Global Aging: Key Elements of The Demographic Transition

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Canada’s Changing Age Structure


Source: CD-ROM, files as7196.xls and as9606.xls. - CD-ROM, fichiers as7196.xls et as9606.xls.
Overview of Presentation

- What is population aging?
- Why does it occur?
- Where is it happening?
- What are the “real” costs and benefits of population aging to societies?
- What’s our lead time?
- What do we need to do to achieve a society for all ages?
Population Aging is Happening worldwide

- Societies are termed “old” if 14% or more of pop. are aged 65+
- Annual increase in pop. 65+ = 2.3% vs. 1.7% for world pop.
- Currently, 24/25 of countries with highest % 65+ are in Europe
- 360 million of the est. 600 million aged 60+ live in developing world
- In 2000, 45% of “oldest old” (people 80+) lived in China, USA, India & Japan
- By 2020 there will be 1 billion aged 65+ and over 700 million will live in the developing world
Percent Aged 65 and Over 1990

Figure 1-1
Percent Aged 65 or Over

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Less than 3.0
3.0 to 7.9
8.0 to 12.9
13.0 or more
Percent Aged 65 and Over 2025
Number of Years Required for Percent of Pop. 65+ to grow from 7-14%

- Developed Countries
  - France (1865-1980): 115 years
  - Sweden (1890-1975): 85 years
  - Australia (1938-2012): 74 years
  - United States (1944-2012): 68 years
  - Canada (1944-2008): 64 years
  - Hungary (1941-1994): 53 years
  - UK (1930-1975): 45 years
  - Japan (1970-1996): 26 years

- Developing Countries
  - Chile (2000-2030): 30 years
  - Azerbaijan (2000-2028): 28 years
  - China (2000-2007): 27 years
  - Brazil (2011-2036): 25 years
  - Colombia (2016-2038): 22 years
  - Singapore (1997-2018): 21 years
  - Jamaica (2015-2033): 13 years
  - Tunisia (2000-2035): 15 years
The Epidemiological Transition

- Decline in deaths from infectious diseases (e.g. small pox; TB)
- More chronic disease
What Causes Population Aging?

Two simultaneous trends
- More people living to be old
- Drop in fertility rate
Birthrates of Major Advanced Countries

Sources: Foreign country statistics: UN, Demographic Yearbook; Council of Europe, Recent Demographic Developments in Europe and North America.
## Total Fertility Rates G8 Countries

(Average number of children born to a woman during her lifetime)

Source: PRB 2010

<table>
<thead>
<tr>
<th>Country</th>
<th>1970</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>2.3</td>
<td>1.7</td>
</tr>
<tr>
<td>France</td>
<td>2.5</td>
<td>2.0</td>
</tr>
<tr>
<td>Germany</td>
<td>2.0</td>
<td>1.3</td>
</tr>
<tr>
<td>Italy</td>
<td>2.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Japan</td>
<td>2.1</td>
<td>1.3</td>
</tr>
<tr>
<td>Russia</td>
<td>2.0</td>
<td>1.5</td>
</tr>
<tr>
<td>UK</td>
<td>2.4</td>
<td>1.9</td>
</tr>
<tr>
<td>USA</td>
<td>2.5</td>
<td>2.0</td>
</tr>
<tr>
<td>Region</td>
<td>All Methods</td>
<td>Modern Methods</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Africa</td>
<td>26</td>
<td>20</td>
</tr>
<tr>
<td>N. America</td>
<td>76</td>
<td>72</td>
</tr>
<tr>
<td>L. America &amp; Caribbean</td>
<td>70</td>
<td>62</td>
</tr>
<tr>
<td>Oceania</td>
<td>60</td>
<td>57</td>
</tr>
<tr>
<td>East Asia</td>
<td>80</td>
<td>79</td>
</tr>
<tr>
<td>Europe</td>
<td>67</td>
<td>51</td>
</tr>
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</table>
Growing Older

The birthrate has dropped and people are living longer. What will happen as Japan’s society ages?
Seniors of today are different than their ancestors
They live longer

<table>
<thead>
<tr>
<th>Year</th>
<th>Males</th>
<th>Females</th>
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</thead>
<tbody>
<tr>
<td>1931</td>
<td>62.2</td>
<td>65.3</td>
</tr>
<tr>
<td>1941</td>
<td>63.7</td>
<td>69.0</td>
</tr>
<tr>
<td>1951</td>
<td>66.7</td>
<td>72.4</td>
</tr>
<tr>
<td>1960-62</td>
<td>68.9</td>
<td>75.2</td>
</tr>
<tr>
<td>1970-72</td>
<td>69.9</td>
<td>76.7</td>
</tr>
<tr>
<td>1980-82</td>
<td>72.6</td>
<td>79.6</td>
</tr>
<tr>
<td>1990-92</td>
<td>75.2</td>
<td>81.3</td>
</tr>
<tr>
<td>1998-2001</td>
<td>78.0</td>
<td>82.8</td>
</tr>
<tr>
<td>Gain</td>
<td>15.8 years</td>
<td>17.5 years</td>
</tr>
</tbody>
</table>
Reflecting the Epidemiological Transition” they are generally

- Physically healthier than their forbearers
- Less likely to die from infectious disease

But seniors are not a homogeneous group
Beware of Apocalyptic Demography

An ideology that the increasing numbers of older people will have catastrophic consequences for society, more specifically -- that they will “break the bank” with the demands that they will make on the health care system and on public pensions
Apocalyptic Demography Themes

1. Homogenization
   - two conflicting themes re: old people
   - rose-coloured glasses re: baby boomers
1. Old people are sick and poor
Old people are “greedy geezers” I.e. well-off leisurers who golf and cruise at public expense and have little concern for the younger generation.
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Boomers:
Poverty Rate – Married couples aged 65 and over

Poverty Rates – Unattached Persons Canada

Key individual difference variables that need to be considered include:

- Gender & Culture
  - housing & living arrangement
  - access to transportation
  - communication (including access to/familiarity with modern ICT)
  - education & literacy

- Health & Functional status
### Elderly Population by Living Arrangement & Age, Canada, 2001

<table>
<thead>
<tr>
<th></th>
<th>65 and over</th>
<th>65-74</th>
<th>75-84</th>
<th>85 and over</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Households</td>
<td>92.6%</td>
<td>97.8%</td>
<td>91.8%</td>
<td>68.4%</td>
</tr>
<tr>
<td>Family</td>
<td>63.6%</td>
<td>73.9%</td>
<td>56.5%</td>
<td>32.6%</td>
</tr>
<tr>
<td>w/relative</td>
<td>1.0%</td>
<td>0.9%</td>
<td>1.2%</td>
<td>1.2%</td>
</tr>
<tr>
<td>w/non-rel</td>
<td>1.3%</td>
<td>1.4%</td>
<td>1.2%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Alone</td>
<td>26.7%</td>
<td>21.5%</td>
<td>33.0%</td>
<td>33.7%</td>
</tr>
<tr>
<td>Collective Dwellings</td>
<td>7.4%</td>
<td>2.2%</td>
<td>8.2%</td>
<td>31.6%</td>
</tr>
</tbody>
</table>
Diversity will increase in the future

- E.g. More people with HIV/AIDS will survive to be old
- Same is true for people with congenital and acquired mental and/or physical disabilities
Other Apocalyptic Demography Themes

- 2. Age-blaming
- 3. Population Aging seen as a significant social problem
- 4. Intergenerational inequity or injustice arguments
  - unfair that they have to pay
  - “kids vs canes”
Summary & Conclusions

- We have some lead time
- To achieve a *Society for all Ages* we must adopt
  - an “Active Ageing” (WHO, 2002) or “Health Determinants” Approach to Policy, Programs and Services (Health Canada, 2002)
<table>
<thead>
<tr>
<th>Year of birth</th>
<th>Year aged 60</th>
<th>Year aged 65</th>
<th>Year aged 75</th>
<th>Year aged 85</th>
</tr>
</thead>
<tbody>
<tr>
<td>1946 (start of boom)</td>
<td>2006</td>
<td>2011</td>
<td>2021</td>
<td>2031</td>
</tr>
<tr>
<td>1956</td>
<td>2016</td>
<td>2021</td>
<td>2031</td>
<td>2041</td>
</tr>
<tr>
<td>1960 (peak)</td>
<td>2020</td>
<td>2025</td>
<td>2035</td>
<td>2045</td>
</tr>
<tr>
<td>1966 (start of bust)</td>
<td>2026</td>
<td>2031</td>
<td>2041</td>
<td>2051</td>
</tr>
</tbody>
</table>
Health Canada’s 12 Determinants of Health

- Biologic & Genetic Endowment
- Healthy Child Development
- Gender
- Education
- Physical Environment
- Social Environment
- Social Support Networks
- Employment & Working Conditions
- Culture
- Income & Social Status
- Life Style
- Health Care
We also need to consider period and cohort effects - i.e. the historical period in which a person is born and moves through the life course.

- E.g. change in average age of retirement; repeal of mandatory retirement policy.
Wahai Inoue, who boasts a career of 55 years as an engineer, is a good source of advice for the company’s younger employees.
Fumio Imamura and local senior citizen at a post-screening lunch session.
References


