

The Path to Healthy Ageing in China: Findings from the Peking University–*Lancet* Commission

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Commissioners

The path to healthy ageing in China: a Peking University– Lancet Commission

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- Thirty authors from 3 countries, 15 institutions
- Economists, epidemiologists, public health specialists, clinicians

Chen, X., Giles, J., Yao, Y., Yip, W., Meng, Q., Berkman, L., ... & Zhao, Y. (2022). The path to healthy ageing in China: a Peking University–Lancet Commission. *The Lancet*, 400(10367), 1967-2006.

The World Population is Ageing

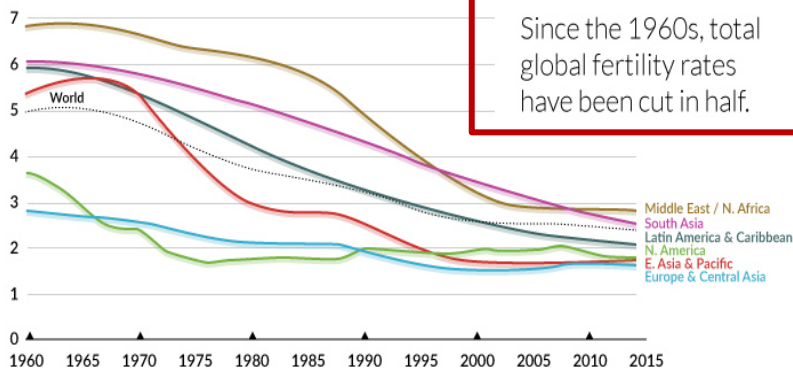
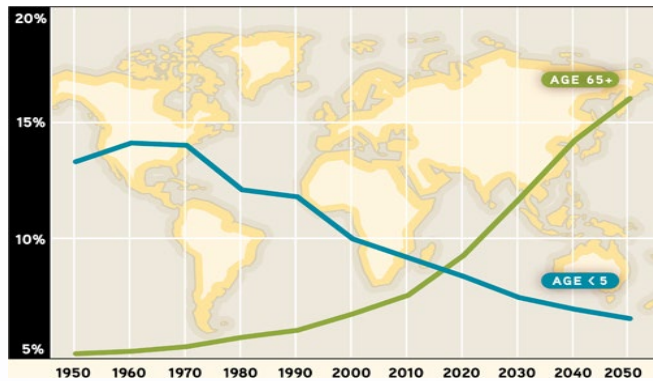
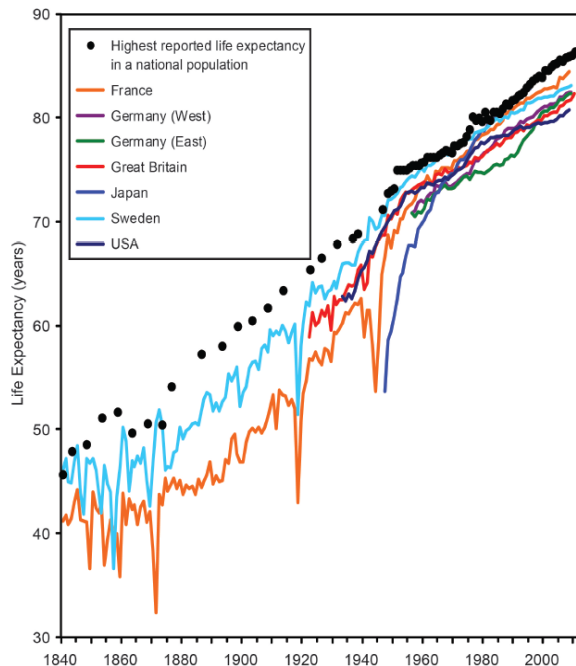
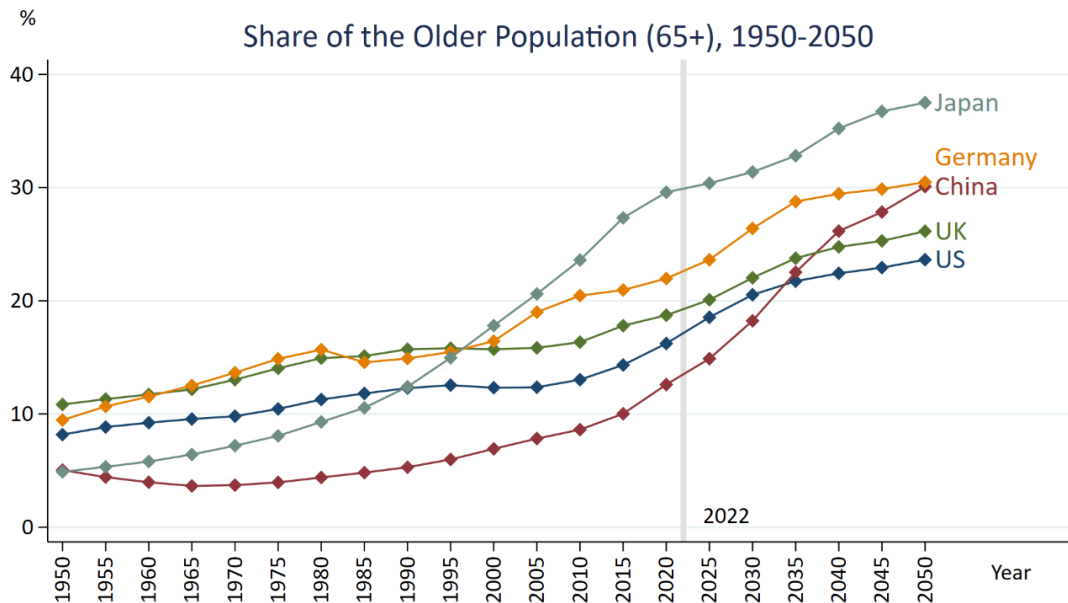


Figure 4.
Female Life Expectancy in Developed Countries: 1840-2009



Source: Highest reported life expectancy for the years 1840 to 2000 from online supplementary material to Oeppen J, Vaupel JW. Broken limits to life expectancy. *Science* 2002; 296:1029-1031. All other data points from the Human Mortality Database (<http://www.mortality.org>) provided by Roland Rau (University of Rostock). Additional discussion can be found in Christensen K, Doblhammer G, Rau R, Vaupel JW. Aging populations: The challenges ahead. *The Lancet* 2009; 374/9696:1196-1208.

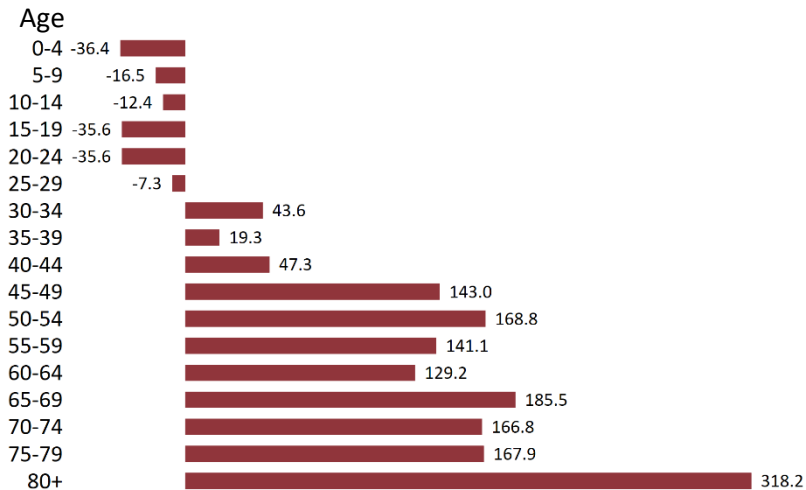
China will be older than many high-income countries



Source: United Nations, World Population Prospects 2022, medium variant

Population changes by age

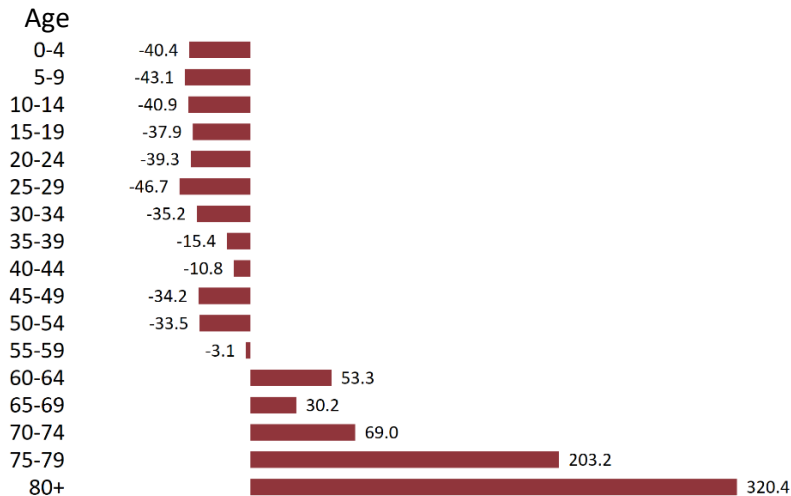
Population Changes by age, 1990-2020



Data from UN, World Population Prospects 2022, medium variant

In 30 years before 2020, population reductions occurred for people younger than 30.

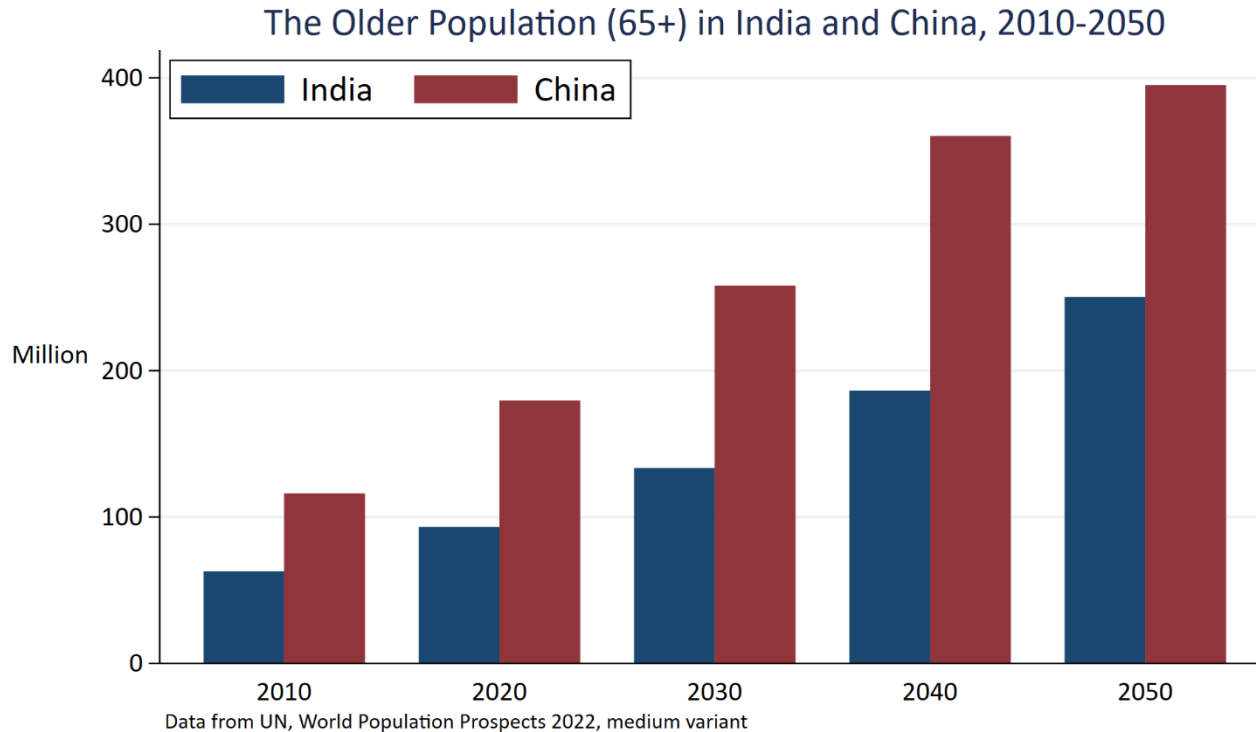
Projections of Population Changes by age, 2020-2050



Data from UN, World Population Prospects 2022, medium variant

The next 30 years will see reductions for all groups younger than 60. Net increases only among older groups.

China has the world's largest older population



Challenges – Public Finance

Increase in
expenditures



Decrease in
revenues

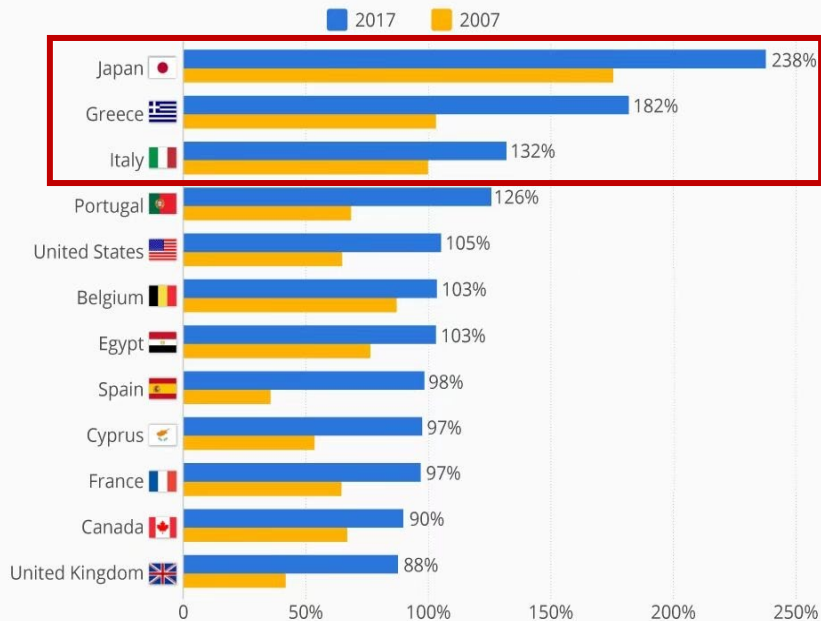


Deficit

Population ageing has stressed public finance

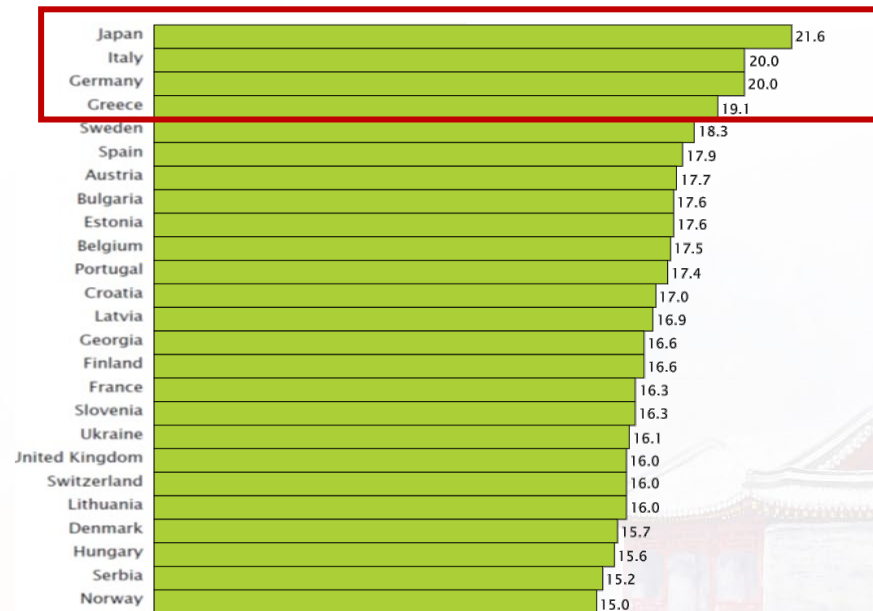
The Most Indebted Countries in the World

General government debt as a percentage of GDP in 2007 and 2017*



The World's 25 Oldest Countries: 2008

Percent of population aged 65 yrs and older



The oldest countries are also the most indebted countries

Challenges – care needs

**Greater
care needs**



**Reduced
care supply**



**Care
Deficits**

Total number of
disabled people in
China is on the rise

Less traditional family support

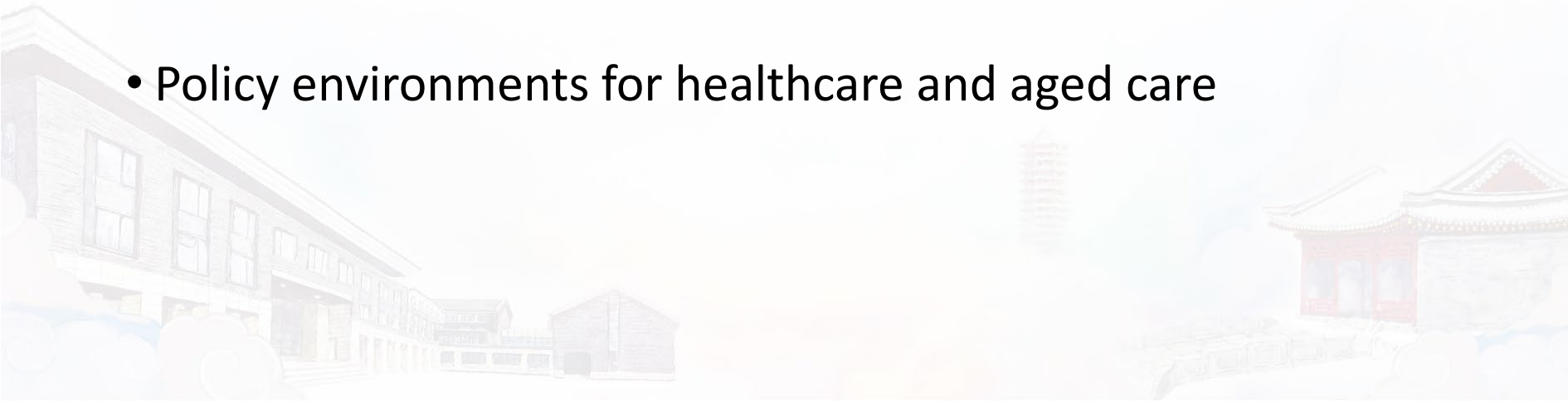
- Dwindling family size
- Changing living arrangements due to migration

Response - Healthy Ageing

- Definition: Health span \approx life span in physical and mental functioning
- Can increase the health capacity to work among older people, a prerequisite for longer working lives
- Can reduce health care and eldercare needs
- Create the longevity dividend

Achieving Healthy Ageing Requires Understanding

- The health status of older Chinese
- The determinants of health for older Chinese
- Policy environments for healthcare and aged care



Report Outline

01

Background: the importance of healthy ageing

02

Health status of older Chinese

03

Determinants of health in old age

04

Policies in healthcare and aged care

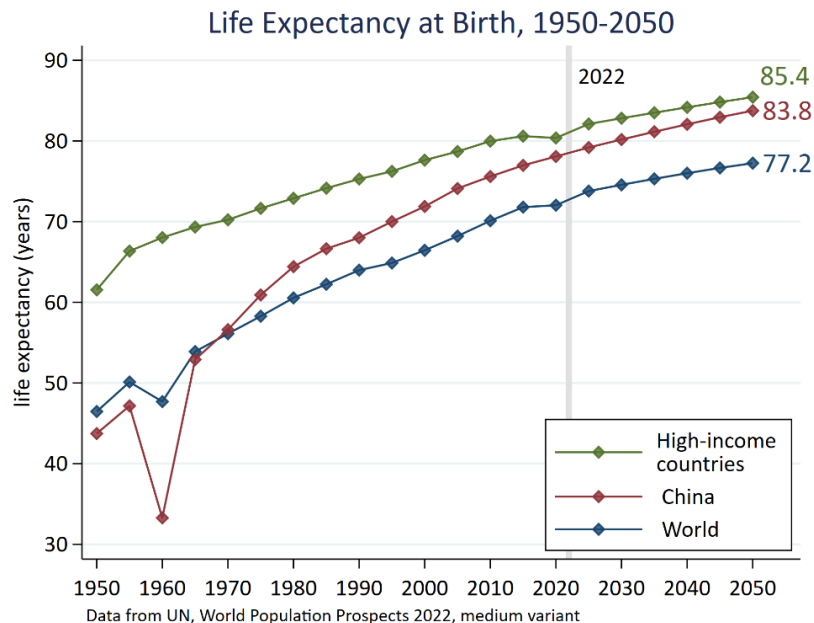
05

Summary and policy recommendations

Section 2. Health Status

- Reviewed evidence on the following subjects
 - Life expectancy and causes of death
 - Chronic conditions and infectious diseases
 - Mental disorders and cognition impairment
 - Functioning dependency and care needs
 - Subjective wellbeing and related conditions
- Mostly cited previous literature; when there was a gap, used the CHARLS data to supplement

Life expectancy and causes of death



Life Expectancy extensions due to reducing infectious diseases and, more recently, controlling chronic diseases

Between 1990 and 2010, China went through an epidemiological transition from infectious diseases to non-communicable diseases (NCDs)

Chronic conditions

Diabetes



Cardiovascular
diseases



Cerebrovascular
diseases



Chronic Kidney
Disease
DISEASE



Chronic Obstructive
Pulmonary Disease
(COPD)



Obesity



Hypertension



Cancers



Disease trends are important

- Inform policy directions and priorities
- However, reliable data on disease trends are scarce
 - Some are based on self-reported doctor diagnosis, which tend to over-estimate the trend with more awareness over time
 - Some are based on two non-representative cross sectional surveys
- May confound trends in diseases that are hard to measure in surveys, such as stroke, cancer, etc.

Trending upward

- Based on objectively measured data with reasonable national representation, we know:
- Chronic diseases associated with sedentary lifestyles and excessive caloric intake, such as overweight and obesity, hypertension, and diabetes showed upward trends
 - Higher among urban than rural areas
- Those associated with smoking and environmental pollution exposure, such as COPD, also trended upward

Unknown trends

- Depressive symptoms; cognitive health
- Sarcopenia and frailty
- When do we see a **turning point** for
 - BMI
 - Hypertension, diabetes, etc.?
- Who will lead the transition?
 - Likely more educated and women

Trending downward



- Difficulty in Activities of Daily Living (ADL) or Instrumental Activities of Daily Living (IADL), a comprehensive measure of functioning ability, has shown a downward trend.
 - Level 1: ADL items
 - Level 2: ADL and cooking, shopping, and taking medicine
 - Level 3: ADL or IADL

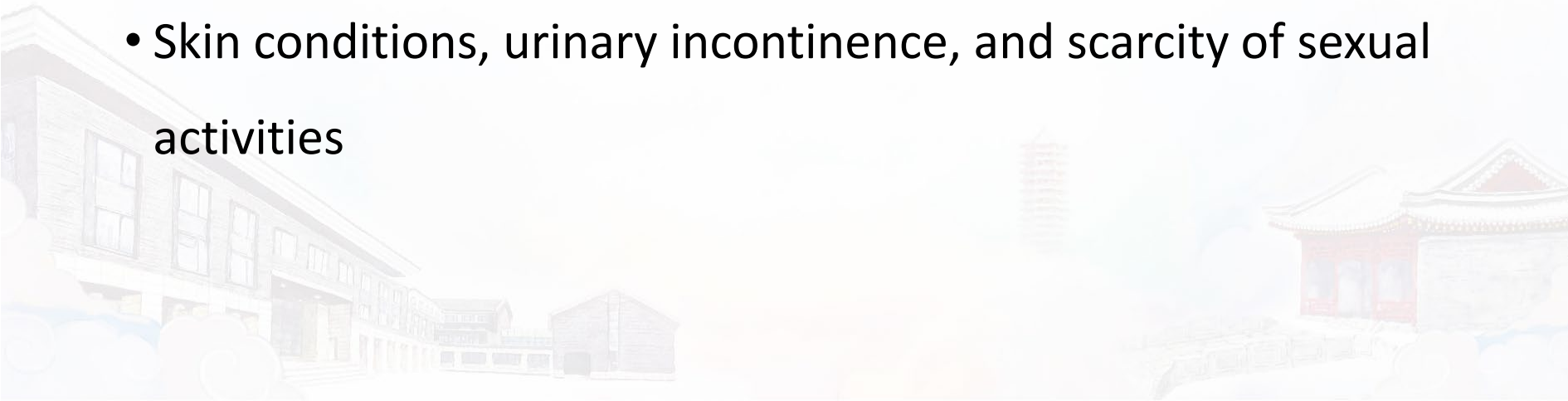
Functional status and disability

In addition to ADL/IADL, also

- Frailty and sarcopenia
- Falls and fractures
- Self-reported pain
- Self-reported sensory functions
- Dental health

Subjective wellbeing and related conditions

- Subjective wellbeing
- Life Quality
- Skin conditions, urinary incontinence, and scarcity of sexual activities



Section 2. Determinants of health

- Reviewed the international literature on determinants of health and the state of the following factors for China
 - In Utero and Childhood Health
 - Health Behaviors – smoking, drinking, physical activities, diet and nutrition
 - Social Environments – social activities, ageism and elder abuse
 - Physical Environment – environmental hazards, age-friendly environments

The long arm of childhood

- Early nutritional deprivation
- Educational attainment
- Poor neighborhood quality
- Parental deficiencies

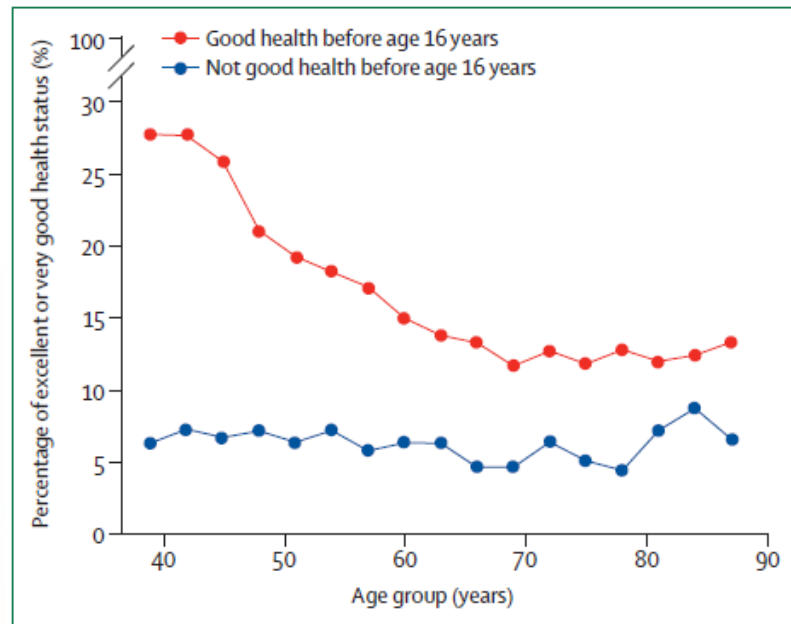


Figure 4: Self-rated health among middle-aged and older adults by child health
Source: CHARLS national sample (2011, 2013, and 2015). Each respondent in the longitudinal survey is only counted once. In cases when a respondent participated in multiple waves of the survey, information on the earliest wave of participation is used in plotting the figure.

Health behavior - smoking



- Smoking is strongly and negatively associated with education.
- Initiation of smoking is mostly in the early adulthood.

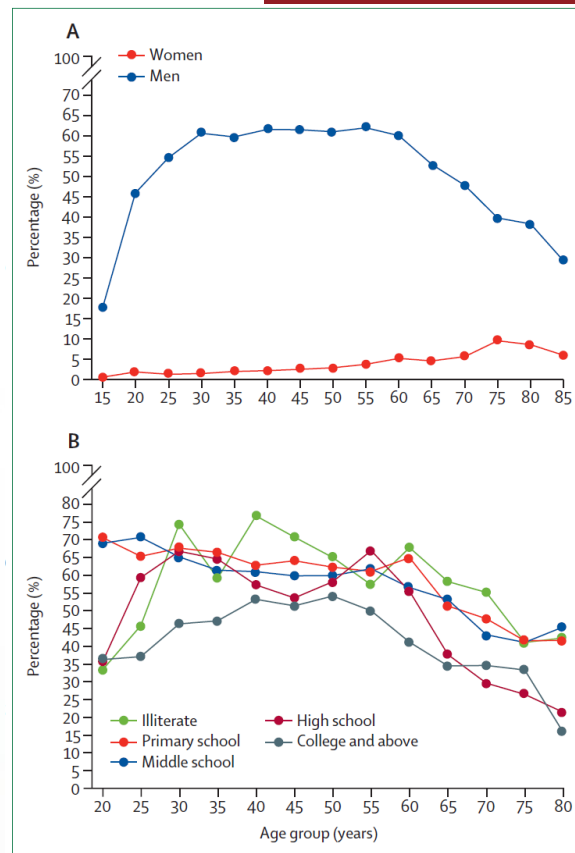


Figure 5: Prevalence of smoking among the Chinese population from Chinese Family Panel Studies 2018 data

(A) Smoking rates by age and gender. (B) Smoking rates of men, by age and education.

Social environments

- Social activities contribute to morbidity, mortality, and well-being.
- Are associated with fewer depressive symptoms, better cognitive functioning, less functional disability, and better SWB
- As the number of children declines and out-migration of adult children, the social network needs to go beyond the family.

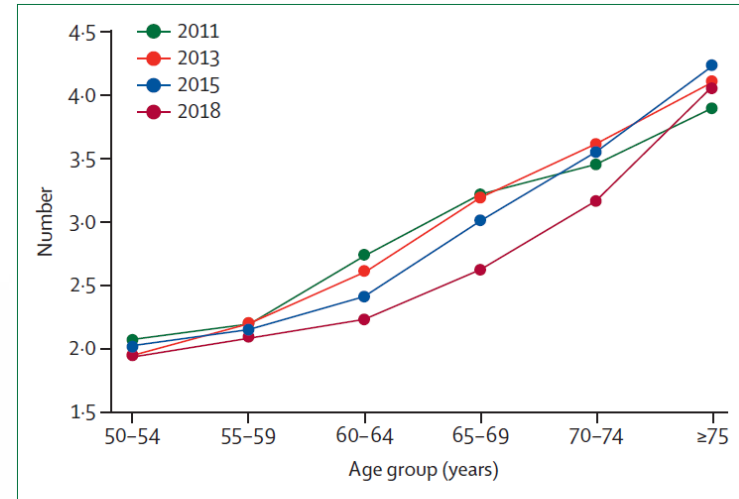
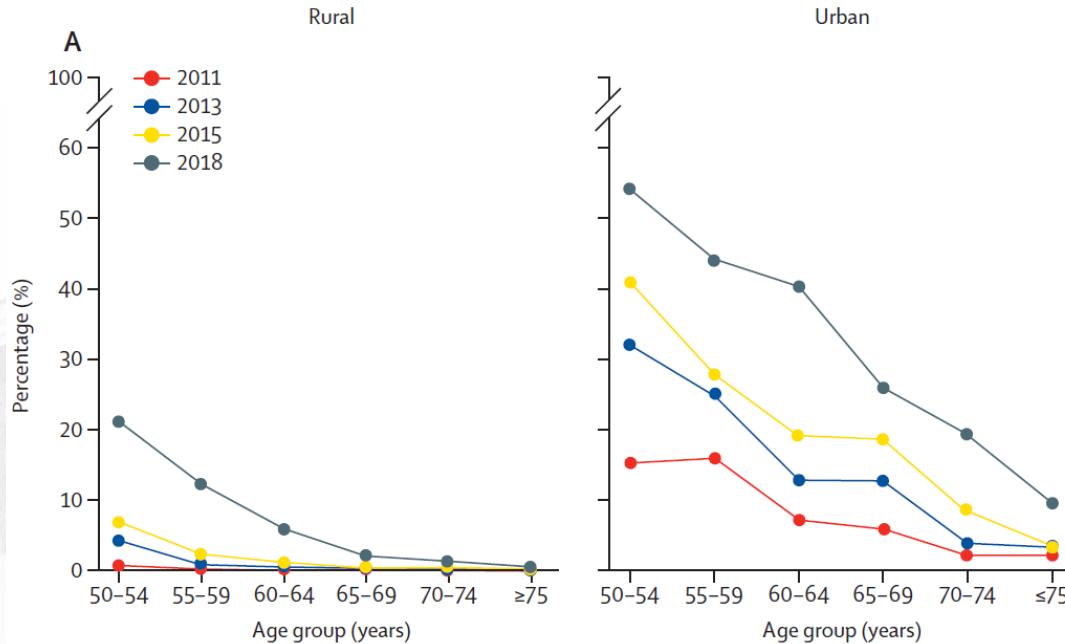


Figure 8: Number of living children among adults aged ≥ 50 years from CHARLS data¹³⁸

Internet use



- Internet can be an important means for social connectedness, especially amid the Covid-19.
- Internet use among older adults have grown substantially in recent years.
- The digital divide among older, rural people remains a serious problem.

Physical environment: environmental pollution

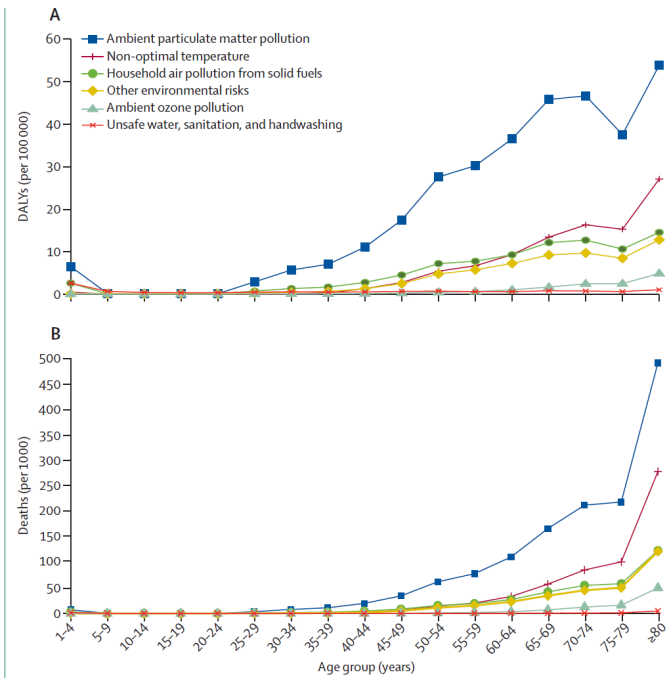


Figure 9: GBD study-estimated China DALYs (A) and deaths (B) by environmental risk factors and age at death, 2019

DALYs=disability adjusted life-years.

- Most deaths and DALYs related to environmental factors occur in older adults.

Section 4. Policies initiatives to promote health and care for older people

Reviewed China's progress in the following policy areas

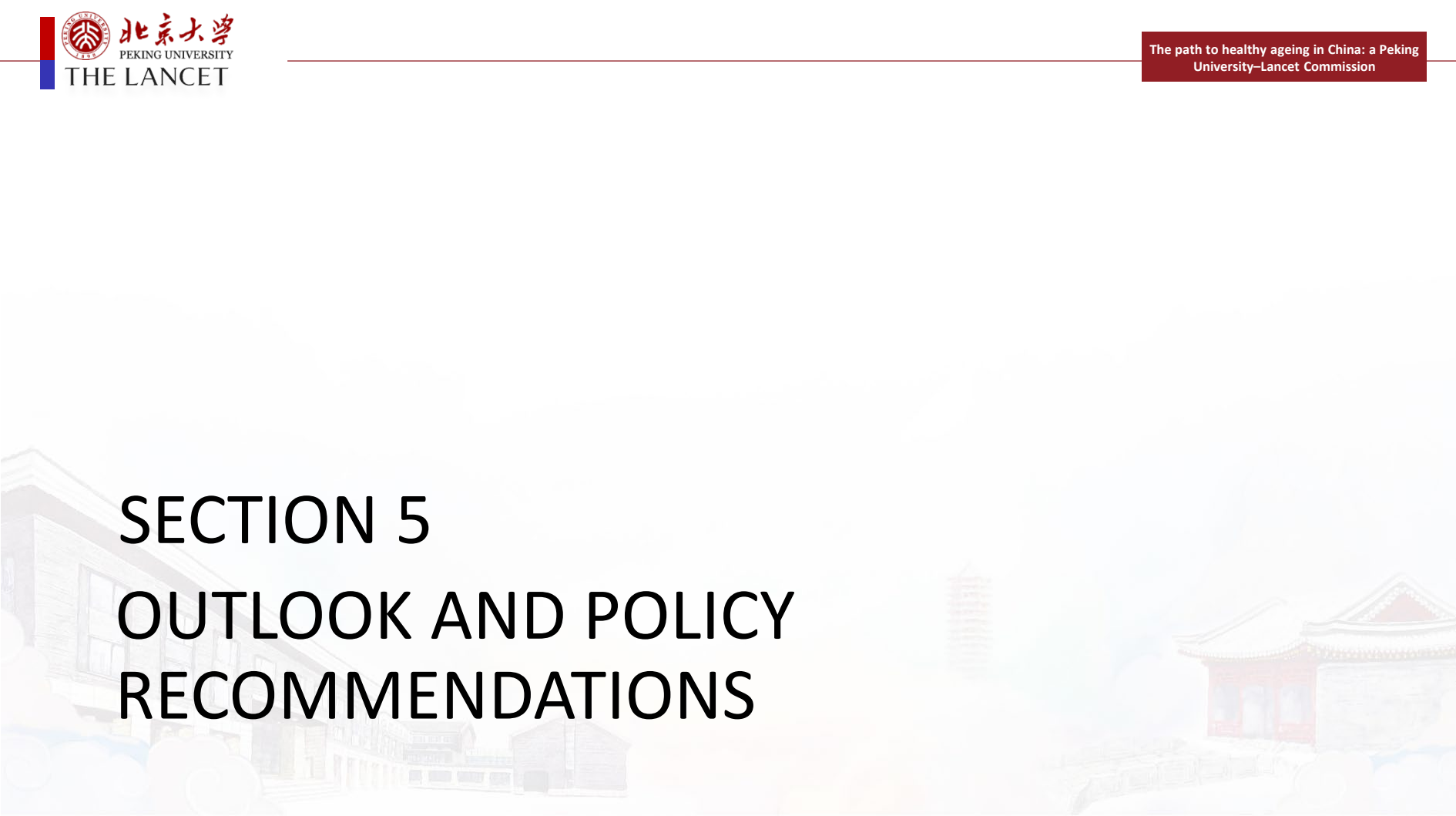
- Health insurance
- Public health promotion
- Primary health care and integrated delivery system
- Geriatric medicine
- Hospice care
- Long-term care system
- Long-term care insurance
- Integration of health care and social care

Health insurance

- Tremendous progress in the past in expanding coverage
- Segmentation by type and locality
 - **Types:** Free insurance, urban workers insurance, resident insurance
 - **Locality:** county or city levels for urban workers and resident insurance
- Problems:
 - Job locks and migration hinderance
 - Inequality across regions
- Building a unified settlement system for health insurance

Long-term care insurance

- Motivation
 - Patients requiring long-term care overburden hospital inpatient units
 - High medical costs
- Pilots: 49 cities by the end of 2020
- Funding: mainly existing health insurance programs
 - Segmented, requiring long participation history in local health insurance
 - Affordability varies across countries



SECTION 5

OUTLOOK AND POLICY RECOMMENDATIONS

Key message 1: NCD control

- Given that social determinants of health are much more important than clinical medicine, China needs to take **a life course approach** in order to improve old-age health
- In the childhood stage, emphasis should go to **nutrition, medical care, education, and health literacy**
- In adolescent and early adult years, emphasis should go **to healthy life style and tobacco control**

Key message 2: age-friendly environment

- **Home and community environment** is critical in maintaining daily functions and mobility for older people, which can facilitate physical activities and social interactions beneficial for older people in terms of cognitive and mental health.
- Most Chinese home were built without considering the needs of older people, lacking handicap access or elevators. Concerted efforts are needed to change the situation.

Key message 3: Primary care

- Primary care delivery needs to **move from disease-centered to person-centered care**
- Need integrated approach given widespread multi-morbidity among older people
- Need to emphasize the maintenance of physical and mental functional abilities despite the presence of diseases
- Need to strengthen personnel training in geriatrics, rehabilitation, hospice care

Key message 4: healthcare sector regulation

- The supply of healthcare services in China has not kept pace with the growing demand spurred by rapid economic growth and expansion of health insurance, and older patients are most squeezed facing the shortage.
- Rampant **fraud targeting reimbursements** through health insurance programs is a key reason that the government is restricting private sector entry into the healthcare sector.
- Building capacity to **screen for fraud** would ease reluctance to allow private sector entry.

Key Message 4 (Cont.)

- Entry of new healthcare providers is important to meet the demand for care; to that end, the government should put more effort into **lowering entry barriers for new health providers**.
- Existing community-level public health facilities can play a bigger role in serving older patients if they are incentivized to visit patients in their homes.
- **Internet-based healthcare** is valuable for older people in rural and remote areas where healthcare services are lacking and should receive priority.

Key message 5: health insurance

- China needs a **unified health insurance system**. A segmented system prevents risk pooling, impedes population mobility, and not conducive to the care of older parents by migrant children
- Achieving portability of health insurance through a unified national insurance is a viable alternative to the current approach of unifying rules of across-region reimbursement
- The barrier to a national system is inequality across regions, whereas migrant-destination regions enjoy surpluses
- To achieve national insurance pooling, the central government may use fiscal tools to rebalance the interests across different provinces.

Key Message 6: aged care

- China will continue to promote a 90-7-3 model, which aims for 90% of all seniors to receive needed care in their homes, 7% through community-based hospitals, and 3% through aged care facilities.
- In this setting, care from family members will continue to be the dominant source of care for older people. Toward that end, policy should focus on **removing barriers of parental migration**.
- Care providers are likely to come under increasing stress with the ageing of the population, with an impact on their physical, psychological and financial well-being.
- Promoting the development of training and complementary services through community centers and web-based service provision may **ease the burdens on family care providers**.

Key message 7: government involvement in aged care facilities

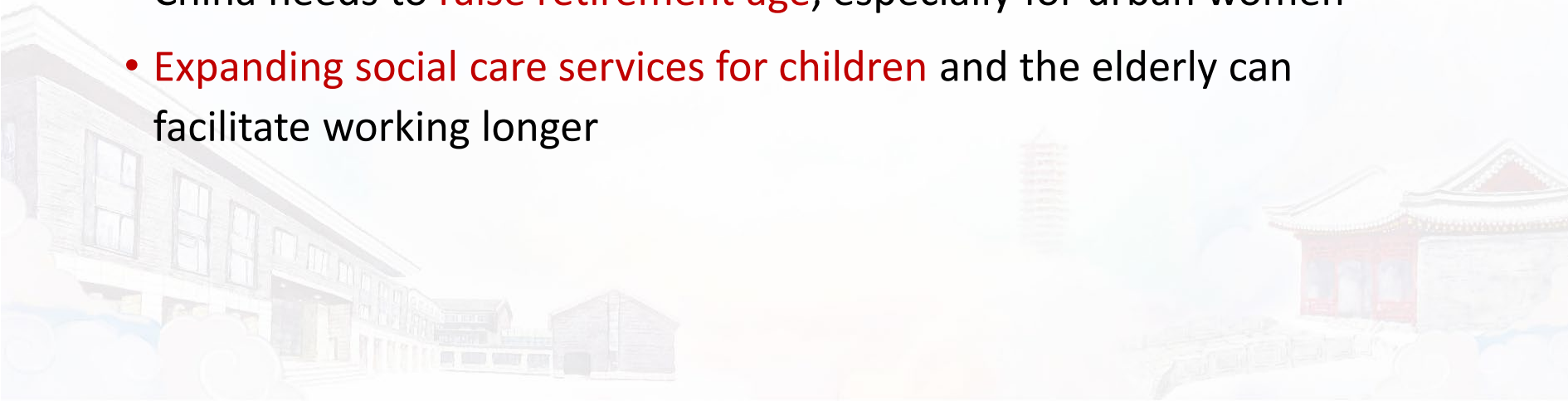
- China has invested heavily in aged care facilities, but many of the investment has resulted in structural imbalances, with some having unutilized capacities while others in shortage.
- Subsidizing people **requiring care instead of care facilities** can facilitate competition among institutions while averting wasteful investment.
- Stringent safety regulations in aged care facilities have become a major impediment in the sector development and delegitimized many existing facilities. The government should seek alternative ways to reduce safety risks and use insurance to guard against any remaining risks.

Key message 8: Long-term care insurance

- Three problems in the existing LTCI pilots
 - Funding: existing social health insurance programs
 - Pay-as-you-go
 - Locally administered
- Risks in financial sustainability and portability
- LTCI needs to be **independently funded, nationally administered with individual accounts**

Key message 9: Retirement policy

- Healthy ageing does not automatically solve China's ageing problem; need to utilize the extra health capacity and transform it into **longevity dividend**
- China needs to **raise retirement age**, especially for urban women
- **Expanding social care services for children** and the elderly can facilitate working longer





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