



World Health Organization

WHO Centre for Health Development (Kobe)

Advancing Innovation for Older Persons: Mapping needs for medical and assistive devices

12 June 2014

12th International Federation of Ageing
Hyderabad, India

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Director

Acknowledgements

- **WHO Kobe Centre: Loic Garcon, Jaz Lapitan**
- **WHO: Francis Moussy, Adriana Velazquez, Chapal Khasnabis, Yukiko Nakatani, Anjana Bhushan, John Beard (WHO HQ, Western Pacific Regional Office)**
- **Australia: Lloyd Walker, Wendy Babidge, David Haley, Kylie Mines**
 - **Royal College of Australian Surgeons, Motivation Australia, Tech4Life**
- **HelpAge International: Matthew Cherian, Paul Ong**
- **All participating countries, participants**

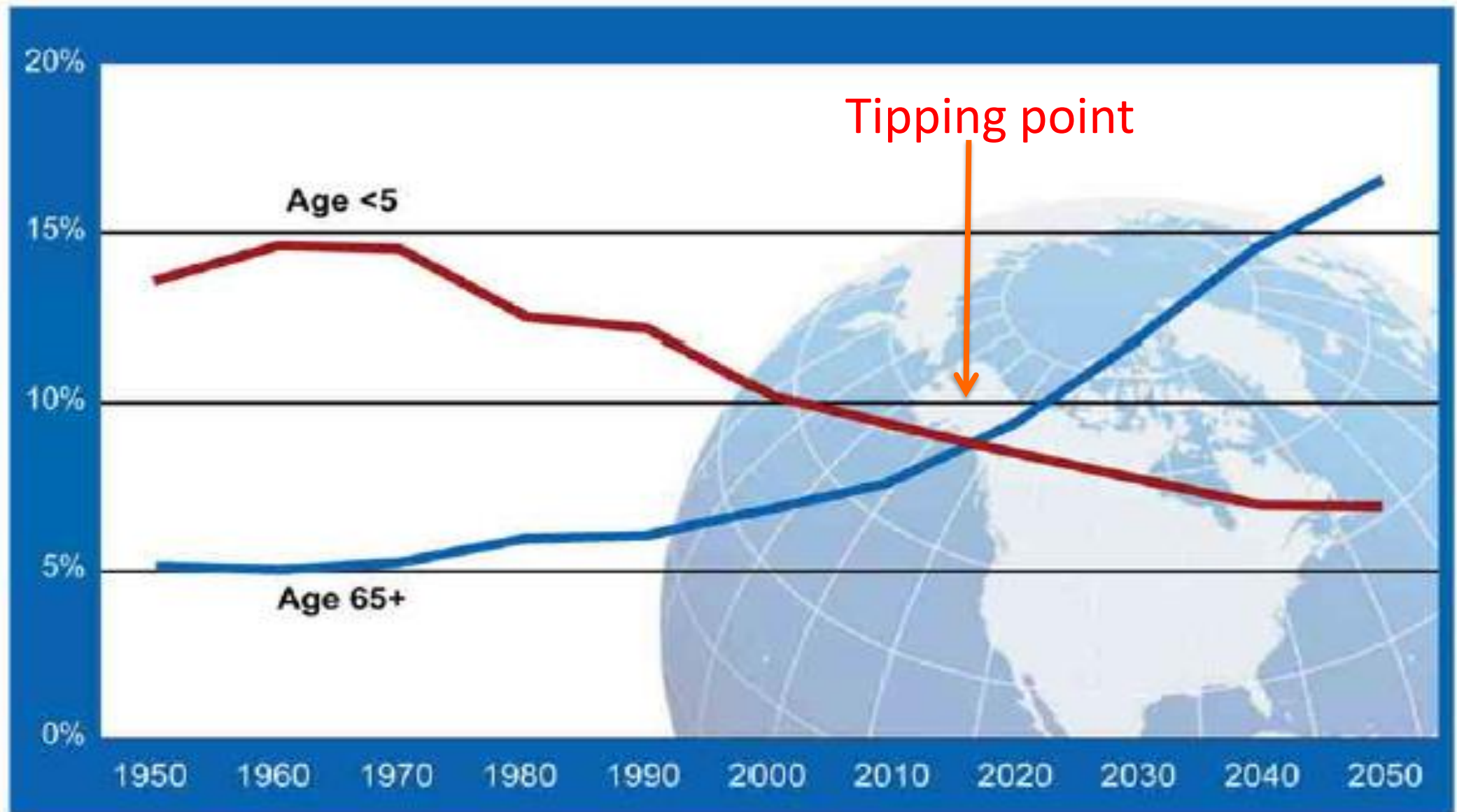
WHO Goals

- Ensure ageing with dignity, quality of life, health
- Delay, manage, reduce functional and cognitive decline for as long as possible
- Early diagnosis, prevention and treatment of prevalent diseases (e.g., non-communicable diseases), reduction of their risk factors,
- Create socially supportive and inclusive environments whilst reducing inequities.
- Non-institutionalization
- Develop/adapt health and social delivery systems
- Integrated approaches
 - Urban planning

WHY INNOVATE?

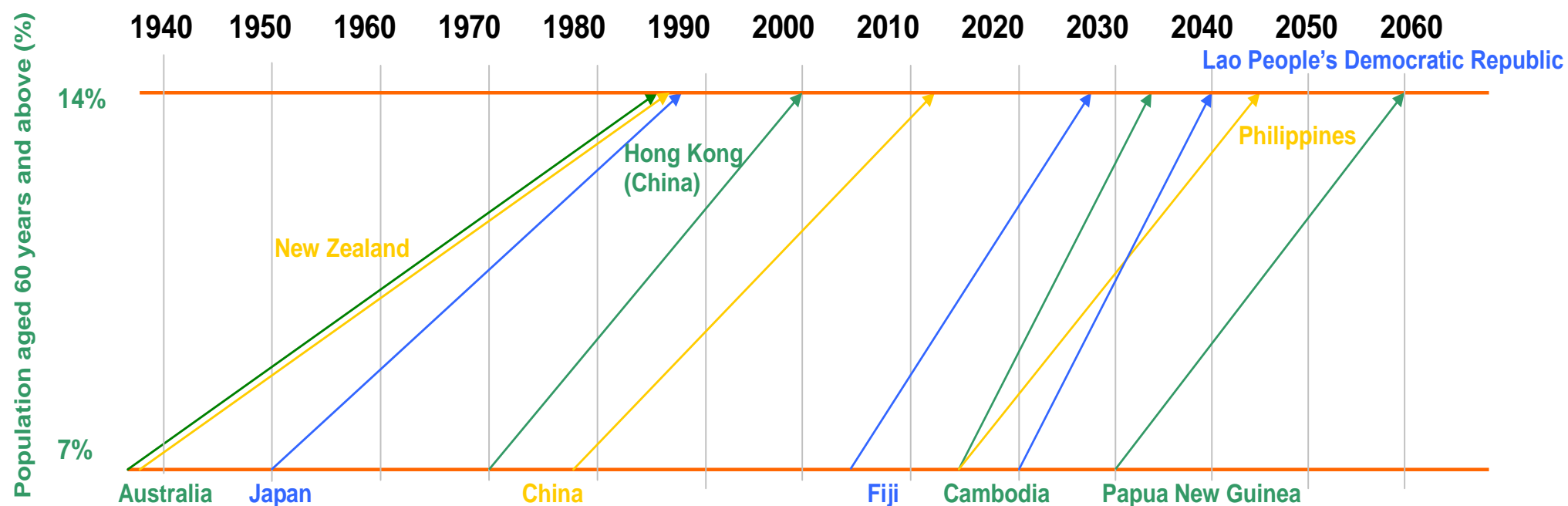


Young Children and Older People as a Percentage of Global Population: 1950-2050



Source: United Nations. *World Population Prospects: The 2010 Revision*.
Available at: <http://esa.un.org/unpd/wpp>.

Time taken for population aged 60 years and above to double, selected countries, Western Pacific Region

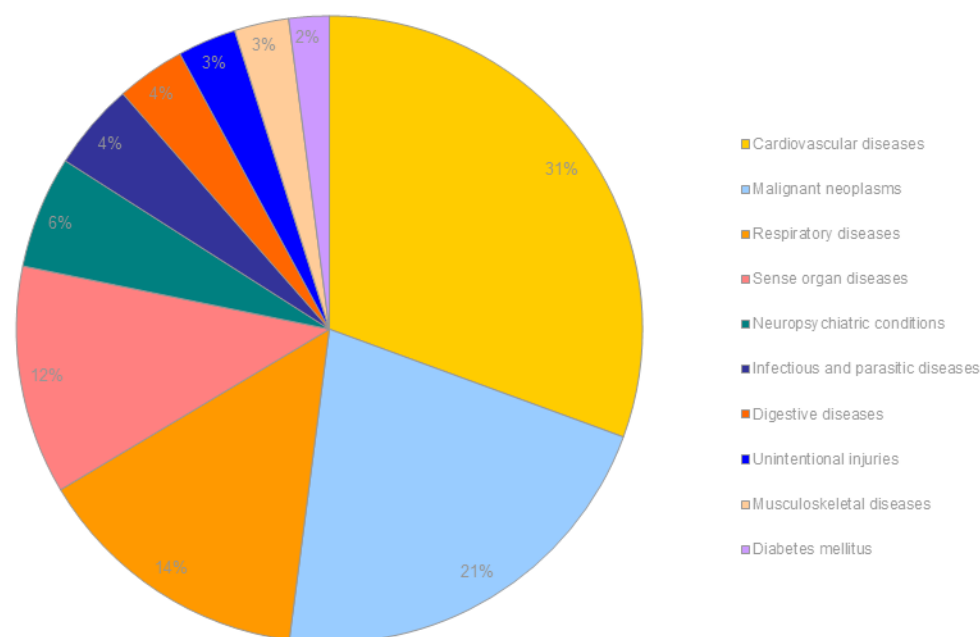


Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2010 Revision*

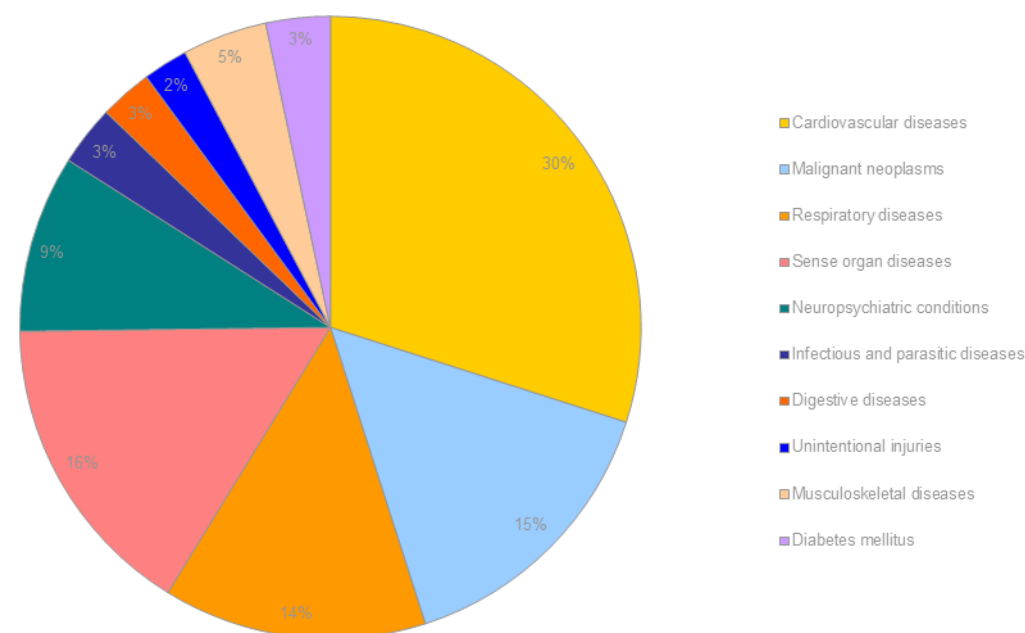
Conference, Hyderabad, 12 June 2014

Morbidity and disability in older people

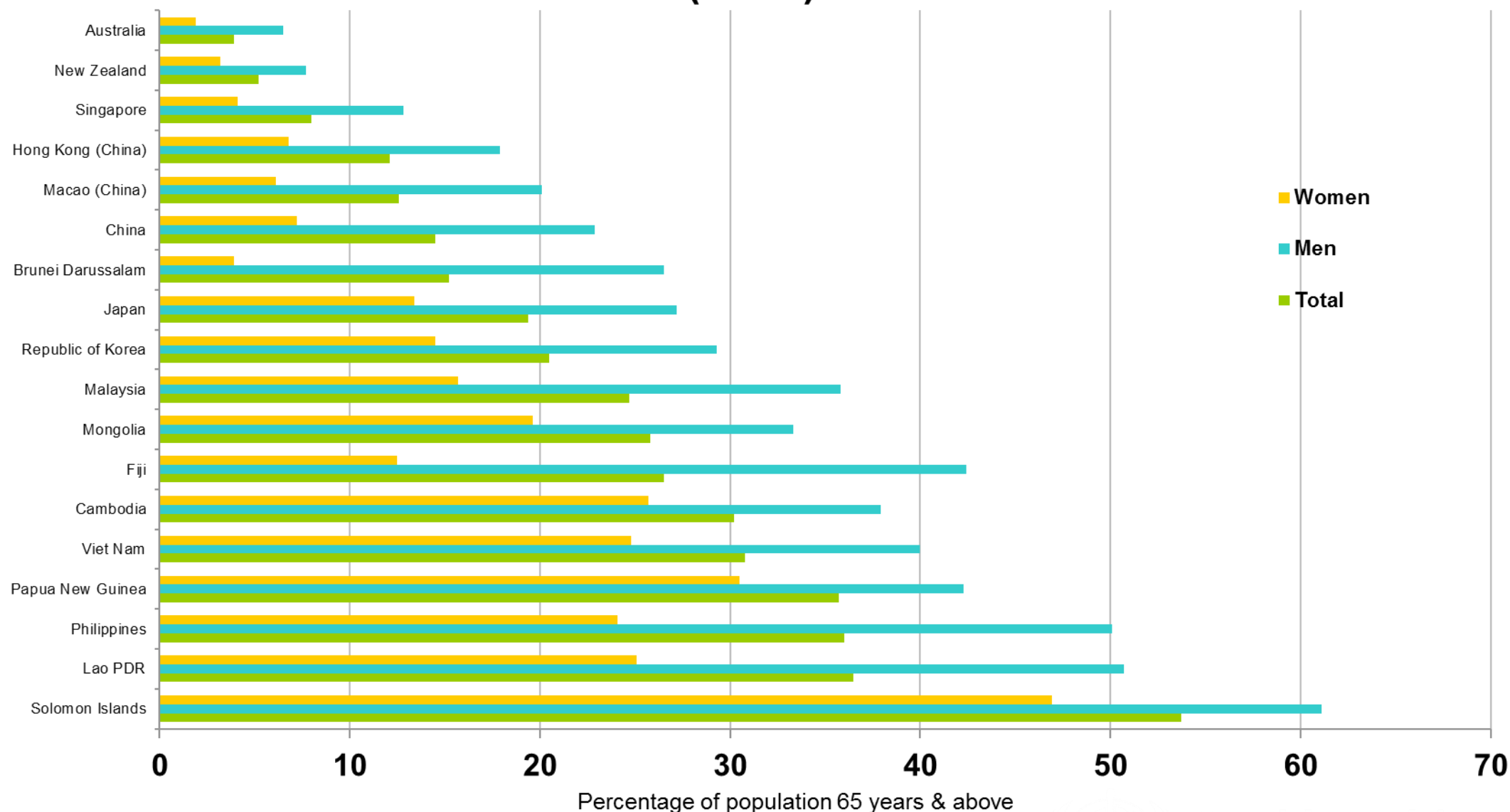
Top 10 causes of DALYs lost for men, 60-79 years, Western Pacific Region (2004)



Top 10 causes of DALYs lost for women, 60-79 years, Western Pacific Region (2004)

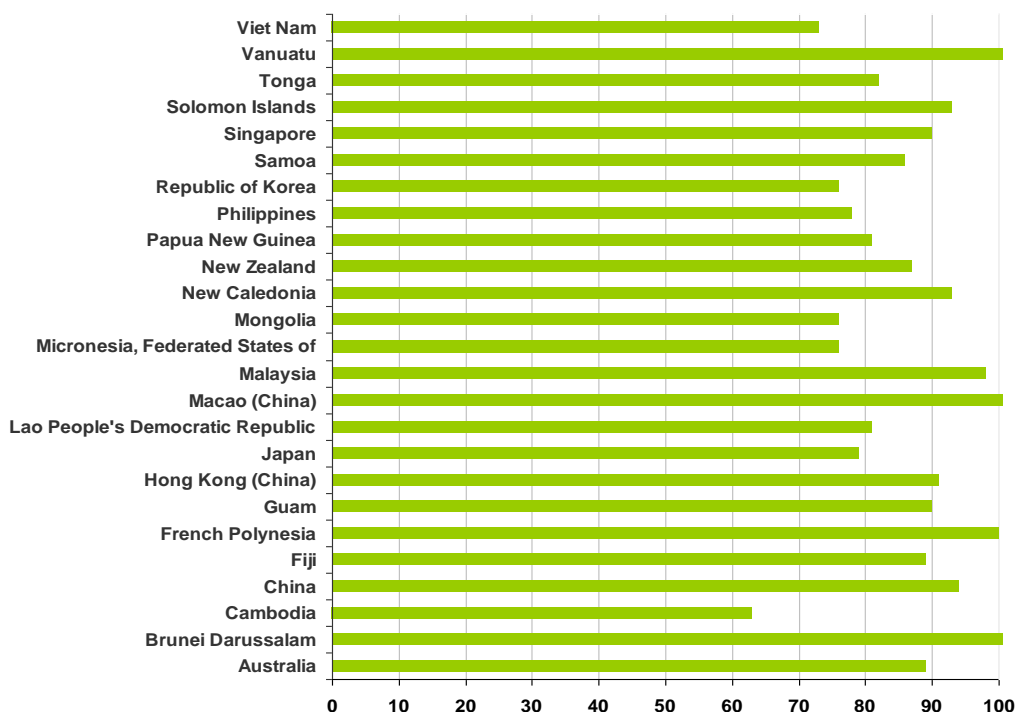


Labor force participation of population 65 years and above, selected countries, Western Pacific Region (2010)

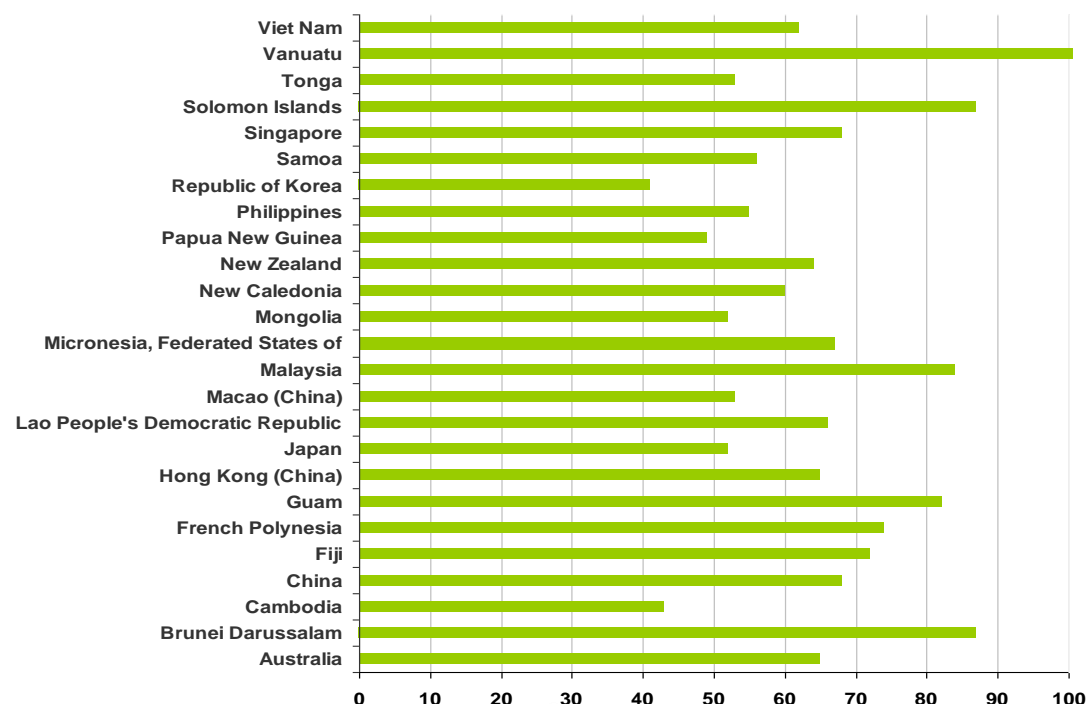


The feminization of ageing

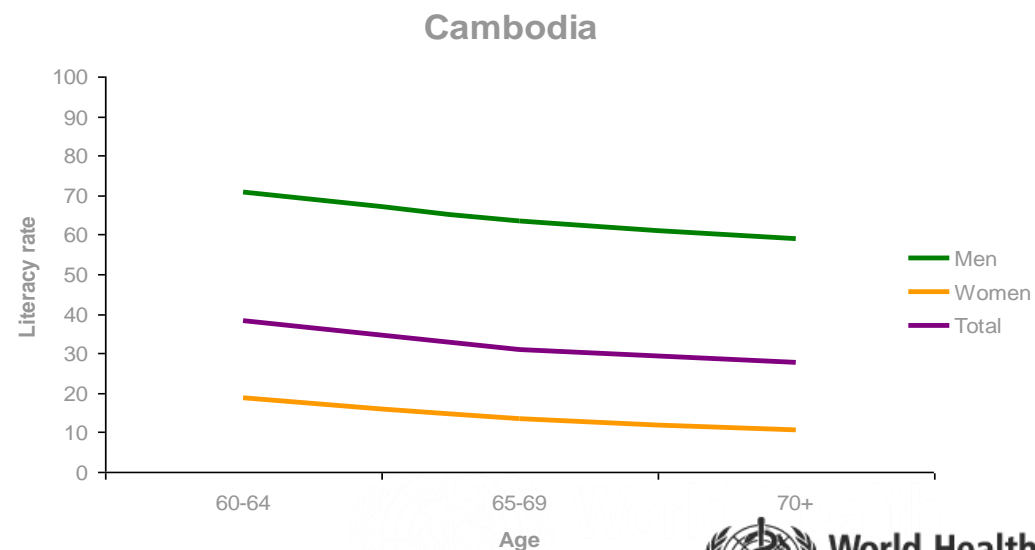
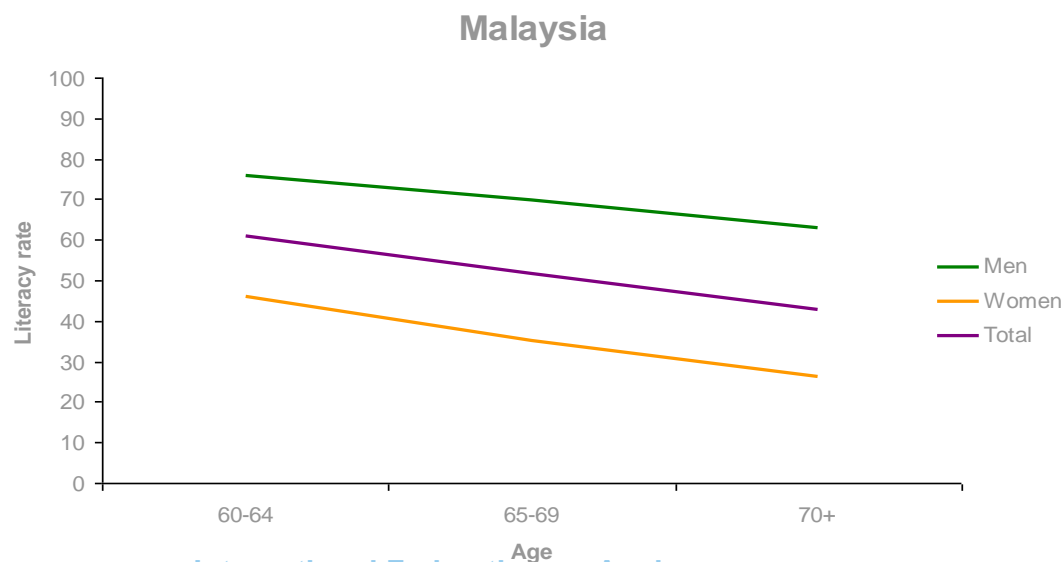
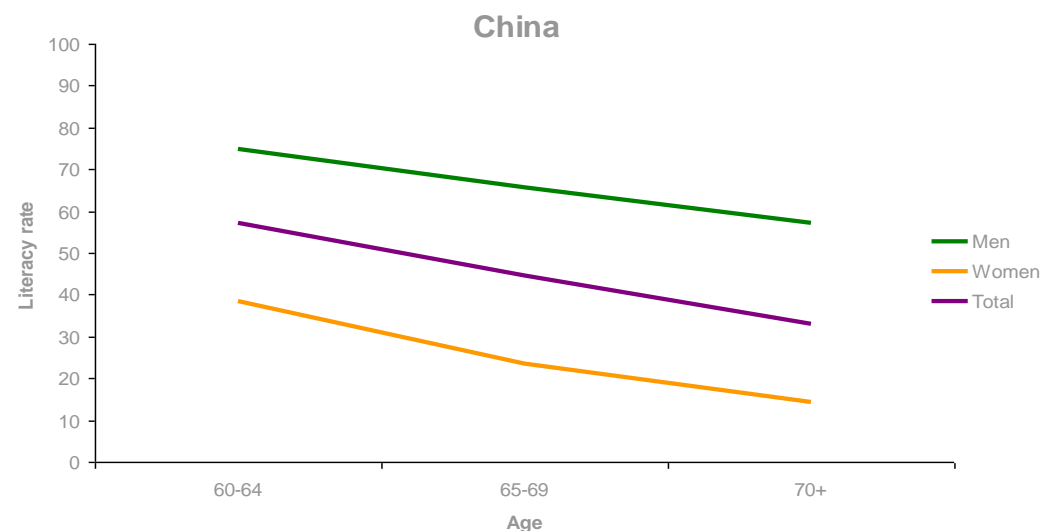
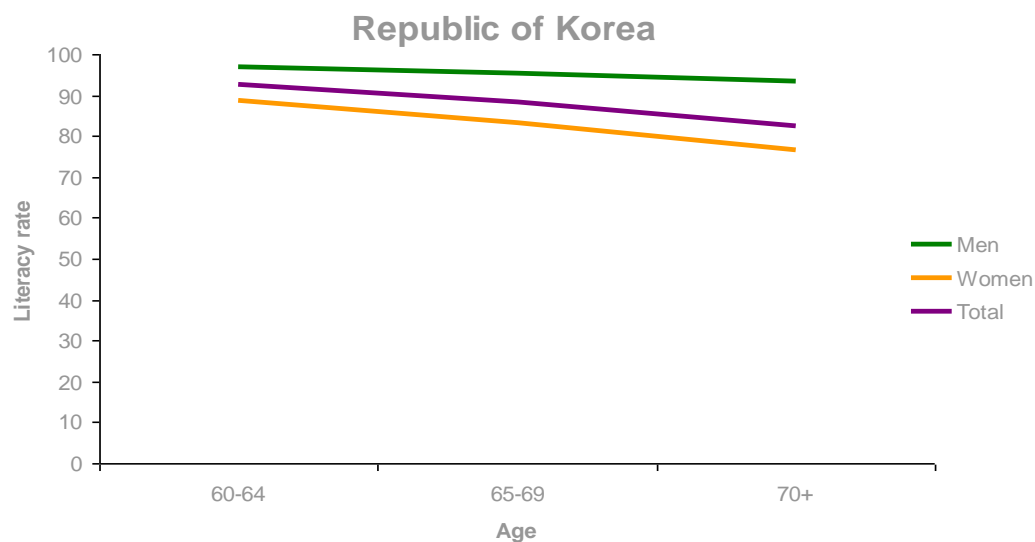
Sex ratio of population aged 60 years & above, Western Pacific Region (2010)



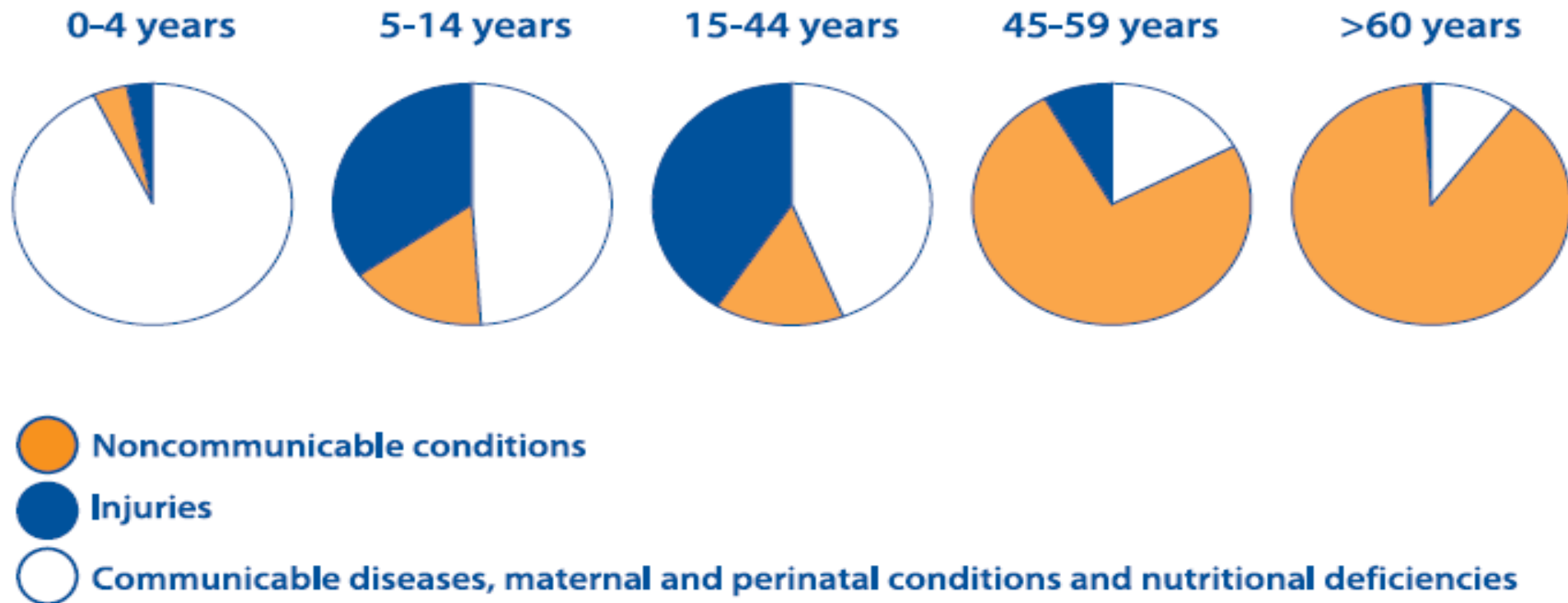
Sex ratio of population aged 80 years & above, Western Pacific Region (2010)



Literacy in population aged 60 years and above, selected countries, Western Pacific Region (2000)

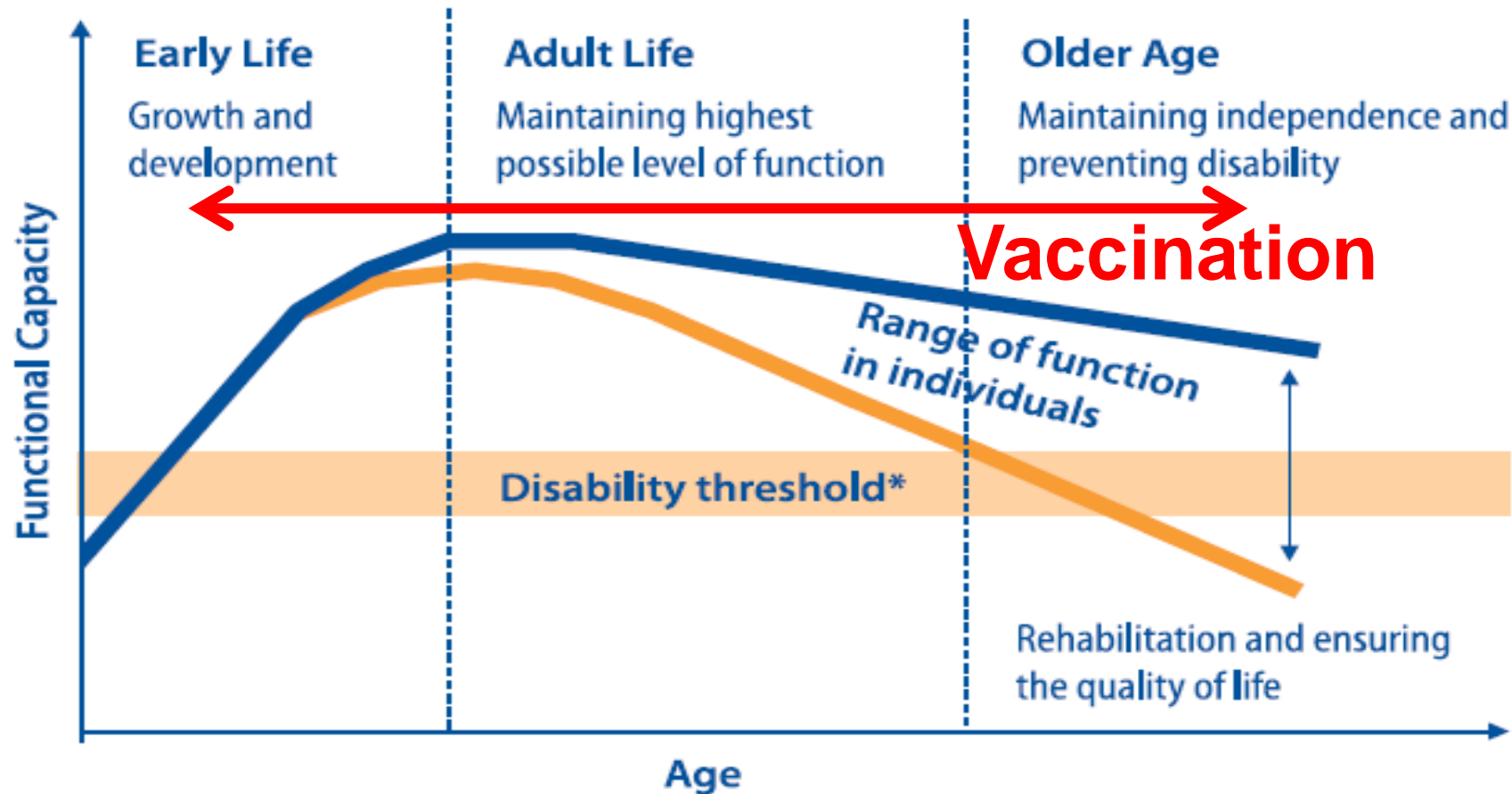


Leading causes of death, low and middle income countries, by age.



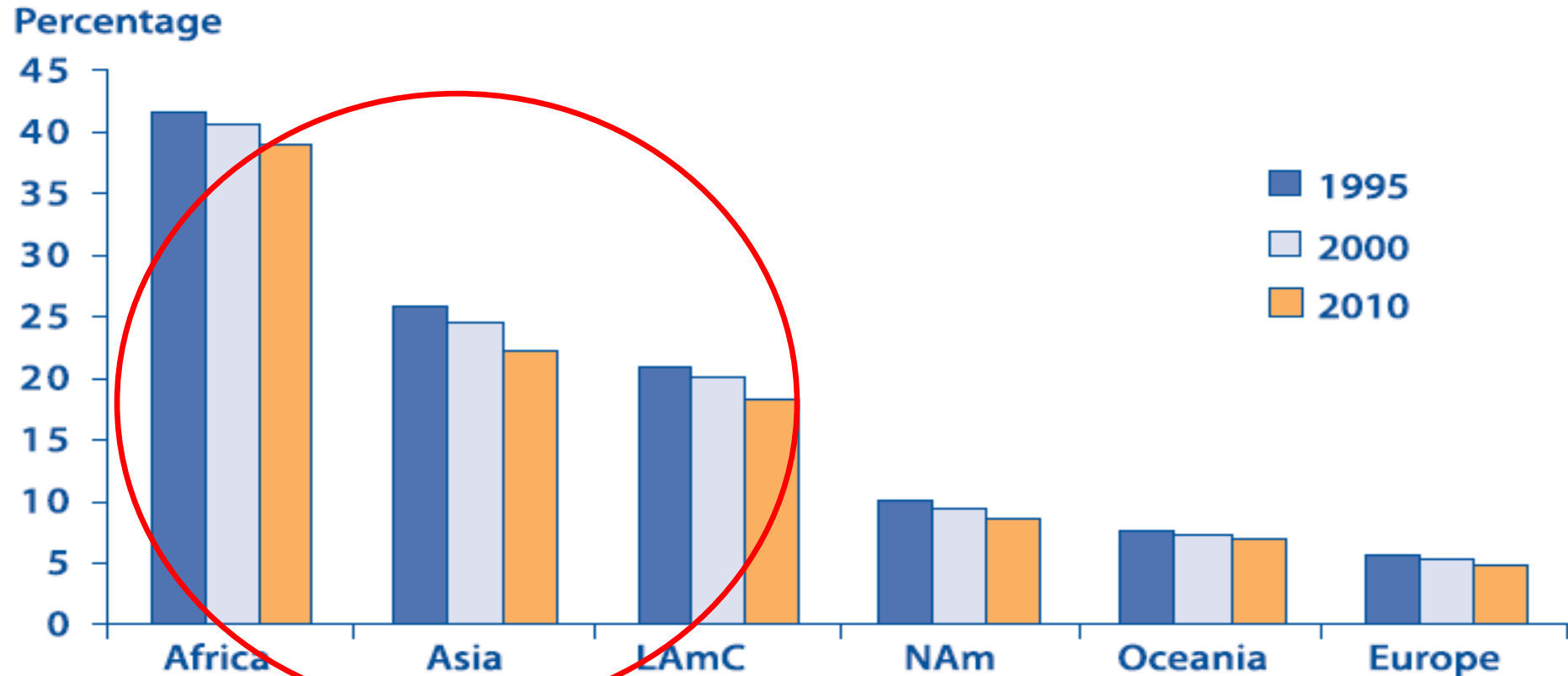
Source: World Health Report 1999 Database

Maintaining functional capacity over the life-course



Source: Kalache and Kickbusch, 1997

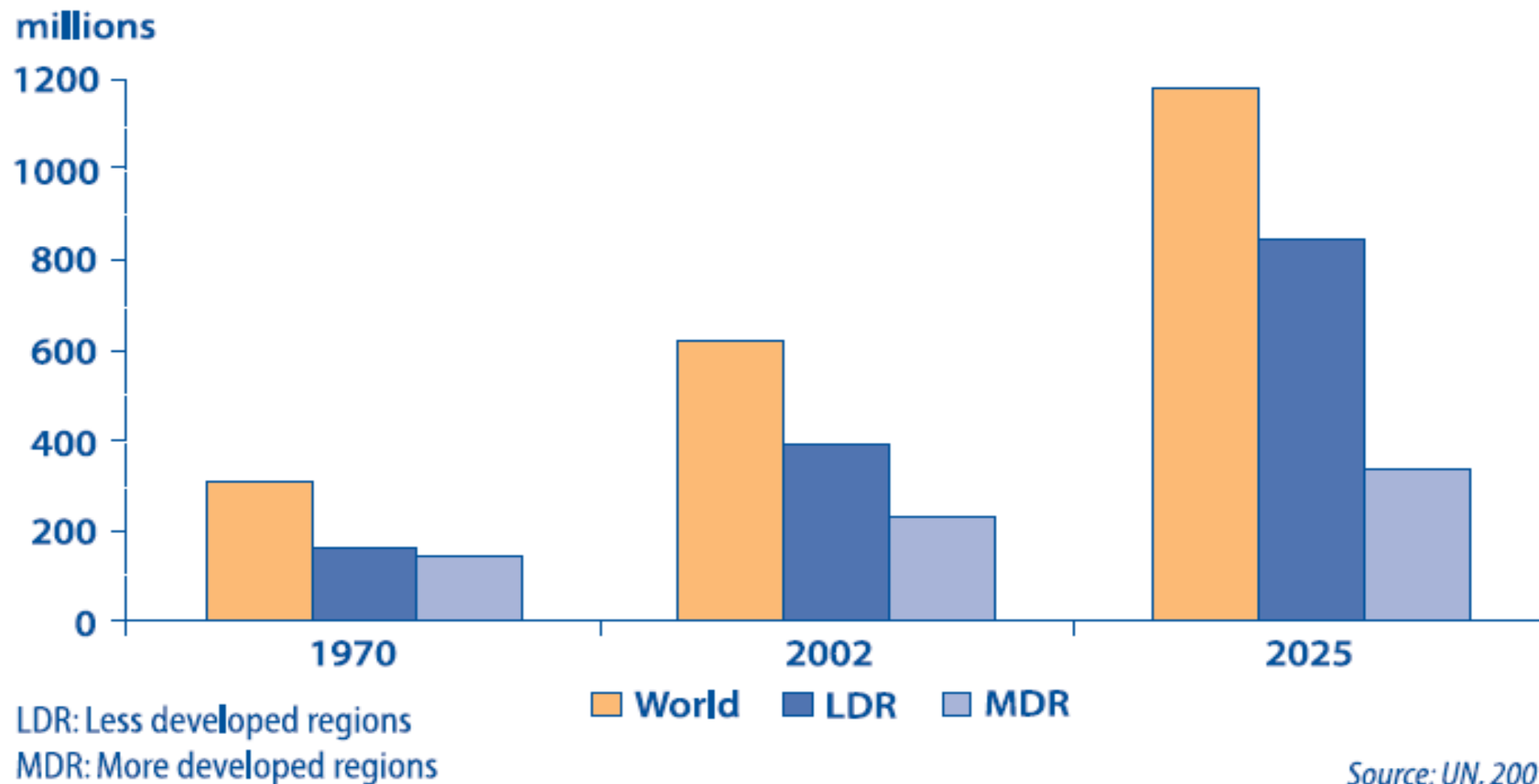
Percentage of labour force participation by people 65 and older, by region



LAmC: Latin America and the Caribbean
NAm: North America

Source: ILO, 2000

The number of people over 60, in less and more developed regions.



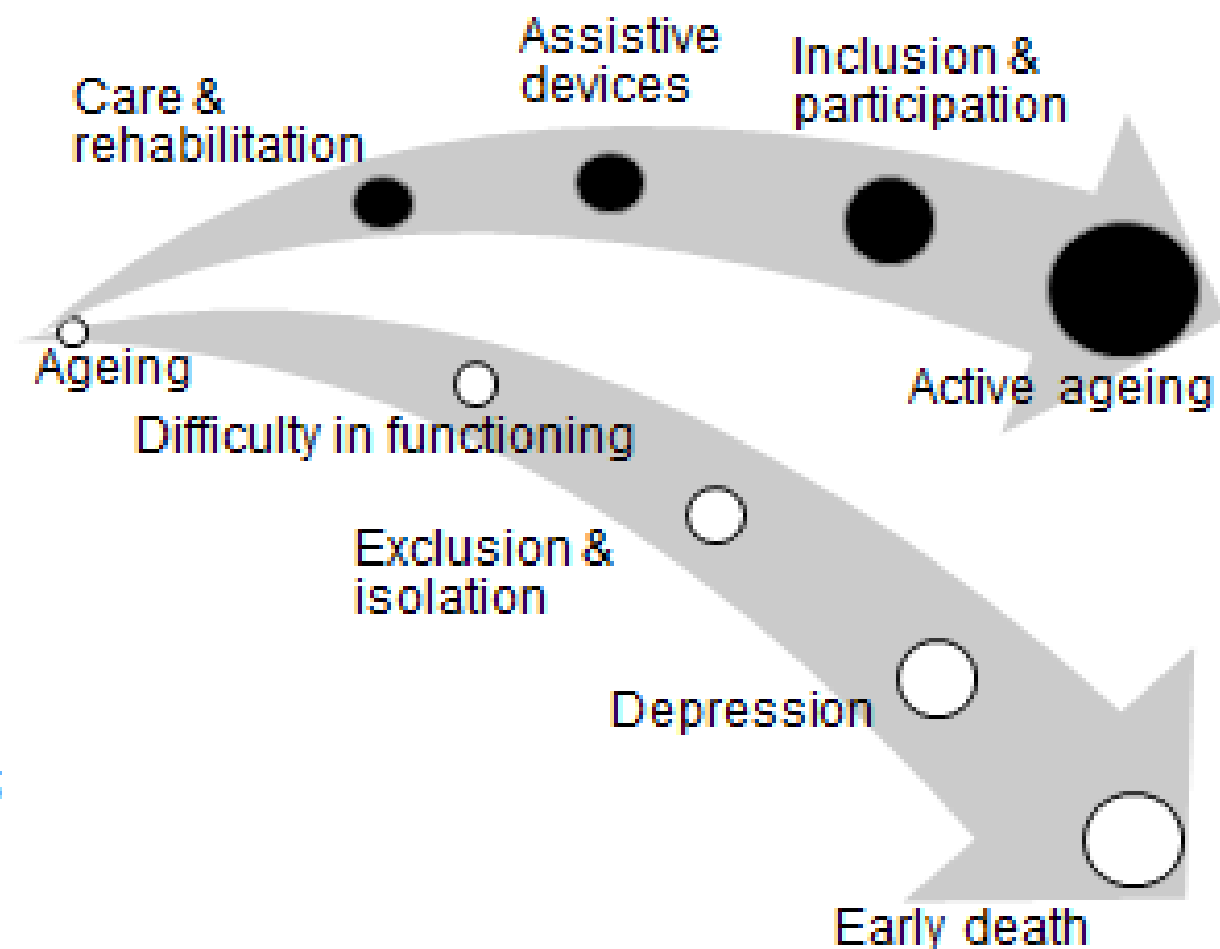
Ageing and functional limitation

Ageing and functional limitation (physical & mental) are synonyms

46% of people over the age of 60 are disabled.

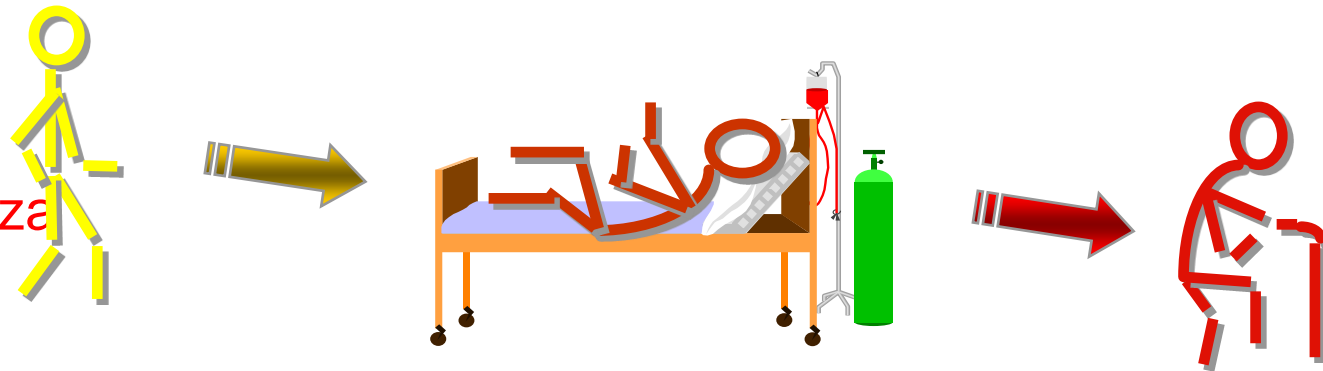
Disabled people are living longer due to improvements in health care etc. – a double burden - if poor then triple burden

Rehabilitation, assistive devices can improve and maintain functioning



Health condition – hospitalization – catastrophic disability

- Catastrophic disability : loss of independence in ≥ 3 ADL
 - 72% who experience catastrophic disability have been hospitalized
- Leading causes of catastrophic disability
 - Strokes
 - CHF
 - Pneumonia and influenza
 - Ischemic heart disease
 - Hip fracture



In all countries, and in developing countries in particular, measures to help older people remain healthy and active are a necessity, not a luxury.

So...

- Many years of ill-health in elderly in all regions...
- Need for health and social support services
- Health technologies are essential tools...

But...

- Focused, prioritized set of technologies needed
- Government/overall strategy needed
- Ethnography/mapping of the needs and preferences of elderly
 - Their needs; culture; language; literacy
 - Identify key obstacles and challenges to accessing technologies
- Affordability

Innovation: Medical and assistive devices



What are health technologies?

- For
 - Diagnosis
 - Prevention
 - Treatment
 - Rehabilitation
- Medicines and vaccines
- Medical and assistive devices
- Information technology

Technological Innovation

- Tools that can significantly
 - Increase quality of life and dignity
 - Prevent and manage co-morbidities; functional and cognitive decline;
 - Enable health preventive, promotion, treatment, rehabilitation and palliative services
 - Reduce institutionalization and keep people at home
 - Reduce social isolation
- A holistic approach: Must be integrated with health and community delivery systems; ecosystem for innovation
- Listening to the elderly: respond to their needs and preferences

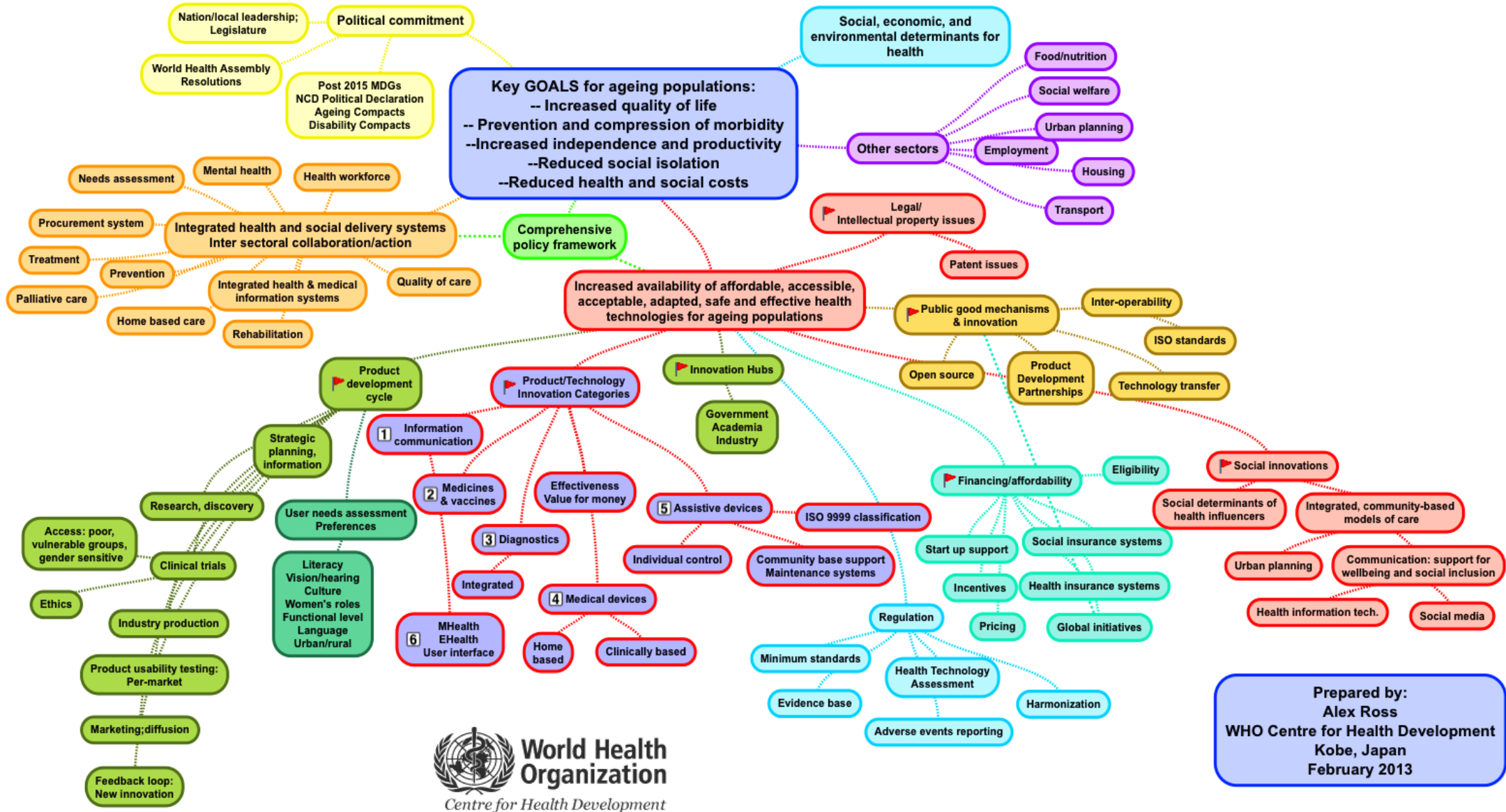
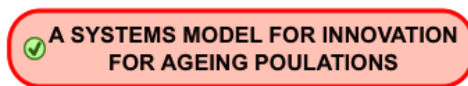
Technological Innovation

- Frugal
- 6 key parameters
 - Affordable
 - Available
 - Acceptable
 - Adaptable
 - Accessible
 - Quality (safe and effective)

Opportunities

- Link disability and ageing communities
 - Community based rehabilitation systems
- Universal Health Coverage
- Integrating health and social (welfare) delivery systems
- Respond to demographic shifts

AN ecosystem for innovation



In the context of universal health coverage

- Current increased attention on universal coverage has created some kind of momentum and platform for developing national health financing systems

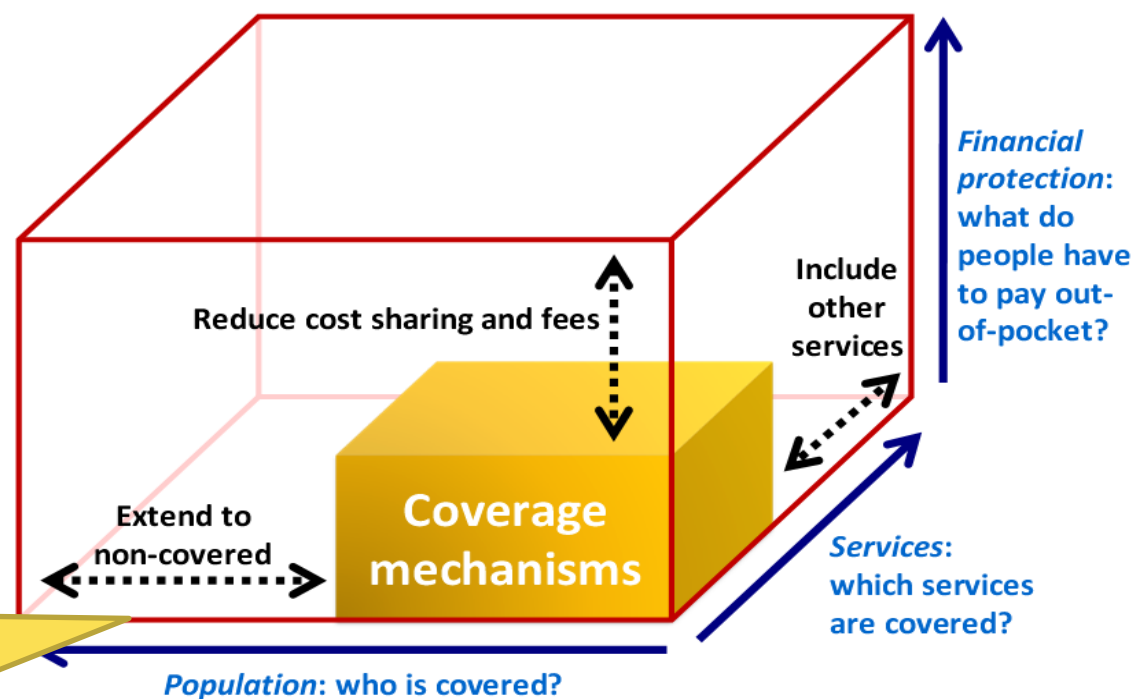
- Services = promotion, prevention, treatment, rehabilitative, palliation

- Who? **Everyone!**

- Financing

Innovation

Towards universal coverage



To ensure improved access of safe, quality medical devices

Research and development

Research and development based on needs

Regulations

Regulations :
Medical devices
Registration and premarket approval

Assessment

Health Technology Assessment

Approved list of devices for interventions

Management

Needs Assessments
Selection

Installation,
Inventories;
User training
Maintenance

Post market surveillance and Adverse event reporting

Decommissioning

Some examples of frugal innovations for ageing populations

- Low cost smart phones – easy to see and use
- A solar powered hearing aid
- Low cost vision solutions (including cataract)
- Assistive solutions: streamlined availability and maintenance
- Appropriate wheelchair
- The cane, with sensors
- GIS and sensors: cognitive decline
- Utility companies – homes – early warning
- Social innovation (e.g. housing, social media, etc)
 - Older persons associations
- Senior centers = social participation, meals, self care
- Many others

Thank you

http://www.who.int/kobe_centre

