



# Bridging the Gap: International Cooperation for Health Literacy for an Ageing World\*

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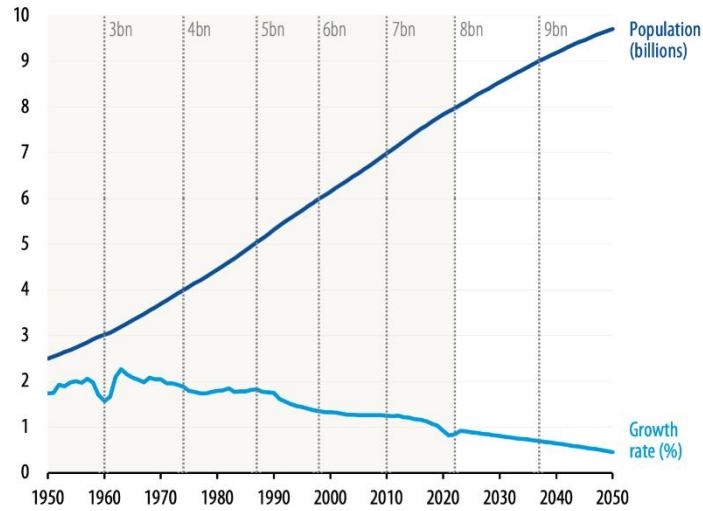
# Outline:

- Ageing society: World, Indonesia, The Philippines and Finland
- Health, Psychosocial, and Economic issues in elderly
- Health Literacy
- AI in Health Literacy and Healthcare
- Higher Education Institutions: Narrowing the gaps
- Take-home messages

Chart 1

### Population boom fizzling

Even as global population passes 8 billion, the rate of growth continues to decline.



Sources: United Nations Department of Economic and Social Affairs, Population Division, World Population Prospects, 2022 Revision.

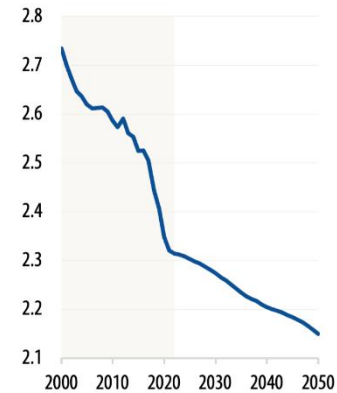
# World Population 1950 -2050/2100

Chart 2

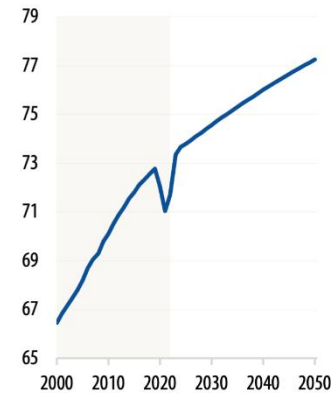
### Aging population

People are living longer and having fewer children, leading to a greater proportion of elderly in the population.

Total fertility rate, worldwide  
(births per woman)



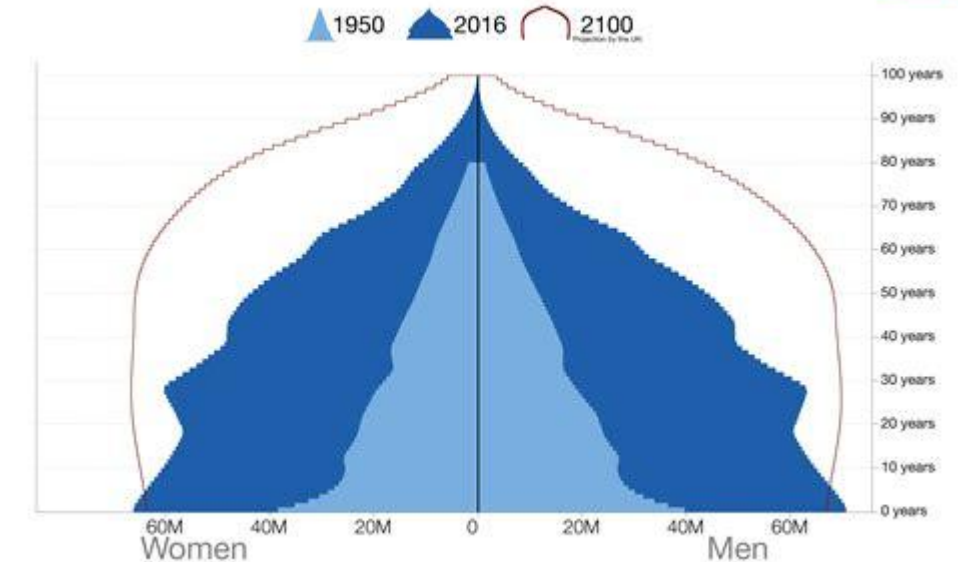
Life expectancy at birth, worldwide  
(years of life expectancy)



Sources: United Nations Department of Economic and Social Affairs, Population Division, World Population Prospects, 2022 Revision.

## The World Population Pyramid in 1950, 2016 and 2100

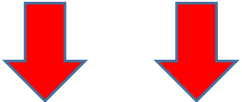
Our World in Data



Data source: United Nations - World Population Prospects 2015. No data for world population older than 100 years in 2016 and 2100 shown; no for world population older than 80 shown in 1950. The interactive data visualization is available at [OurWorldinData.org](https://ourworldindata.org). There you find the raw data and more visualizations on this topic. Licensed under CC-BY-SA by the author Max Roser.

Table 1

## World demographic characteristics



Country groupings	Population, millions (share of world pop., %)	Total fertility rate	Life expectancy at birth, years	Share of international migrants in pop.*, %	Share of pop. ages 65+, %	Share of pop. ages 80+, %	Ratio of working-age pop. to non-working-age pop.**	Share of pop. living in depopulating countries, %
World	7,975 (100%)	2.3	71.7	3.6	9.8	2.0	1.3	26.1
High-income	1,251 (15.7%)	1.6	80.9	14.7	19.2	5.3	1.4	33.2
Upper-middle-income	2,526 (31.7%)	1.5	76.0	2.0	12.2	2.2	1.6	64.3
Lower-middle-income	3,432 (43%)	2.6	67.0	1.0	6.1	0.9	1.2	1.3
Low-income	738 (9.2%)	4.5	63.0	1.8	3.1	0.4	0.8	0.0
Africa	1,427 (17.9%)	4.2	62.2	1.9	3.5	0.4	0.9	0.0
Asia	4,723 (59.2%)	1.9	73.2	1.8	9.6	1.8	1.5	34.3
Europe	744 (9.3%)	1.5	77.4	11.6	19.6	5.4	1.5	60.2
LATAM and the Caribbean	660 (8.3%)	1.8	73.8	2.3	9.2	1.8	1.5	2.3
Northern America	377 (4.7%)	1.6	78.7	15.9	17.3	4.0	1.4	0.0
Oceania	45 (0.6%)	2.1	79.2	22.0	12.9	3.1	1.3	0.1

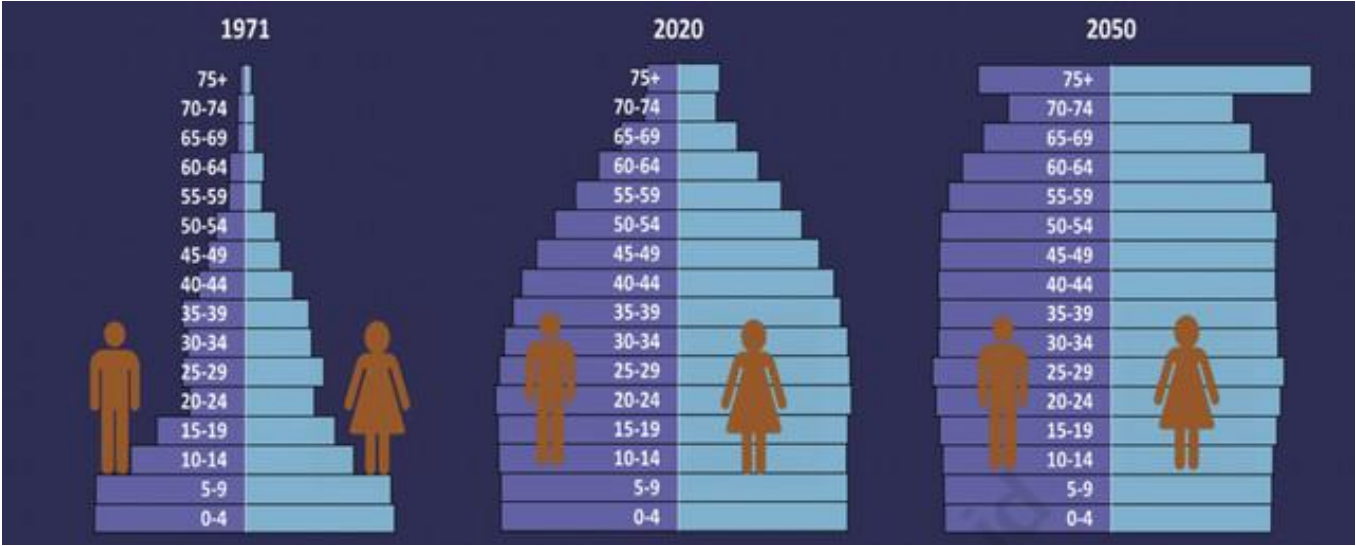
**Sources:** United Nations Department of Economic and Social Affairs, Population Division, World Population Prospects, 2022 Revision and International Migrant Stock 2020; World Bank, GNI Per Capita Operational Guidelines & Analytical Classifications.

**Note:** \*Data as of 2020. \*\*Ratio of ages 20–64 to ages 65+ and below 20. LATAM = Latin America.

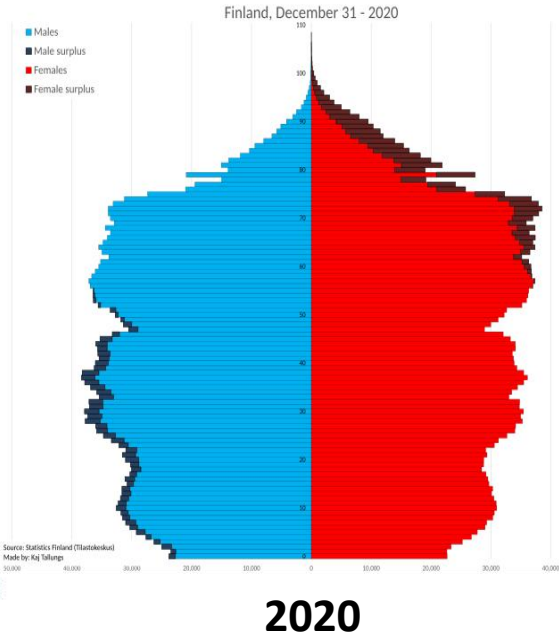
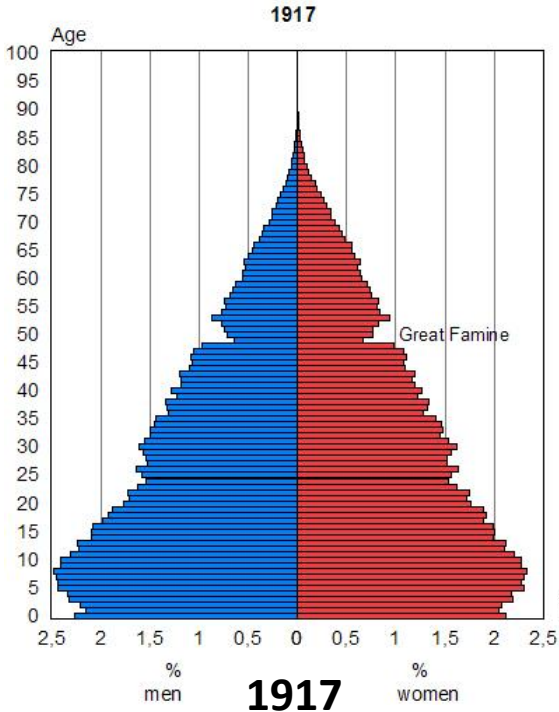
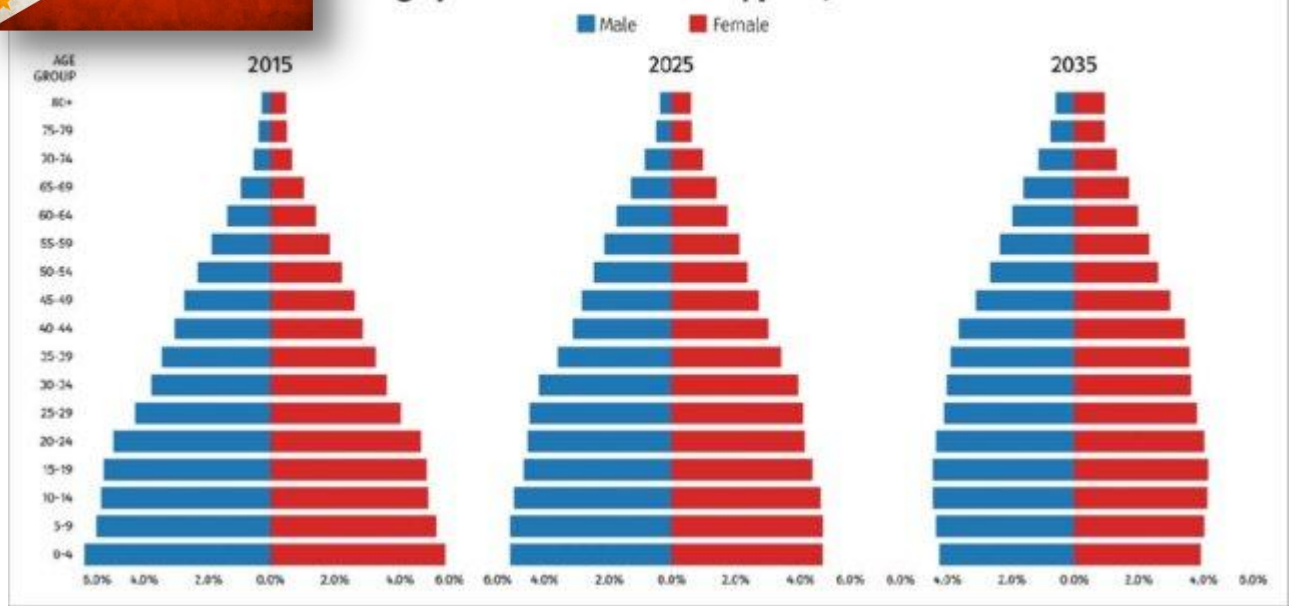
This figure describes the proportion of the elderly population compared to the total population of a country. Consider high-income, upper-middle income and low-income countries. Also, look at the columns showing the percentage of the population aged +65 years and +80 years. It can be seen that high-income and upper-middle income countries account for 19.2 and 12.2%, while low-income countries account for only 3.1%.



Comparison of population pyramids over time of Indonesia, the Philippines and Finland



Demographic structure of the Philippines, 2015 - 2035



# Comparison between Finland, the Philippines, and Indonesia

## Finland: Pop. 5,621,694 (2025)

- **Advanced Aging:**
  - Finland has a significantly advanced aging population. It's among the countries with the highest proportion of older adults in the world.
  - This results from a combination of high life expectancy and low fertility rates.
  - This leads to challenges related to:
    - Strain on pension systems.
    - Increased demand for elderly care.
    - Potential labor shortages.
- **Social Structures:**
  - Finland has well-developed social welfare systems to support its aging population.

## The Philippines: Pop. 116,533,406 (2025)

- **Relatively Younger Population:**
  - The Philippines has a relatively younger population compared to both Finland and Indonesia.
  - While the population is aging, it's happening at a slower pace.
  - However, the country still needs to prepare for the future challenges of an aging population, including:
    - Improving access to healthcare and social services for older adults.
    - Strengthening social security systems.
- **Family and Community:**
  - Similar to Indonesia, family and community support systems are important for older adults in the Philippines.

# Comparison between Finland, the Philippines, and Indonesia

**Indonesia: Pop. 285,120,997 (2024)**

- **Aging, but with Differences:**

- Indonesia's population is also aging, but at a less advanced stage compared to Finland.
- While the proportion of older adults is increasing, Indonesia still has a relatively young population overall.
- Challenges include:
  - Developing adequate social security and healthcare systems for the elderly.
  - Addressing the needs of older adults in diverse and geographically spread populations.

- **Cultural Factors:**

- Traditional family structures play a significant role in caring for older adults, but this is changing with urbanization and modernization.
- Information regarding the aging population in Indonesia is available from sources such as BPS-Statistics Indonesia.

# Key Differences Summarized:

- **Stage of Aging:** Finland is far ahead in the aging process, while Indonesia is in a transitional phase, and the Philippines is relatively younger.
- **Social Welfare:** Finland has robust social welfare systems, while Indonesia and the Philippines are still developing their systems to meet the needs of their aging populations.
- **Cultural Context:** Family structures play a significant role in elder care in Indonesia and the Philippines, though these are evolving.
- **Aspects of geography:** Finland is a continental country while the Philippines and Indonesia are archipelagic countries. This has its own difficulties in terms of access and distribution of health services.



# Health, Psychosocial, and Economic issues in elderly

- Frailty
- Dement, Alzheimer
- Comorbidities (hypertension, T2DM, dyslipidemia, etc.)→ prone to have complications
- Loneliness
- Stereotype (helpless, unproductive, etc.)
- Discrimination (workplace rejection, Difficult to get access, etc.)
- Insecurity



# Health Literacy

Health literacy is a crucial factor for any health institution that aspires to offer equitable, safe, and high-quality care.

This is clearly demonstrated across a range of health outcomes: **low health literacy is associated with higher mortality, morbidity, medication errors, and rates of hospitalization and emergency department visits.** (Berkman *et al.*, 2011)

WHO: “Health literacy represents the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health” (Nutbeam, 1998)



<https://cbrhl.org.au/what-is-health-literacy/health-literacy-environment/>

# Most frequently used definitions of health literacy (Urstad et al, 2021)

Reference	Definition
<b>Category 1</b>	
Jorm (1997)	<p>'Knowledge about appropriate treatment options; and <i>attitudes</i> that facilitate recognition and treatment-seeking'</p> <p>'<i>Knowledge and beliefs</i> about mental disorders which aid their recognition, management or prevention'</p>
American Medical Association (1999)	' <i>The constellation of skills, including the ability</i> to perform basic reading and numerical task required to function in the healthcare environment'
<b>Category 2</b>	
Nutbeam	The <i>cognitive and social skills</i> which determines the motivation and ability of individuals to gain access to understand and use information in ways which promote and maintain good health.
Sorensen <i>et al</i>	'Health literacy entails people's knowledge, motivation and competences to access, <i>understand, appraise</i> and <i>apply</i> health information in order to make judgements and take decisions in everyday life concerning healthcare, disease prevention and health promotion to maintain or improve quality life during the life course'
The Institute of Medicine	'The individuals' capacity to <i>obtains, process</i> and understand basic health information and services needed to make appropriate health decisions.'

# AI in Health Literacy and Healthcare

- Artificial intelligence, virtual and augmented reality, and machine learning are examples of digital technologies that have been consistently used in healthcare services due to the rapid advancement of modern science and technology. Although the standard of healthcare goods and services has increased, older persons' methods of learning and disseminating health information are also evolving. → Japan, Singapore and developed countries

## AI in Healthcare:

- Enhanced patient's care (example: remote patient monitoring)
- Offering accurate information
- Data analysis and improved diagnosis
- Enhanced drug discoveries, new method for treatments
- Reduced care cost (there is no evidence in developing countries, because it has not been applied yet)

# Contribution of Higher Education Institutions to Health Literacy

**Indonesian universities have three basic tasks (The Three Pillars of Higher Education): Education/learning, Research and Community service.**

- Education: Study programs that are directly or indirectly related to health literacy can map the problems and needs of the community for health literacy that will be synchronized with learning objectives and graduates.
- Research: Basic research, policy research, participatory action research. All kinds of health research related to the elderly are examples of research themes that can be carried out either independently or in collaboration.
- Community service: This activity is able to bring the theoretical approach and application in the field closer. Universities will be able to evaluate and monitor the projects created based on the results of previous research, as well as get input to improve future projects.



## Digitally Inclusive, Healthy Ageing Communities (DIHAC) <https://digital-ageing.com/about/>

**DIHAC is a cross-cultural study that aims to understand the contextual affects of digital inclusion and its effects on healthy ageing.**

Structural equation models will be used to quantitatively analyse digital skill, e-health literacy, health promotion participation, and quality of life.

To uncover underlying beliefs and basic values regarding digital inclusion and healthy ageing, qualitative theme analysis will uncover cultural patterns and contextual elements that explain how older people in various nations manifest, speak, act, think, and feel.

Currently, DIHAC's active members are Japan, Thailand, Republic of Korea, and Singapore. The principal investigator is Assoc. Prof. Myo Nyein Aung, MD, MSc, PhD.



The activities are knowledge and experience sharing in the form of Zoom meetings and webinars.



# Elderly School (Sekolah Lansia): Indonesia Experience

- Elderly School is an effort to provide information, training and educational games about health, religion, social culture etc., so that the elderly can live happily and prosperously.
- Vision: SMART (Healthy, Independent, Active, and Productive) and Dignified in 7 Dimensions of the Elderly Resilient (the spiritual, physical, emotional, the intellectual, societal, vocational professional and environmental dimensions) as a whole that is useful for oneself, family, community and country.
- Mostly organized by the people (community-based) and supported by Ministry of Population and Family Development.
- The government acts as an umbrella of activities, providing consultation in the development of programs including curriculum and other technical issues.
- Learning is usually divided into 3 tiers, namely S1, S2, and S3 (Standard 1-3) which lasts 6 months to 12 months.

**Universitas Respati Indonesia (Urindo)**

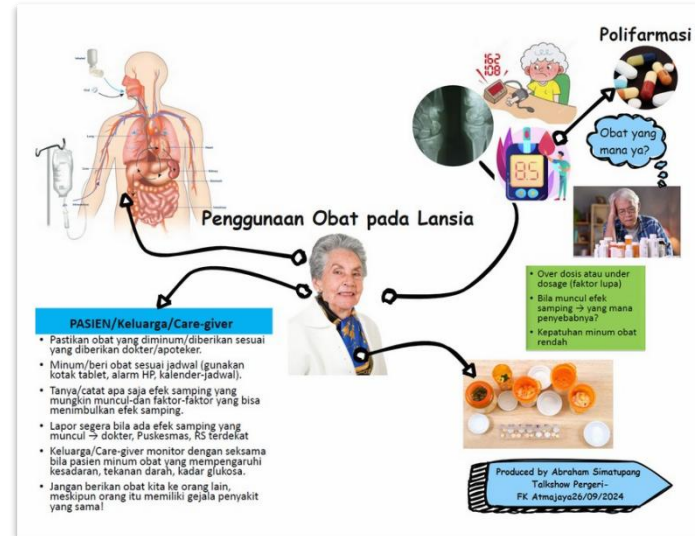
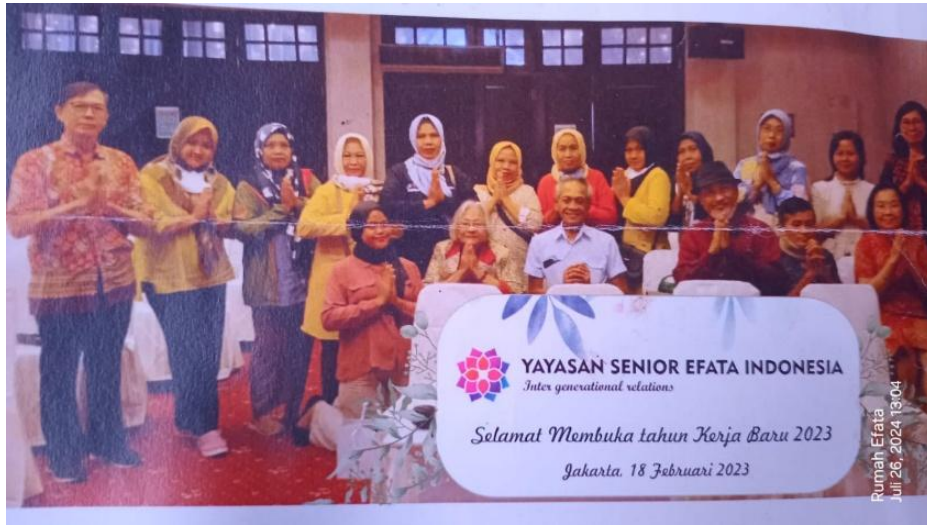


**Indonesia Ramah Lansia (IRL) Foundation**





# Health-literacy: Seminar for the elderly on medicine



Pergeri Collaboration with Atma Jaya – Catholic University and Senior Foundation Effata-Indonesia



Information on Frailty and Fall in UKI Teaching Hospital





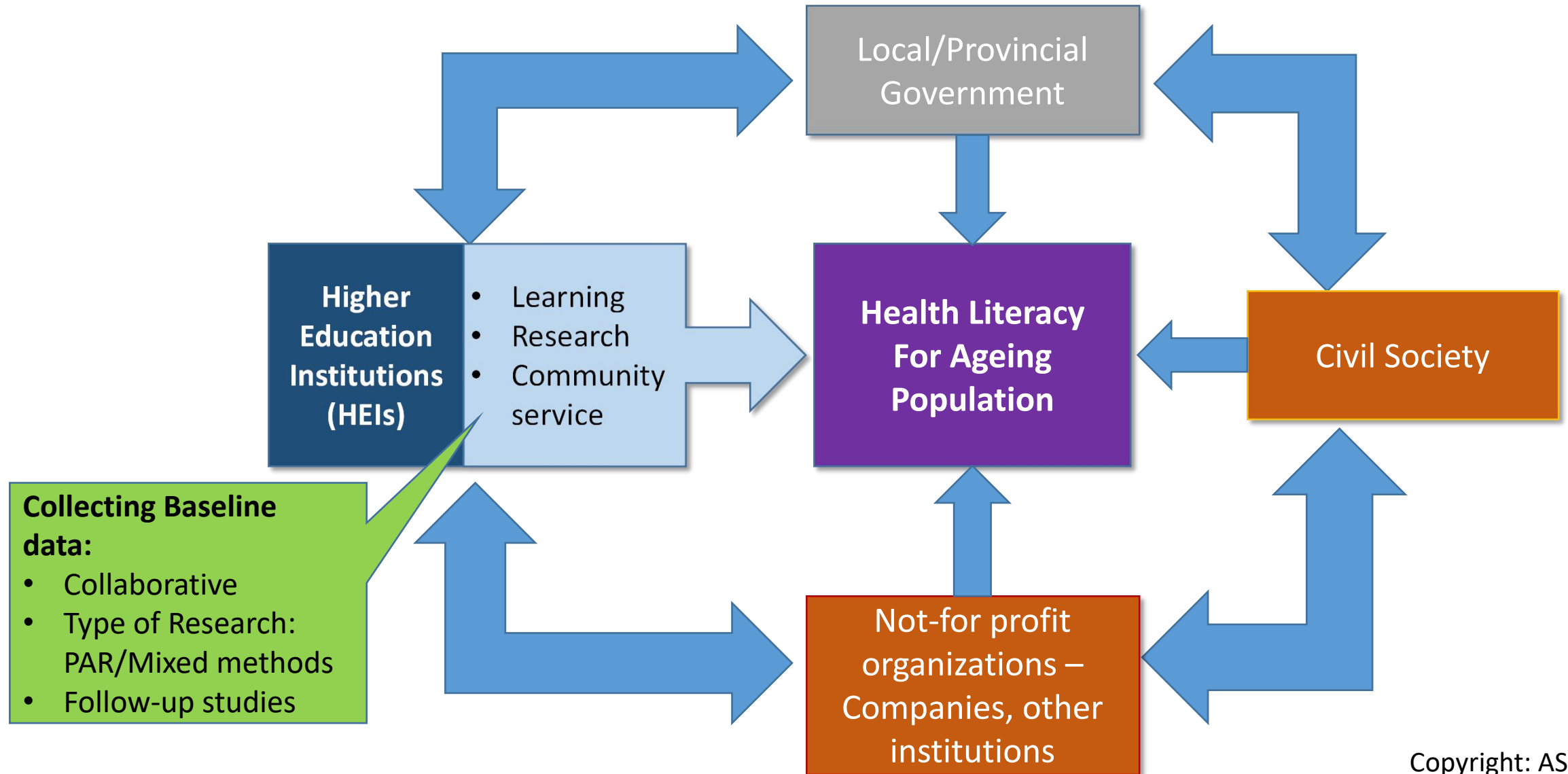
# (Rural) Community Health Center

## Activities for seniors in cooperation with local church:

1. Meet monthly
2. Health examination: TB, weight, BP, pulse, etc. Treatment will be given when needed.
3. The priest attended the activity to hear the patients' problems. It can be one of the sermon's spiritually oriented resources.
4. People bring food (corn, mung beans, fish, etc.) that will be eaten together, after the health check-up.
5. Often interspersed with health talks



# A model of Higher Education Institutions' engagement with other institutions in Health Literacy in Ageing Society



# Take-home messages



- The demographics of the world's population are moving towards old age, especially in developed countries, to be followed by low-middle countries.
- One of the gaps is health-literacy in its broadest sense.
- Collaboration between stakeholders is necessary and universities play an important role.
- Universities can narrow the gap through education, research and community service



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Terima kasih, Thank You,  
Maraming salamat po,  
Kiitos!

School of Medicine



Teaching Hospital



Bona



Hanoch



Abraham

