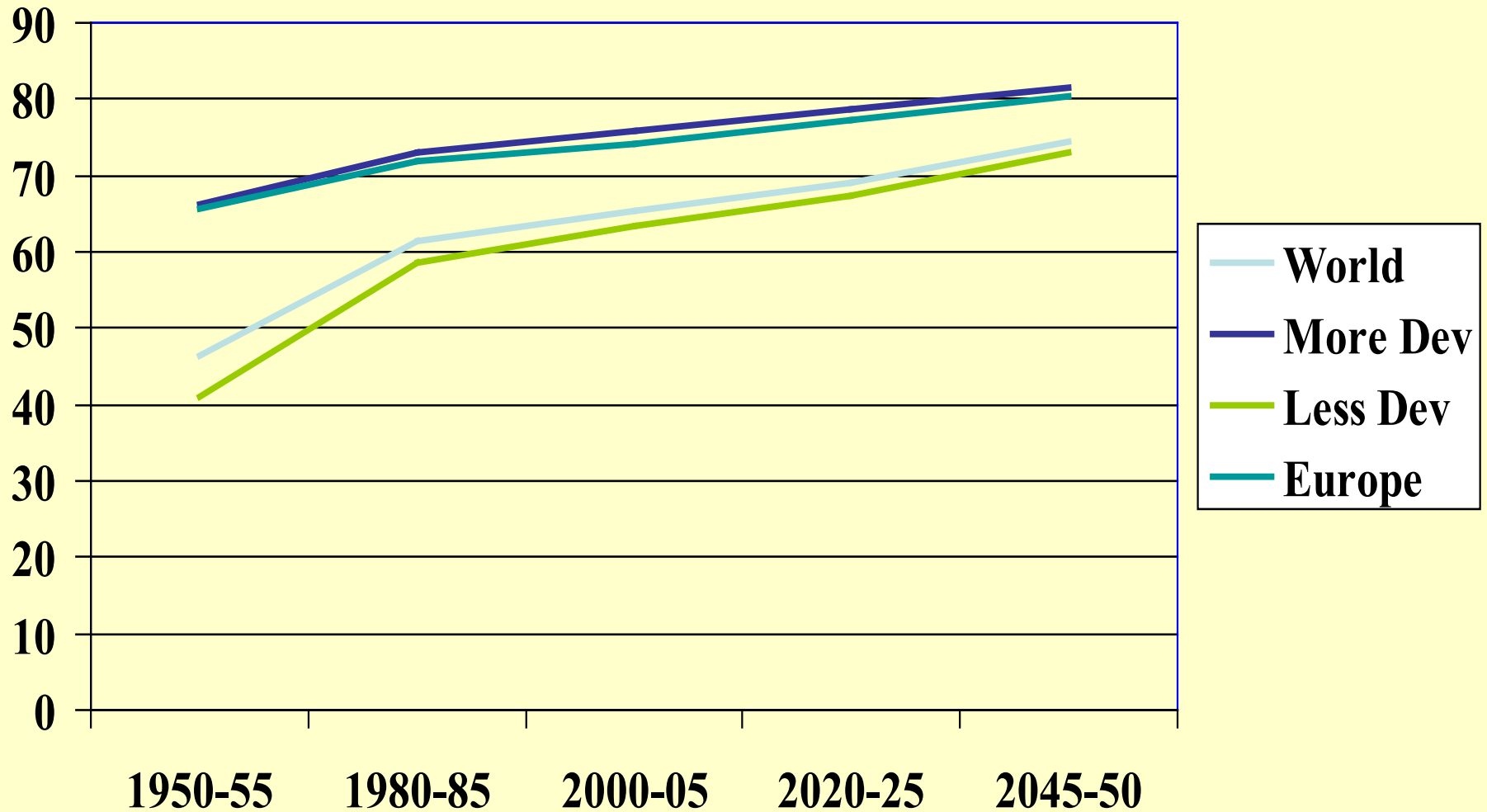
Mortality

Migration

# Fertility 1950-2050



# Life expectancy 1950-2050



# Migration

- Migration plays an important role.
- It can slow down the process of ageing.
- Uncertainty in future migration.

# Net annual migration, years to 2050

## UN projections

Region	Net annual migration assumed for UN projections
Asia	-1,200,000
Latin America & Caribbean	-750,000
Africa	-400,000
USA & Canada	+1,300,000
Europe	+850,000
Australia	+100,000

# The UK situation

Number of centenarians increase at a faster rate. The number *will reach some half a million by 2066.*

The prevalence of disability rises with age:

6% Children

16% Working age adults

45 % State pension age+

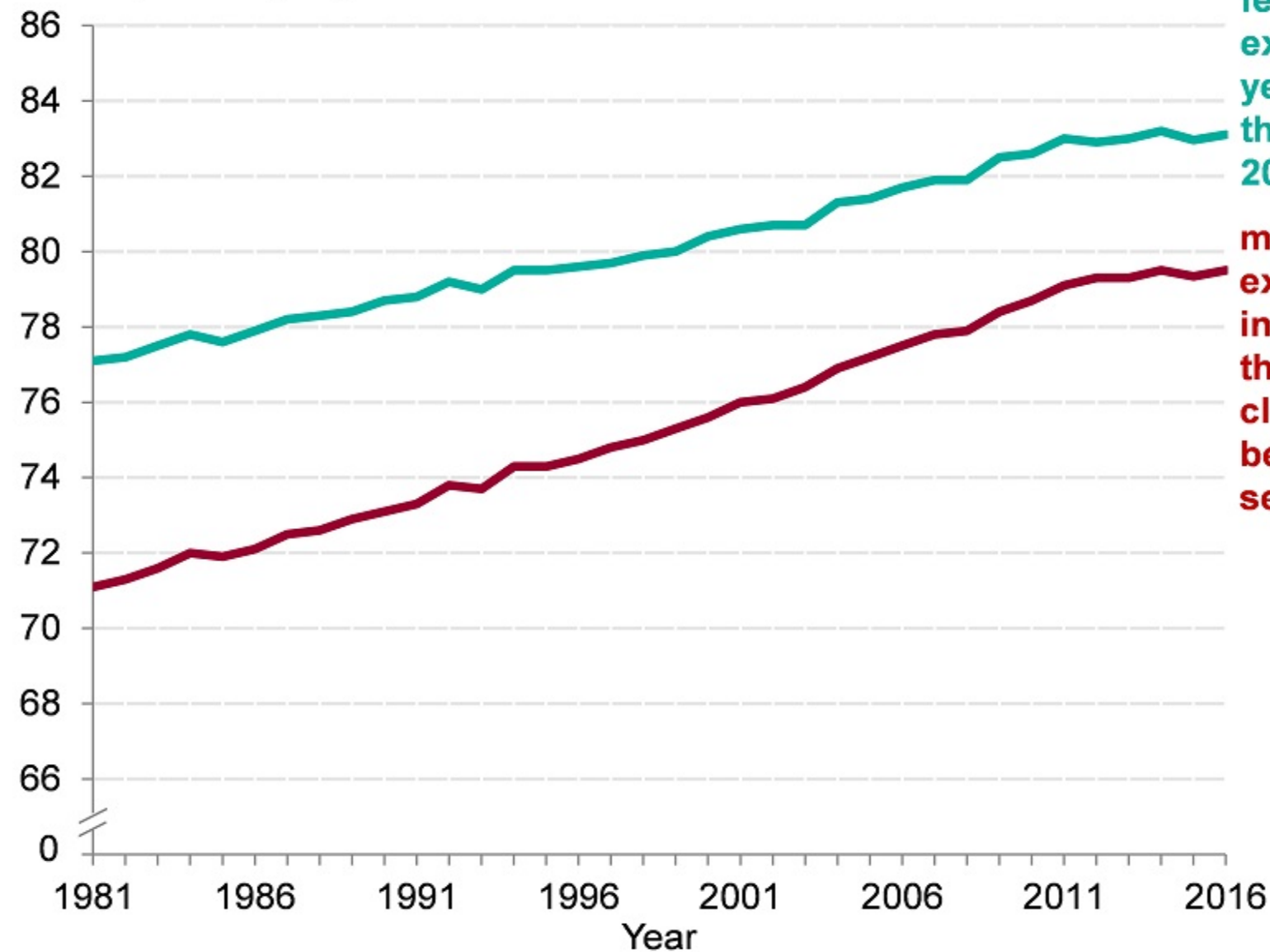
Currently over 11 million disabled people in the UK (18%), costing around £80 billion per annum.

# Expectation of life at birth, UK

Life expectancy in years

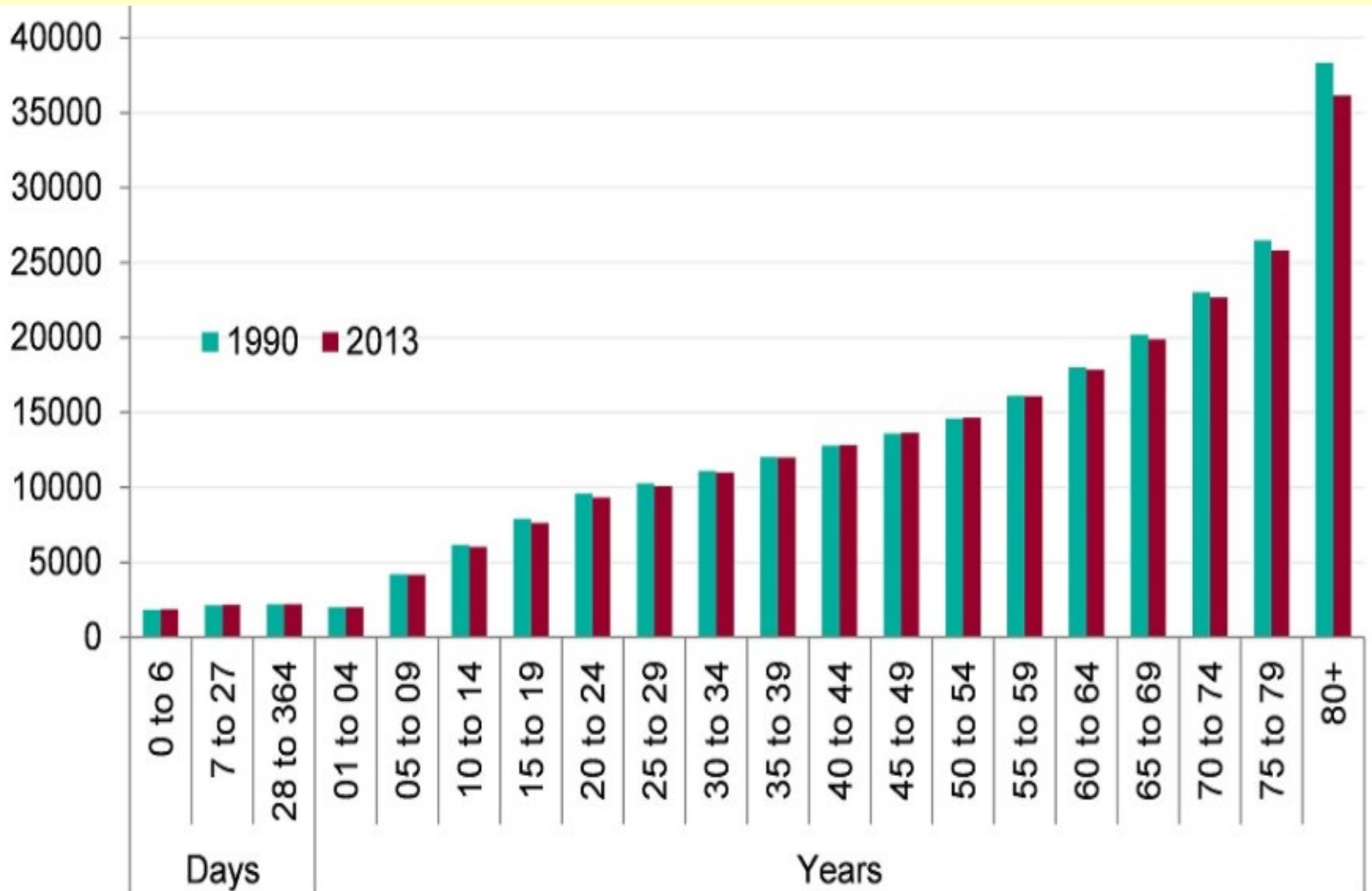
**female life expectancy is 3.6 years greater than for males in 2016**

**male life expectancy is increasing faster than female, closing the gap between the sexes**





# Years lived with disability per 100,000 population (Public Health England, 2017)



# Proportion of life spent in poor health at age 65, England (2013 - 2015)

	At birth Males	At birth Females	At age 65 Males	At age 65 Females
Life expectancy	79.5	83.1	18.7	21.1
Healthy Life expectancy	63.4	64.1	10.5	11.2
Number of years in poor health	16.1	19.0	8.2	9.9
% of life in poor health	20.3	22.9	43.9	46.9

# Public health challenges in an ageing society

*What are the key challenges that health system may face in 21<sup>st</sup> century?*

- Burden of disease in old age
- Familial resources for elderly care
- Financing elderly care & later life
- Care workforce for elderly

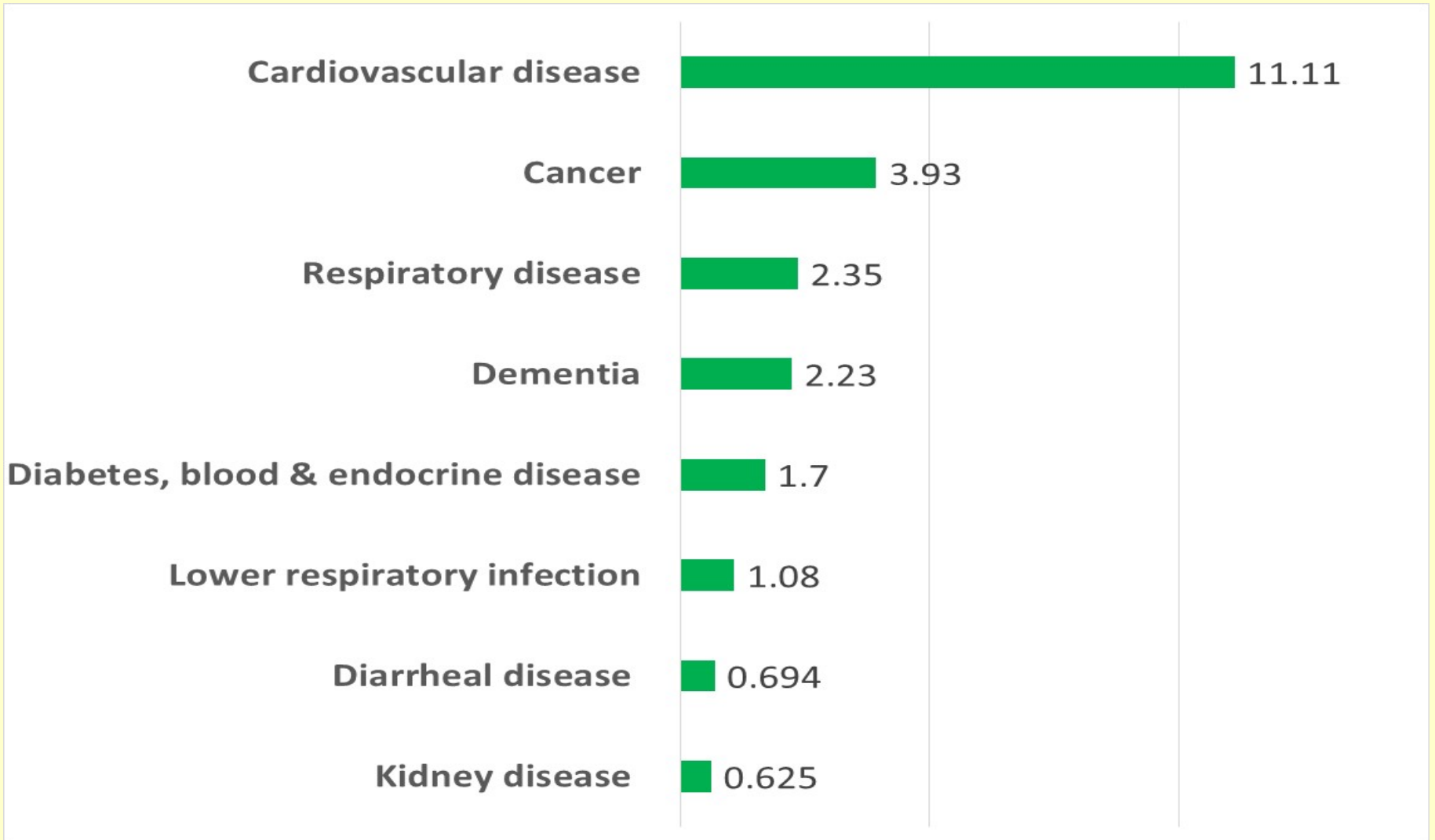
# Burden of disease in old age

- Epidemiological transition – changes in leading causes of deaths from acute and infectious diseases to chronic and non-communicable ones.
- Non-communicable diseases are big threats such as Heart disease, Stroke, Cancer, Diabetes and Dementia.
- These are also linked with disability, dependency & long-term care needs.
- Highly likely to suffer from multi-morbidities.

# Burden of disease

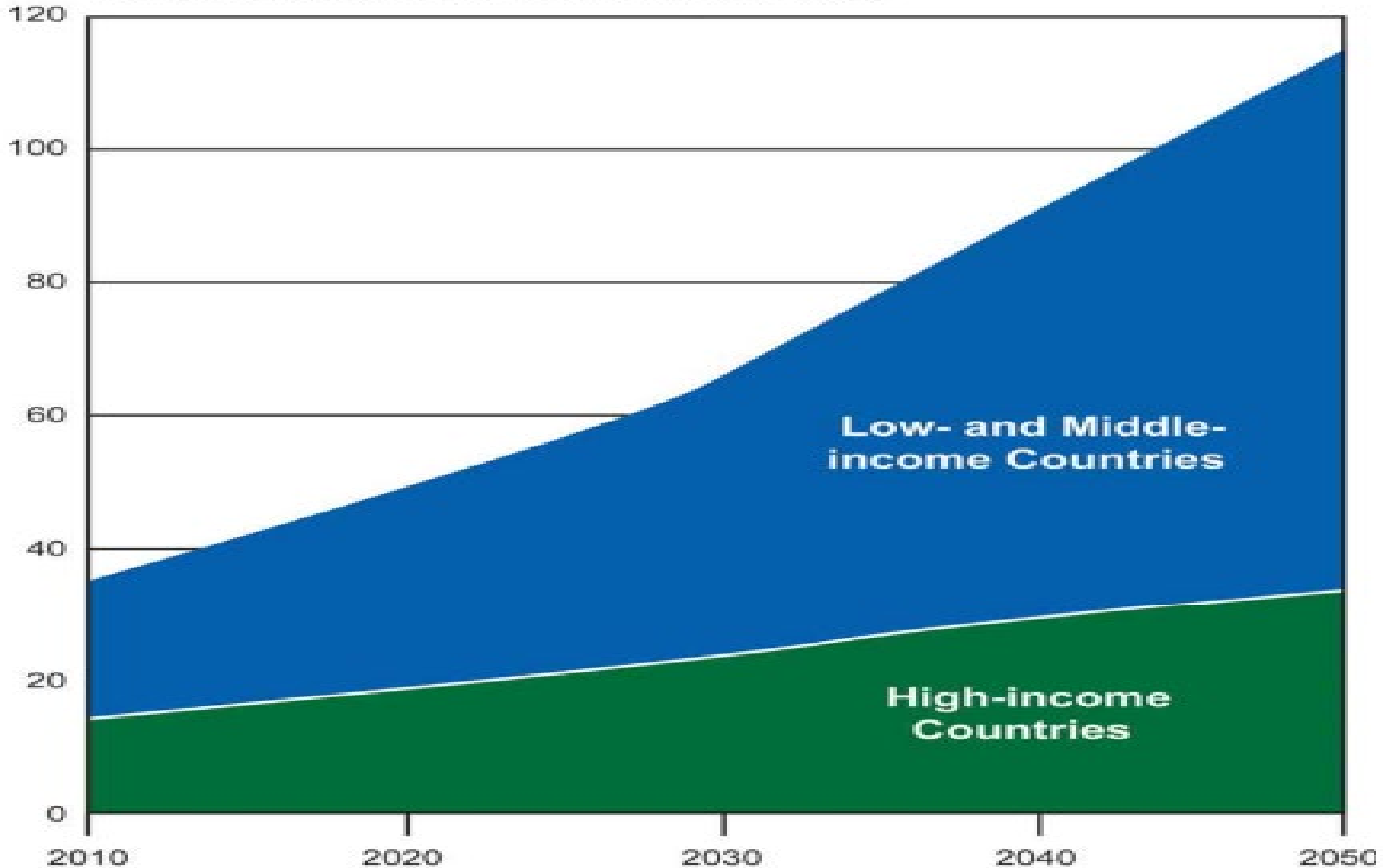
- Age-related diseases:
  - Cancer
  - Cardiovascular disease (Heart disease & Stroke)
  - Dementia (Ageing brain)
  - Diabetes
  - Osteoporosis
  - Arthritis
  - Vision, hearing, and other sensory disorders
- Link between ageing and age-related disease.

# Causes of deaths in adults 70+ years, World 2016 (millions)



# Global scenario of dementia

Number of people with dementia (millions)



# Dementia & cognition

- The number of people with dementia is steadily increasing in the UK.
- There are currently 700,000 people with dementia in the UK.
- There will be over a million people with dementia by 2025.
- 64% of people living in care homes have a form of dementia.
- Two thirds of people with dementia live in the community, while one third live in a care home.

# Dementia

- The well established prevalence rates for dementia in the UK are:
  - 40-64 years: 1 in 1400
  - 65-69 years: 1 in 100
  - 70-79 years: 1 in 25
  - 80+ years: 1 in 6
- Two thirds of people with dementia are women.
- People with learning disabilities may experience a higher risk of dementia because of premature ageing. Also, people with Down's syndrome have an increased genetic risk of developing dementia.

# Dementia

Alzheimer's disease is the most common form of dementia. The proportions of those with different forms of dementia can be broken down as follows:

Alzheimer's disease (AD): 62%

Vascular dementia (VaD): 17%

Mixed dementia (AD and VaD): 10%

Dementia with Lewy bodies: 4%

Fronto-temporal dementia: 2%

Parkinson's dementia: 2%

Other dementias: 3%

# Burden of disease

Complex multi-morbidities

+

Ageing

=

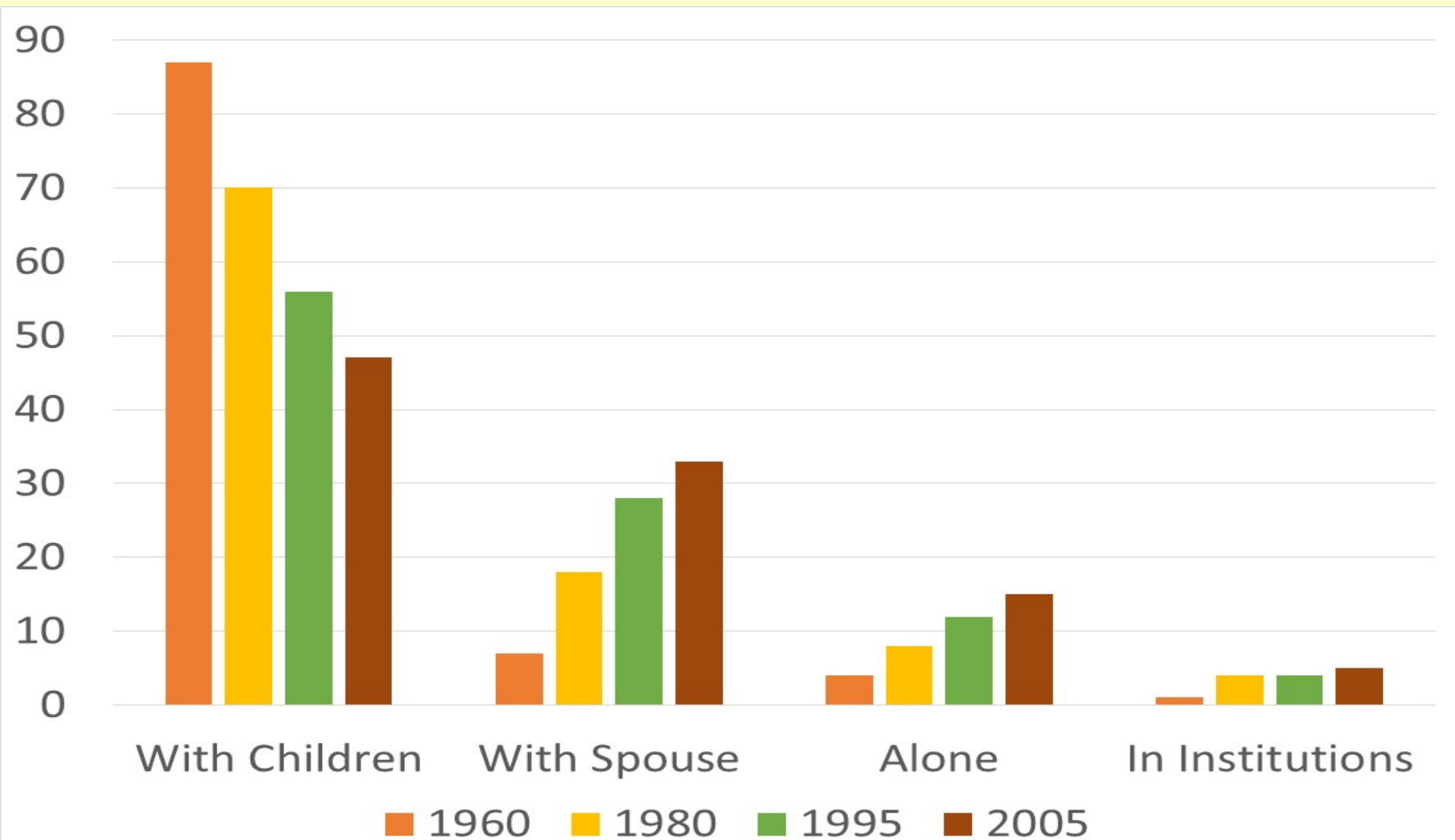
Double burden for carers

A big challenge for global public health

# Familial resources for elderly care

- Family has been known as the main sources of informal care in many countries, particularly in Asia.
- Changes in family size and structure.
- This has reshaped living arrangements in the household.
- Older people quickly become vulnerable within the household.

# Living arrangements of people aged 65+ in Japan

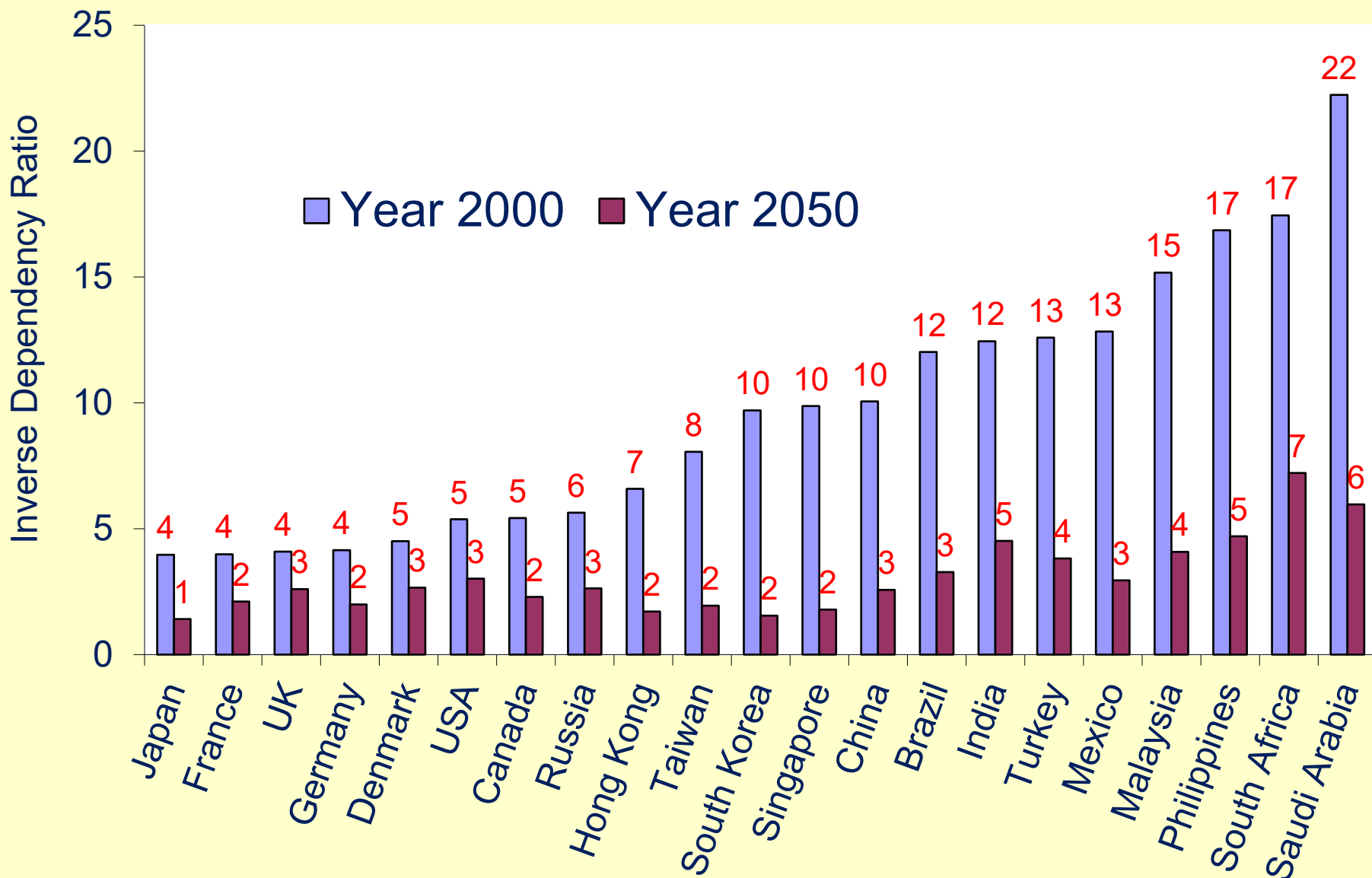


Traditionally, covering cost of elderly care was part of family responsibility.

Is it sustainable anymore? If not,

- Who is going to pay the cost of care in old age?
- Is it the Individual, or the Family, or the Government?

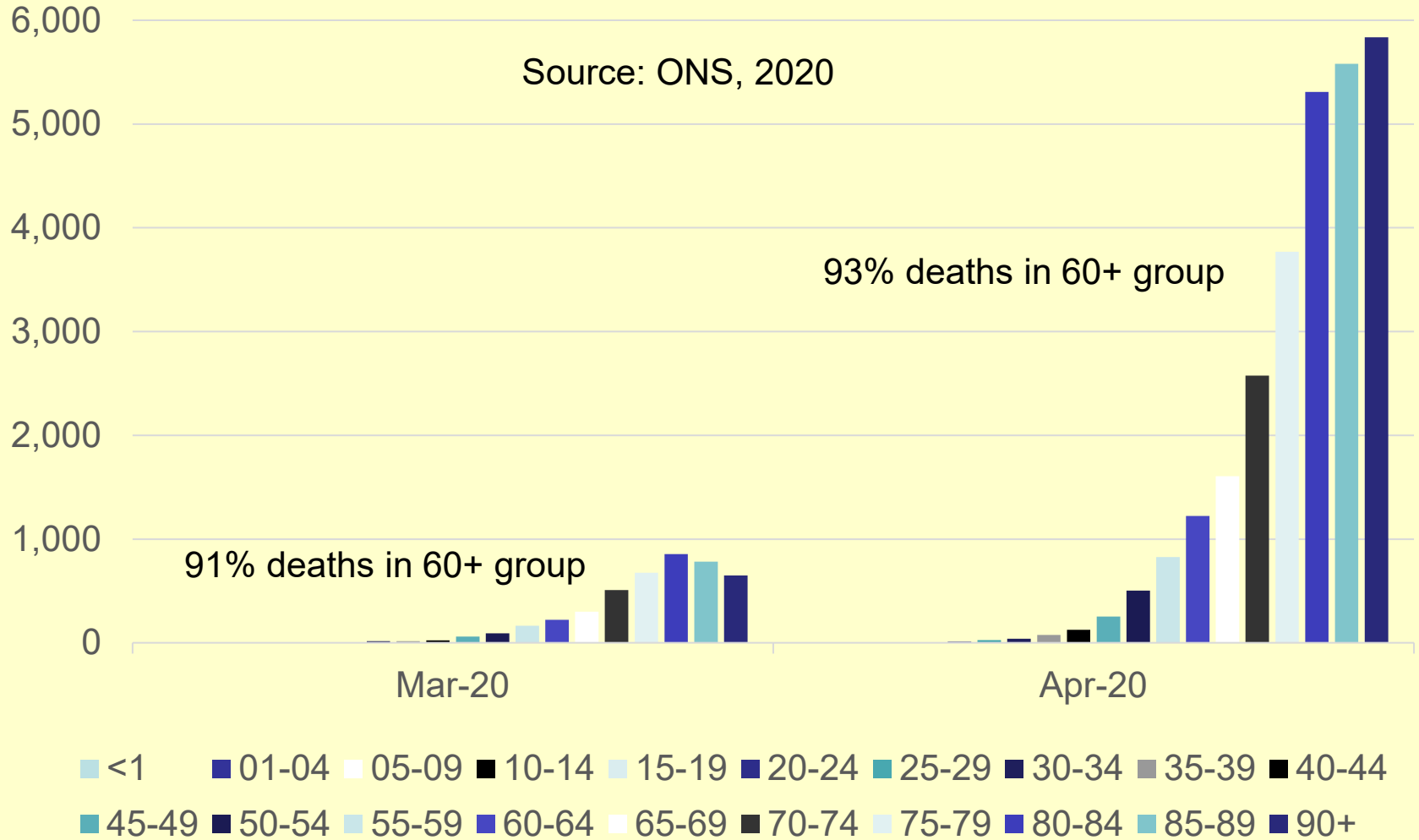
# Persons aged 15-64 years to support per 65+



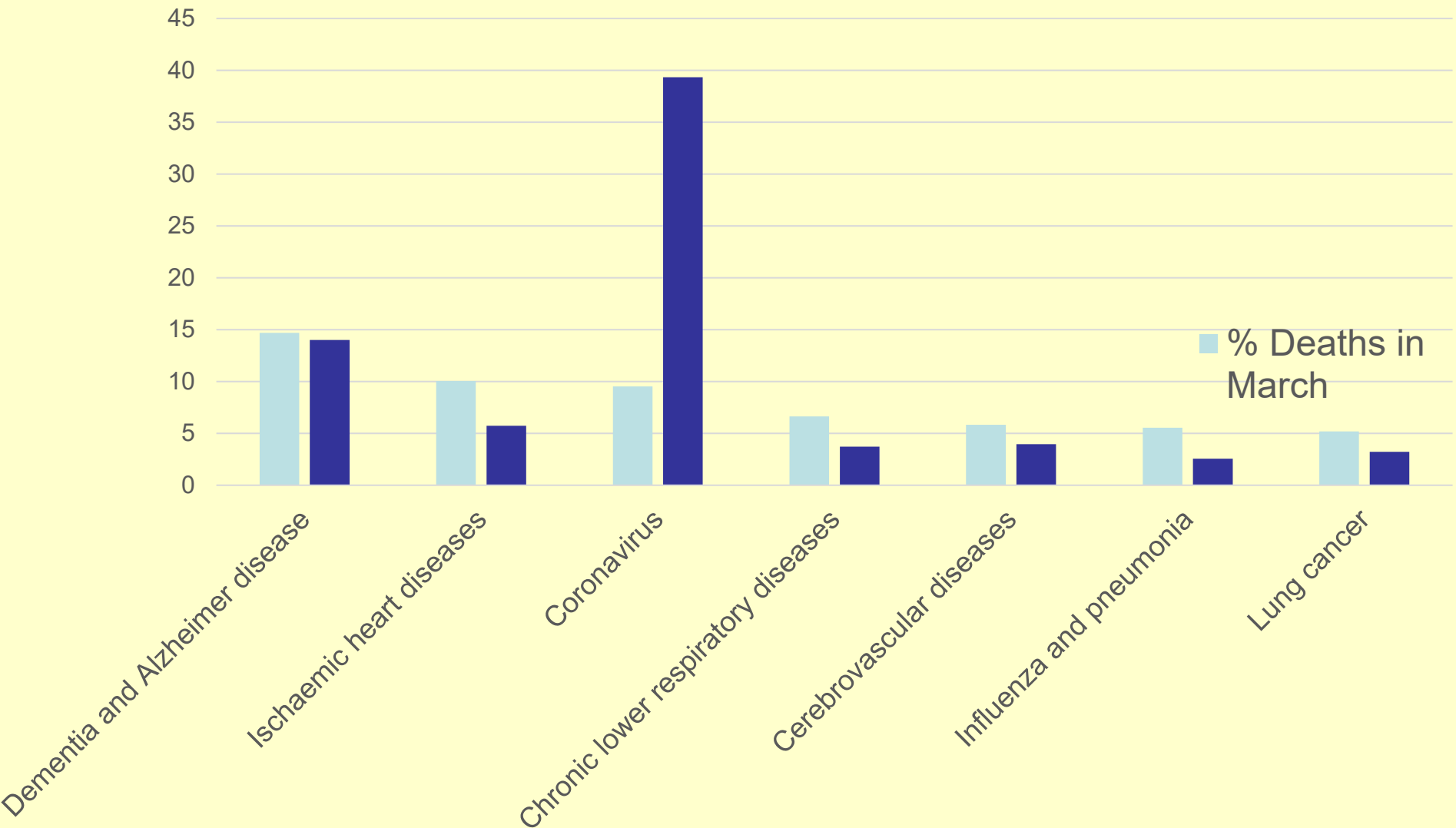
# Pressure on health system

- Population ageing is expected to lead to a higher need for expenditure on health & social care.
- Primary care & secondary care.
- Availability of long-term care facilities.
- Enhance pain management.
- Lessen the disabling effects of disease.
- Human resources required in care sector:
  - Occupational Therapists
  - Social workers
  - Health visitors
  - GP
- So main message is to deliver cost-effective care.

# Number of deaths due to COVID-19 in England and Wales



# Leading causes of deaths during Covid 19 pandemic in England and Wales 2020



# More likely to suffer from new communicable diseases

- Covid-19
- Monkeypox
- Pneumonia
- Complex morbidities

All these will put pressure on the existing health system as well as traditional support system.

# Care cost in Japan

The increase in the number of elderly people will put a strain on costs for medical and nursing care services.

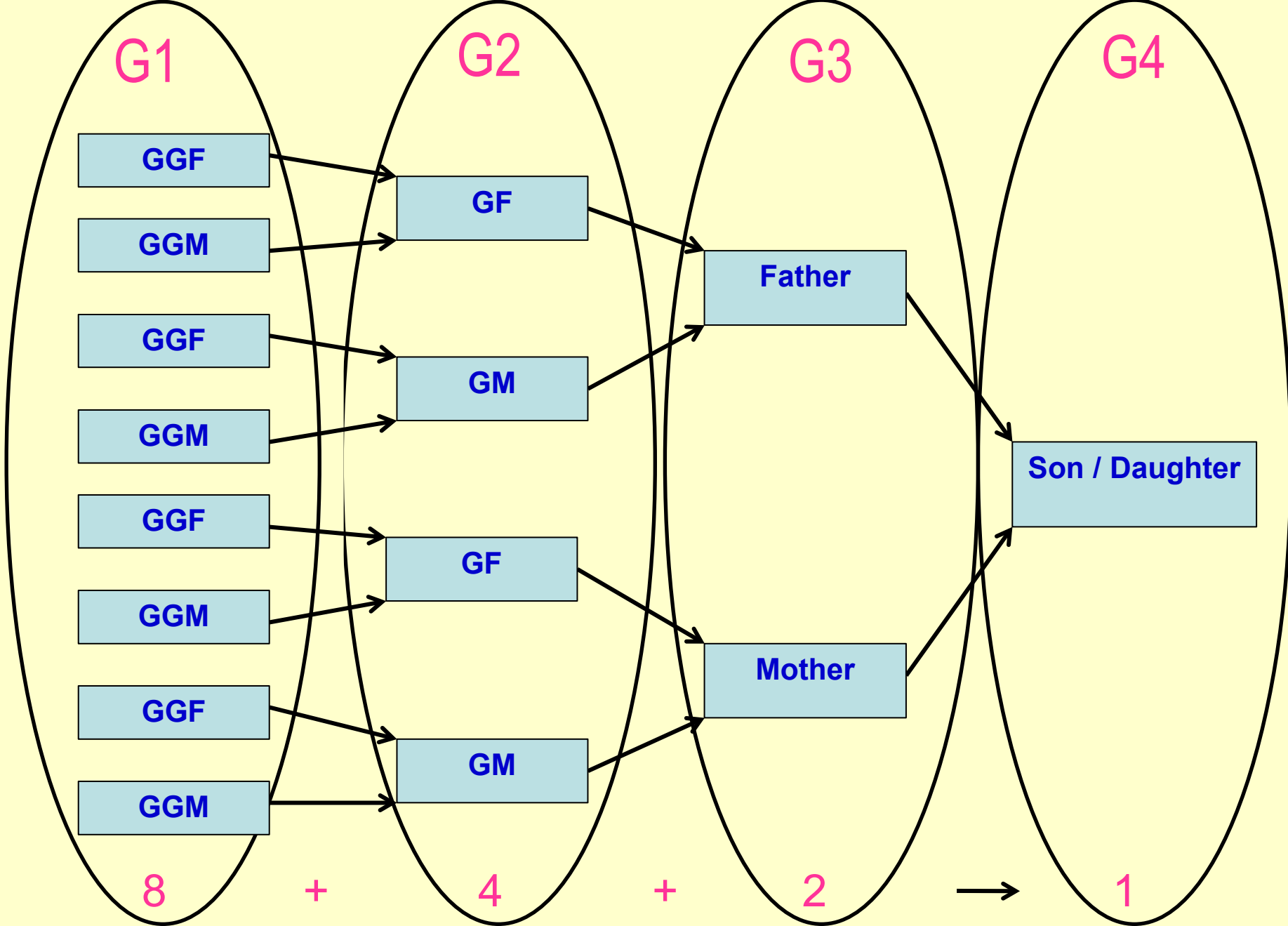
Medical service costs for people aged 75+ run to average of £6,090 per year.

Nursing care service costs for people aged 75+ works out an average of £3,572 a year.

Total annual cost per person aged 75+ is £10,000.

# Care cost in Japan

- Japan has integrated health care system
- Person centered health and social care is needed to meet the demand of elderly. Due to globalization elderly people's care demand is also increasing.
- Japan has sustainable healthcare policy
- Finance comes from long-term care insurance



The current generation (G4) may need to take care of max of 14 people

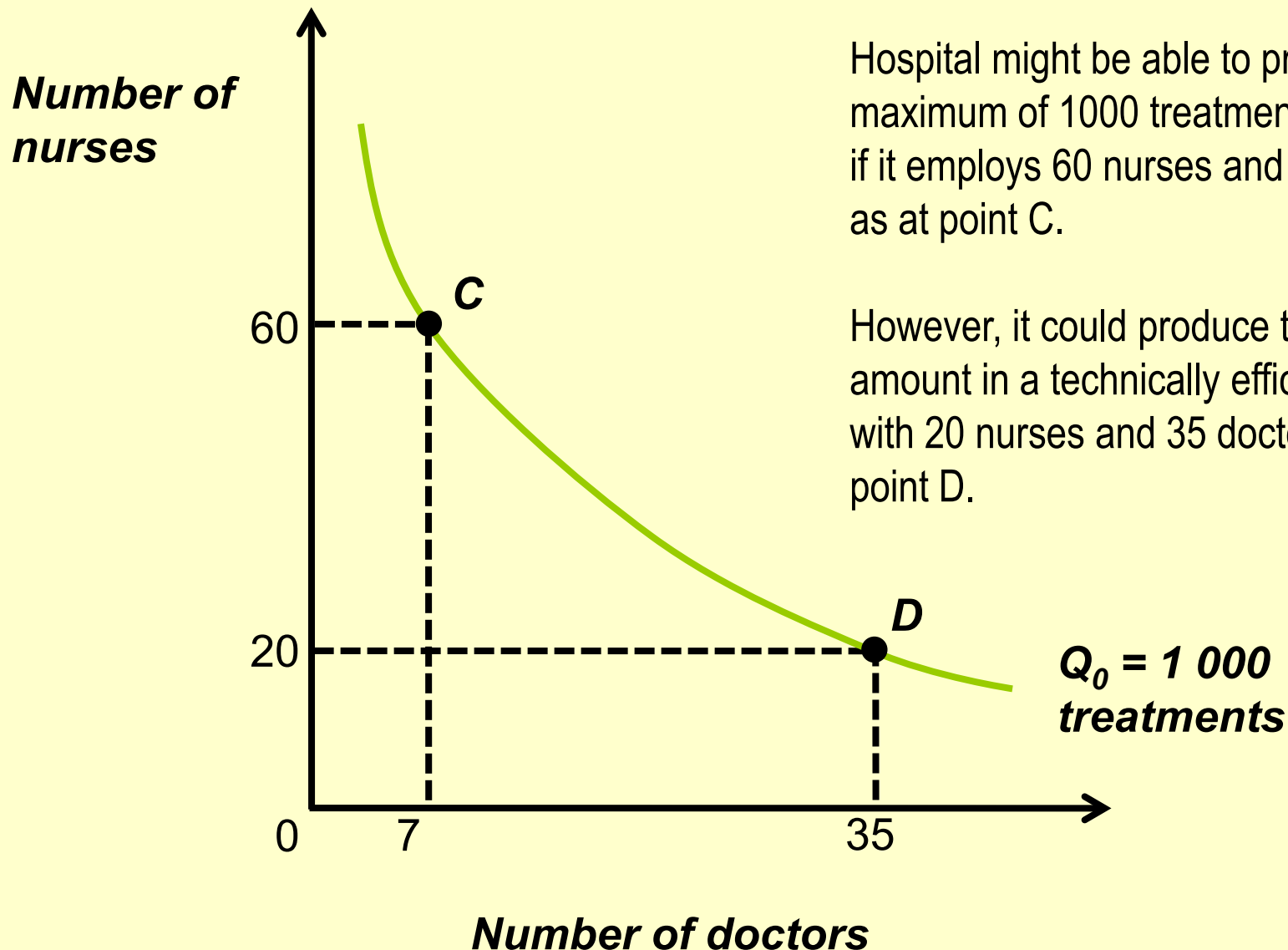
# Care burden

- New generation has an increasing care responsibility.
- Care responsibility usually shared by siblings within families.
- The lower the number of sibling the higher degree of care responsibility goes to them.
- Childlessness in the household may be a big concern for future care provision.

# Healthcare workforce for elderly

- Healthcare workforce include doctors, dentists, nurses as well as a host of allied health professionals involved in the healthcare.
- Growing demand for adequate number of care workforce for ageing population.
- Production of healthcare workforce for treatment.

# Production function of health



Hospital might be able to produce a maximum of 1000 treatments per year if it employs 60 nurses and 7 doctors, as at point C.

However, it could produce the same amount in a technically efficient way with 20 nurses and 35 doctors, as at point D.

# Concluding remarks

- The ageing population presents many challenges on existing public health system.
- Health system needs to be reformed to meet the increasing pressure of elderly care today.
- Public health curriculum should focus on geriatrics to acquire adequate knowledge and understanding about care demand of various segments of population of a country.
- Elderly people need affordable care and support in later life to live with a dignity.

# Contact

*Professor Hafiz Khan  
University of West London, UK*

[Hafiz.Khan@uwl.ac.uk](mailto:Hafiz.Khan@uwl.ac.uk)

