The Greying of the World: Ageing Matters

Commission on Population and Development
New York, 10th April 2007

Somnath Chatterji
Measurement and Health Information Systems
World Health Organization
Geneva
The world stands on the threshold of a demographic revolution called global aging.

Focus on Ageing

BusinessWeek

Global Aging

It’s not just Europe—China and other emerging-market economies are aging fast, too. There are solutions, but it’s time to act.

By Pete Engardio and Carol Matlack (p. 46)
Why Population Aging Matters
A Global Perspective
Ageing Headlines!

• "Life expectancy in most European countries is increasing now by five hours a day"

• "Population ageing will fundamentally change the lives of Europeans"

• "The scale of change will be comparable to or greater than the effects of climate change or global terrorism"
Ageing concerns

- Global leaders see a higher cost for social services, possible labor shortages, and higher costs for pensions, and health care as probable outcomes from a larger older population (AARP, 2004)
Background

• Changing demography of the ageing population especially in the developing world
• Burden of chronic illness
• Issues of compression of morbidity
Trends in Global Ageing

Percent of Population Aged 65 & Over: History and UN Projection

Source: UN (2005)
“Ageing is a development issue. Healthy older persons are a resource for their families, their communities and the economy.”

WHO Brasilia Declaration on Ageing, July, 1996
Feminization of ageing

- NUMBERS
- MORBIDITY
- POVERTY
Young vs. Old – trends in global ageing

Projected Increases in Global Population by Age

Increasing Burden of Chronic Non-Communicable Disease

Communicable, maternal, perinatal, and nutritional conditions
Noncommunicable diseases
Injuries
<table>
<thead>
<tr>
<th>Country</th>
<th>Percent Age 65 or Older</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>19.5</td>
</tr>
<tr>
<td>Italy</td>
<td>19.5</td>
</tr>
<tr>
<td>Germany</td>
<td>18.6</td>
</tr>
<tr>
<td>Greece</td>
<td>17.8</td>
</tr>
<tr>
<td>Sweden</td>
<td>17.3</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>17.2</td>
</tr>
<tr>
<td>Belgium</td>
<td>17.1</td>
</tr>
<tr>
<td>Portugal</td>
<td>17.0</td>
</tr>
<tr>
<td>Spain</td>
<td>16.9</td>
</tr>
<tr>
<td>Estonia</td>
<td>16.7</td>
</tr>
<tr>
<td>Latvia</td>
<td>16.5</td>
</tr>
<tr>
<td>Croatia</td>
<td>16.4</td>
</tr>
<tr>
<td>France</td>
<td>16.4</td>
</tr>
<tr>
<td>United Kingdom</td>
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<tr>
<td>Finland</td>
<td>16.0</td>
</tr>
<tr>
<td>United States</td>
<td>12.4</td>
</tr>
</tbody>
</table>

### Speed of Population Aging in Selected Countries

**Number of Years for Percent of Population Age 65 or Older to Rise from 7% to 14%**

<table>
<thead>
<tr>
<th>Country</th>
<th>Range</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>More developed countries</td>
<td></td>
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</tr>
<tr>
<td>France</td>
<td>1865-1980</td>
<td>115</td>
</tr>
<tr>
<td>Sweden</td>
<td>1890-1975</td>
<td>85</td>
</tr>
<tr>
<td>Australia</td>
<td>1938-2011</td>
<td>73</td>
</tr>
<tr>
<td>United States</td>
<td>1944-2013</td>
<td>69</td>
</tr>
<tr>
<td>Canada</td>
<td>1944-2009</td>
<td>65</td>
</tr>
<tr>
<td>Hungary</td>
<td>1941-1994</td>
<td>53</td>
</tr>
<tr>
<td>Poland</td>
<td>1966-2013</td>
<td>47</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1930-1975</td>
<td>45</td>
</tr>
<tr>
<td>Spain</td>
<td>1947-1995</td>
<td>45</td>
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<tr>
<td>Japan</td>
<td>1970-1996</td>
<td>26</td>
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<tr>
<td>Less developed countries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>2000-2041</td>
<td>41</td>
</tr>
<tr>
<td>Chile</td>
<td>1998-2025</td>
<td>27</td>
</tr>
<tr>
<td>China</td>
<td>2000-2026</td>
<td>26</td>
</tr>
<tr>
<td>Jamaica</td>
<td>2008-2033</td>
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<tr>
<td>Tunisia</td>
<td>2008-2032</td>
<td>24</td>
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<tr>
<td>Sri Lanka</td>
<td>2004-2027</td>
<td>23</td>
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<td>Thailand</td>
<td>2003-2025</td>
<td>22</td>
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<tr>
<td>Brazil</td>
<td>2011-2032</td>
<td>21</td>
</tr>
<tr>
<td>Colombia</td>
<td>2017-2037</td>
<td>20</td>
</tr>
<tr>
<td>Singapore</td>
<td>2000-2019</td>
<td>19</td>
</tr>
</tbody>
</table>

* Dates show the span of years when percent of population age 65 or older rose (or is projected to rise) from 7 percent to 14 percent.

China’s Age Distribution

Population Structures by Age and Sex

1950

2000

2050

Age

## Inequalities – global extremes

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>Sierra Leone</th>
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<tbody>
<tr>
<td><strong>LEB</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>81.9</td>
<td>34.0</td>
</tr>
<tr>
<td>Male</td>
<td>78.4</td>
<td>32.4</td>
</tr>
<tr>
<td>Female</td>
<td>85.3</td>
<td>35.7</td>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>Sierra Leone</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HALE</strong></td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>75.0</td>
<td>28.6</td>
</tr>
<tr>
<td>Male</td>
<td>72.3</td>
<td>27.2</td>
</tr>
<tr>
<td>Female</td>
<td>77.7</td>
<td>29.9</td>
</tr>
</tbody>
</table>
Evidence from the US: disability rates are declining

Chronically disabled Americans 65 years and older

- **Projected numbers**
- **Actual numbers**

Population projections: three scenarios

UN Population Projections (2002 revision)

- Baseline scenario
- Pessimistic scenario
- Optimistic scenario
Broad trends in Mortality for Group II causes

Group II deaths

Deaths (millions)

Year


Other
Digestive
Respiratory
Cancer
CVD
Global Mortality projections for selected causes

Projected global deaths (millions)

Year

2000 2010 2020 2030

Cancers
IHD
Stroke
HIV/AIDS
Other infectious
Road traffic accidents
TB
Malaria

Measurement and Health Information
World Health Organization
Decomposition of Deaths (millions)

- Total change
- Population growth
- Population ageing
- Epidemiological change

HIV/AIDS, Other Group I, Group II, Group III
Global projected tobacco-attributable deaths

- Medium and low income countries
- High income countries

Year:
- 2000
- 2005
- 2010
- 2015
- 2020
- 2025
- 2030
- 2035

Tobacco-caused deaths (millions):
- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
WHO Study on Global Ageing and Adult Health

SAGE

- China
- India
- Russia
- Mexico
- South Africa
- Ghana
- Kenya
- Tanzania
- Bangladesh
- Viet Nam
- Indonesia

Legend
- Full SAGE only
- Full SAGE + at INDEPTH sites

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement. © WHO 2005. All rights reserved.
SAGE Objectives

• To obtain reliable, valid and comparable data on levels of health on a range of key domains for older adult populations

• To examine patterns and dynamics of age-related changes in health using a longitudinal design

• To supplement and cross-validate self-reported measures of health and the anchoring vignette approach to improving comparability of self-reported measures, through measured performance tests for selected health domains

• To collect data on health examinations and biomarkers to improve reliability of data on morbidity, risk factors and monitor effect of interventions
SAGE Objectives

• Follow-up to study intermediate outcomes, monitor trends, examine transitions and life events, and address relationships between determinants and health and health-related outcomes;

• To develop a mechanism to link survey data to data from demographic surveillance sites - INDEPTH

• To build linkages with other national and cross-national ageing studies – SHARE, ELSA, KLoSA, MHAS, Chile, Argentina

• To provide a public-access information base for an evidence based policy debate amongst all stakeholders
Living arrangements of the elderly

Percentage of single member households of all households with at least one person aged 65 or more by World Bank category

World Bank category:
- High
- Upper-Middle
- Lower-Middle
- Low

Percent
Health Status by Age

Health Score by Sex and Agegroup, according to World Bank Categories

Source: WHS 2002
Tobacco Use

Tobacco Use by World Bank categories and age groups

Percent

Tobacco Use by World Bank categories and age groups

Age groups

High
Upper Middle
Lower middle
Low

Measurement and Health Information

World Health Organization
Insufficient Physical Activity by World Bank categories and age groups

Percent

- High
- Upper middle
- Lower middle
- Low

50-59
60-69
70-79
80+

Measurement and Health Information

World Health Organization
Chronic Conditions

Percentage of respondents with one or more chronic condition using standard algorithms by age group and World Bank categories

Percent

<table>
<thead>
<tr>
<th>Age Group</th>
<th>High</th>
<th>Upper-middle</th>
<th>Lower-middle</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-59</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>60-69</td>
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<tr>
<td>70-79</td>
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<tr>
<td>80+</td>
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</tbody>
</table>
Stress and Satisfaction

Health and Stress
by Age and by World Bank Category

High

Upper-middle

Lower-middle

Low

Overall health 1
Stress 1
Satisfaction with health

Overall health 2
Stress 2
Summary Results

• Older populations in worse off health
• Low income countries worse than high income countries
• Worse health associated with less satisfaction, high stress and presence of chronic illness
• Worse health correlated with difficulties with work and household activities
Ageing Matters

• Focus on functioning
• Improve health and well-being
• Decrease disease and death