### **Aging and Health**

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435 Lecture Notes by Sara Alkhalifah

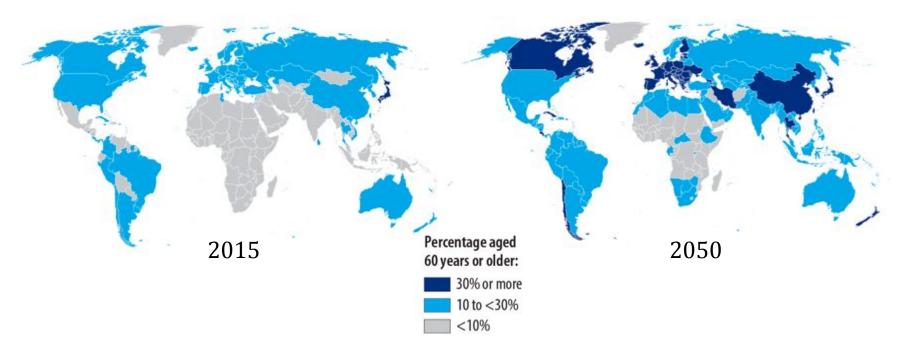
**Boys' slides** 

**Original Content | Titles | Additional Notes | Important** 

### **Learning objectives**

- What is ageing?
- Misconceptions on ageing and health.
- A new concept of functional ability
- What is Geriatrics?
- Health Promotion recommendations for Older Adults
- Preventive Health Care

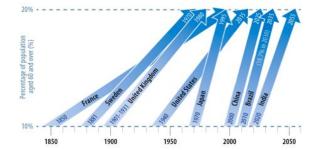
### **People are getting older**



We know that populations are getting older overall. The number of people aged 60 years or older will rise from 900 million to 2 billion between 2015 and 2050 (moving from 12% to 22% of the total global population). These two map shows how populations are changing in different countries around the world.

# **Population aging**

- Population ageing is happening much more quickly than in the past.
- For example, while France took almost 150 years to adapt to a change from 10% to 20% in the proportion of the population that was older than 60 years, places such as Brazil, China and India will take slightly more than 20 years to make the same adaptation.
- There are **two** key drivers of population ageing. The first is is falling fertility rates, and the second is people living longer overall.
- This picture shows time for percentage of population older than age 60 to double

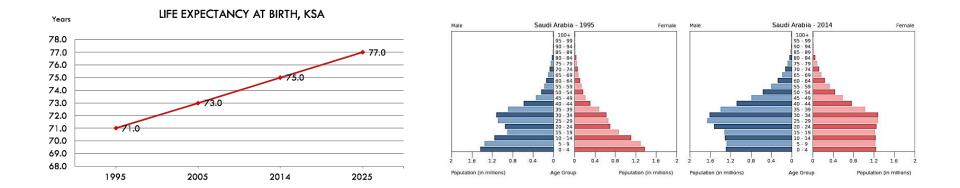


## What Is Aging?

- Not so straightforward. There's a lot of controversy on the definition of aging.
- The CDC uses the age of 65 years and above to refer to elderly population
- The United Nations has not adopted a standard criterion but use the age of 60 years and above to refer to older or elderly population
- Simply refer to the passage of time; chronological.
- At the biological level, ageing is associated with the accumulation of a wide variety of <u>molecular</u> and <u>cellular</u> damage → leads to a gradual decrease in physiological reserves, an increased risk of many diseases and a general decline in the intrinsic capacity of the individual. Ultimately, it results in death.
- X linear X consistent
- So it doesn't necessarily depend on age. Everyone ages at a different age (if that makes sense), everyone's body and mind change at a different age.
- Furthermore... Shifts in roles and social positions, and the need to deal with the loss of close relationships.
- Goals, motivational priorities and preferences also appear to change, some changes may be driven by an adaptation to loss, others reflect ongoing psychological development in older age that may be associated with "the development of new roles, viewpoints and many interrelated social contexts".

### **Classification of elderly**

- Classified into:
  - Young old (60 to less than 75 years)
  - Old (75 years to less than 85 years)
  - Oldest old (85 years and above)
  - Frail elderly (above 60 years with cognitive impairment or a disability)



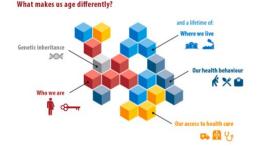
# **People are living longer**

- Overall life expectancy for a baby born today is <u>71 years</u>.
- But a person who is currently 60 years of age can expect to live 20 years more, on average.
- How can these extra 20 years be spent?
  - A longer life brings with it opportunities, not only for older people and their families, but also for societies as a whole. Additional years provide the chance to pursue new activities such as further education, a new career or pursuing a long neglected passion. Older people also contribute in many ways to their families and communities.
  - Yet the extent of these opportunities and contributions depends heavily on one factor: health.



... It all depends on HEALTH

- 1. There is no "typical" older person
  - Biological ageing is only loosely associated with person age in years. Some 80 year-olds have physical and mental capacities similar to many 20 year-olds. Others experience declines in physical and mental capacities at much younger ages.
  - Every 60 year old is different, some are healthier than others, so not all are considered elderly.
- 2. Health in older age is not random
  - Picture: everything can be modified except for genetics which represent only a small area.



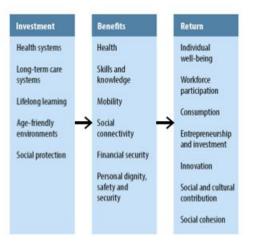
- 3. Older age does not imply dependence
  - Ageism is the stereotyping, prejudice, and discrimination against people on the basis of their age.
  - $\circ$  ~ Ageism has harmful effects on the health of older adults.
  - Overlooked for employment, restricted from social services and stereotyped in the media, ageism marginalises and excludes older people in their communities.
  - For example, a healthy 60 year old will have to retire and no one else will employ them only because they're 60 even though they're completely healthy.
  - Barriers to healthy aging:
    - Outdated and ageist stereotypes
    - Inadequate policies
    - Lack of accessibility: to housing, transportation, social facilities
    - Inadequate or absent services. For example, health systems are often designed to cure acute conditions only.
    - Lack of consultation and involvement in the decisions that affect their lives.

- 4- Population ageing will increase health-care costs but not by as much as expected
  - In fact, in some high-income countries, health-care expenditure per person actually falls significantly after the age of around **75**.
  - Because more and more people are growing into advanced old age, enabling people to lead long and healthy lives may therefore actually ease pressures on in action in health-care costs.
  - The association between age and health-care costs is also strongly influenced by the health system itself.
- 5-70 is not yet the new 60
  - here is little evidence that older people today are experiencing life in better health than was the case for their parents or their grandparents.
  - Investing in Healthy Ageing is crucial for countries to benefit from population ageing.

- 6- Good health in older age is not just the absence of disease
  - Older people may have limited capacity, but they may still be able to shop if they have access to:
    - anti-inflammatory medication,
    - an assistive device (such as a walking stick, wheelchair or scooter) and
    - live close to affordable and accessible transport.
  - This combination of individuals and their environments, and the interaction between them, is their functional ability.
  - The goal: maximize functional ability

- 7- Families are important but alone cannot provide the care many older people need
  - Long-term care is about more than meeting basic needs it is about preserving older persons' rights (including to health), fundamental freedoms and human dignity.
  - This means caregivers require adequate training and support.
  - Responsibility for long-term care should be shared between families, governments and other sectors in order to ensure access to quality health care and avoid financial hardship to both older people and their caregivers.

- 8- Healthy Ageing is an investment, not a cost
  - In reality, older people make many positive contributions to society; and health and social care expenditures for older people are an investment rather than a cost. These investments bring benefits to older people and returns for society as a whole.
  - $\circ$  ~ Eventually, benefits will increase and costs will decrease.



- 9- It's not all about genes
  - Healthy ageing starts at birth with our genetic inheritance, only approximately 25% of the diversity in longevity is explained by genetic factors.
  - The other 75% is largely the result of the cumulative impact of our interactions with our physical and social environments, which shape behaviours and exposures across the life course.
- 10- Mandatory retirement ages do not help create jobs for youth
  - But they reduce older workers' ability to contribute.
  - They also reduce an organization's opportunities to benefit from the capabilities of older workers.
  - Age has not been shown to be a reliable indicator for judging workers' potential productivity or employability.

#### GLOBL CHALLENGES FACING THE INCREASE IN THE ELDERLY POPULATION

- Strains on the social security systems;
- Demands for health care and social services;
- Needs for trained-health workforce in **gerontology**;
- Needs for long-term care, particularly for dementia; and
- Counteract pervasive ageism that denies older people the rights and opportunities available for other adults.

### **Problems of the elderly**

- Physical problems:
  - Chronic/degenerative diseases
  - Nutrition problems
  - Impairment of special senses
  - Unintentional injuries
  - Deterioration of functional abilities
  - Polypharmacy
- Mental problems:
  - Cognitive impairment: (Dementia)
  - Psychological problems: (Depression)
- Social problems:
  - Low social contact
  - Low social involvement
  - Decrease income
  - Unsuitable living conditions

- Physical and mental health problems among the elderly are characterized by
  - Insidious onset
  - Multitude of ailments
  - Rapid deterioration

#### **Problems of the elderly Cont.**

- Nutrition problems:
  - **Primary malnutrition:** Reduced intake due to social or economic reasons
  - Secondary malnutrition: Excess loss and reduced absorption
  - Overweight and obesity: imbalance between intake and expenditure of energy
- Polypharmacy: is defined as taken more than **5** drugs at a time including
  - $\circ$  Prescribed medications
  - Over the counter medications
  - Herbal treatment
- Polypharmacy is the result of
  - Presence of multitude of diseases
  - Physician's aim to control physical problems
  - Polypharmacy may have adverse health effects on the elderly in the form of side effects and drug interaction.

#### **Problems of the elderly Cont.**

- Vision impairment:
  - Cataract
  - Corneal opacity
  - Macular degeneration
- Hearing impairment
- Deterioration of smell
- All of which leads to:
  - $\circ$  Increase dependence on others
  - Psychological problems (frustration of not hearing others)
  - Social isolation
  - Increase rate of unintentional injuries

- Unintentional injuries:
  - Mostly falls in the elderly own home
  - Less likely falls outside the home
- Which leads to:
  - Fractures
  - Being bed bound
  - Slow recovery
  - Unable to regain their status
  - Increase dependency

### **Insturmental activities of daily living:**

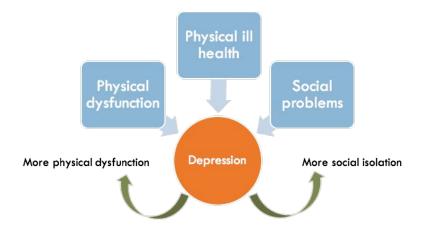
- Reflects the abilities of the elderly to live independently. It includes:
  - Housekeeping
  - Shopping
  - $\circ$  Cooking
  - $\circ$  Use of transportation
  - Use of telephone
  - Dealing with money
  - Taking medications

### **Activities of daily living:**

- Reflects the abilities of the elderly for self-care. It includes:
  - Bathing
  - Dressing
  - Grooming (take care of appearance)
  - $\circ$  Feeding
  - Continence (control urine and stool)
  - Ambulating (moving about)
  - Transfer (moving from one place to another inside the house)



- Commonest psychological disorder among the elderly
- Insidious onset and progressive course
- Often not recognized by the elderly or the caregivers
- Manifested by executive dysfunction



### **Health Status of Older Adults**

- Health habits
  - affect the likelihood of people getting a chronic disease and of becoming disabled, whatever age the person is. This particularly involves physical activity, nutrition, and smoking.
- Screening.
  - for people who are at high risk for a number of diseases, such as cancer, makes a tremendous difference in their outcomes, regardless of age
- Immunizations
  - decrease the risk of **influenza** and **pneumonia**.

### **Health Status of Older Adults Cont.**

- Access to health care
  - makes a difference in terms of outcomes. Health care for diseases that we thought were inevitably fatal, such as heart disease, now can make a tremendous difference in terms of both survival and how well people do.
- How well people manage their own diseases
  - affects outcomes, for example, high blood pressure or diabetes.
- Community services
  - to support people as they age, to support their ability to take care of themselves or their family's ability to take care of them, also makes a difference not just in their ability to stay in their home over the long run, but also in how well they continue to manage.
  - Elderly day care centers: Elderly clubs to maintain social interaction
  - Elderly day health centers: Day hospitals for elderly who need nursing care
  - Home services: Provide social and nursing services to elderly in their own homes
  - Residential or institutional care
  - Elderly homes (long term care for elderly who can't live independently in their own homes)
  - Nursing homes (long term care for elderly with health problems requiring continuous medical and nursing care)

### **Geriatrics**

- What is it? Caring for older adult
- Team approach
  - $\circ$  Geriatrician
  - Nurse
  - Physician assistant
  - Social worker
  - Consultant pharmacist
  - Nutritionist Because most elderly people are malnourished
  - Physical therapist
  - Occupational therapist
  - $\circ$  Speech and hearing specialist
  - Geriatric psychiatrist

### **Preventive Health Care**

- Primary: screening
  - To prevent the occurrence of disease or injuries in the first place. This is accomplished by identifying people who might be at risk for developing specific diseases and intervening to prevent them.
- Secondary
  - When somebody has an early condition to prevent it from progressing and developing complications or, in some circumstances, actually curing the condition, even though it has already occurred.
- Tertiary: preventing disability
  - **Is the realm that geriatricians have traditionally been involved in**, the intersection of preventive health care with traditional medicine. It involves intervention to improve the health status of somebody who already has a disease. It could be a classic medical intervention to treat the disease itself, or it could involve putting in place community services to stabilize somebody who has a disease. Ultimately, tertiary prevention focuses on preventing disability and frailty that can result from disease.

### **Priority areas for Public health action**



- Four priority areas for action can be identified:
  - aligning health systems with the needs of the older populations they now serve;
  - developing systems for providing long-term care;
  - creating age-friendly environments;
  - improving measurement, monitoring and understanding.

### Align health systems

- Place older people at the centre of health care
- Shift the care focus from managing diseases to optimizing what people can do.
- intrinsic capacity, which refers to the composite of all the physical and mental capacities that an individual can draw on at any point in time.
- Develop the health workforce: basic knowledge and skills in geriatrics

### **Develop long-term care systems**

#### • Establish the foundation for a functioning system

- Only governments can establish a long-term care systems as a whole. But this does not mean that they need to do everything. Each country will need to take stock of its unique situation to identify the best system for its context.
- Develop the long-term care workforce
- Ensure the quality of long-term care
  - The quality of long-term care can be improved by moving away from notions of long-term care as a minimal and basic safety net that provides rudimentary support to older people who can no longer look after themselves, towards a more positive and proactive agenda. Systems and caregivers need to look at how they can optimize both the older person's capacity, and compensate for losses of capacity, in a way that maximizes dignity and choice.

### **Create age-friendly environments**

- Combat ageism
- Enable autonomy: freedom
  - Autonomy has been shown to have a powerful influence on older people's dignity, integrity, freedom and independence, and has been repeatedly identified as a core component of their general well-being.
- Support Healthy Ageing in all policies

### Improve measurement, monitoring, and understanding

- Agree on metrics, measures and analytical approaches
- Improve understanding of the health status and needs of older populations
- Increase understanding of ageing trajectories and what can be done to improve them
- Older people must be included in vital statistics and general population surveys, and analyses of these information resources should be disaggregated by age and sex in order to understand healthy aging.
- Investing in Healthy Ageing means creating a future that gives older people the freedom to live lives that previous generations could never have imagined.