



NHIS GLOBAL FORUM **2025**

Data-Driven Guidance, Digital Health & AI for Healthy Ageing and Long-Term Care

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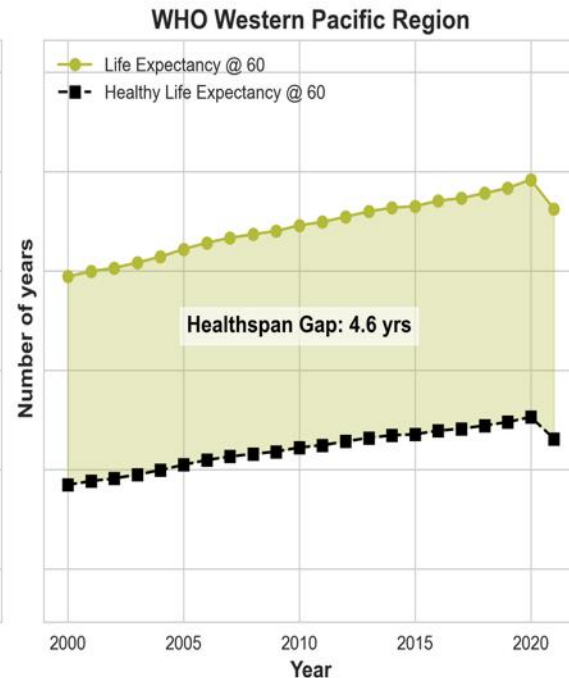
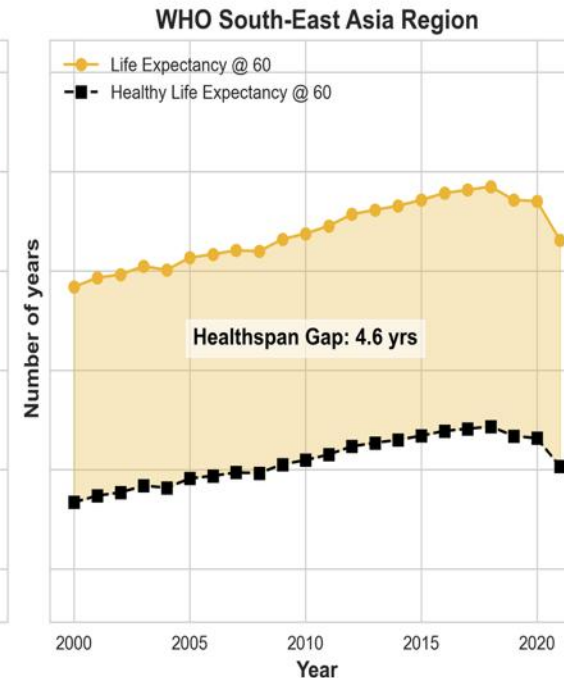
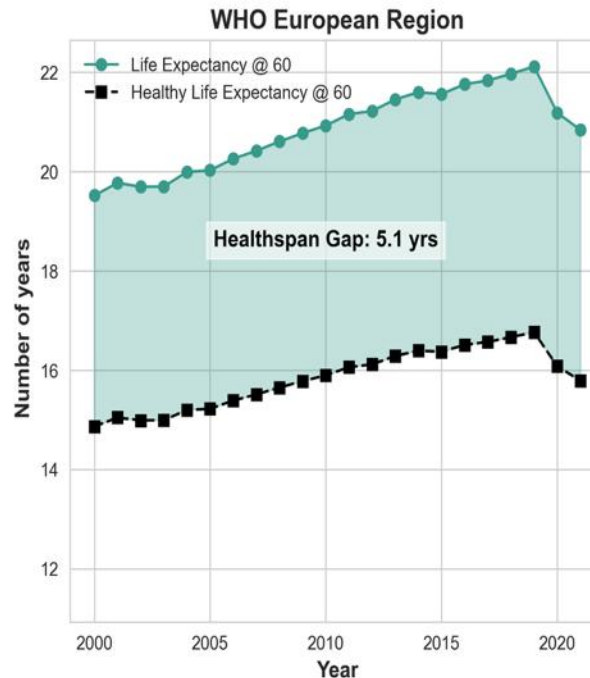
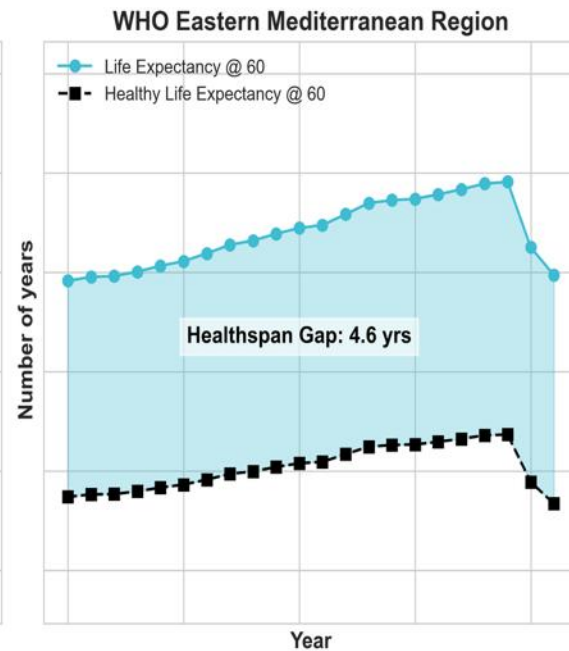
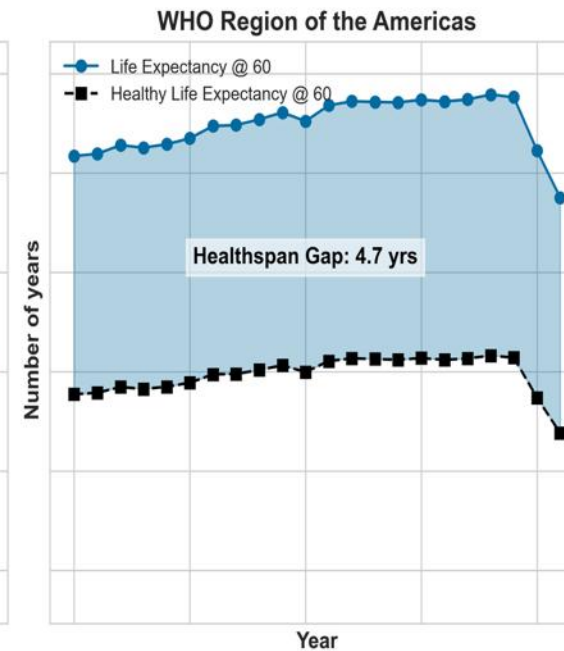
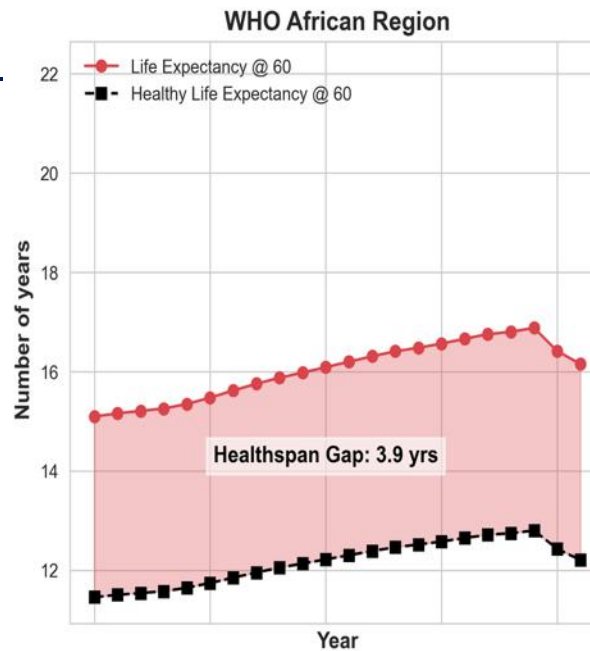
**Department of Maternal, Newborn, Child, Adolescent
Health and Ageing**

World Health Organization

Part 1. Data and Evidence-driven Guidance for Healthy Ageing and Long-term care for Older People

Living longer, but not healthier

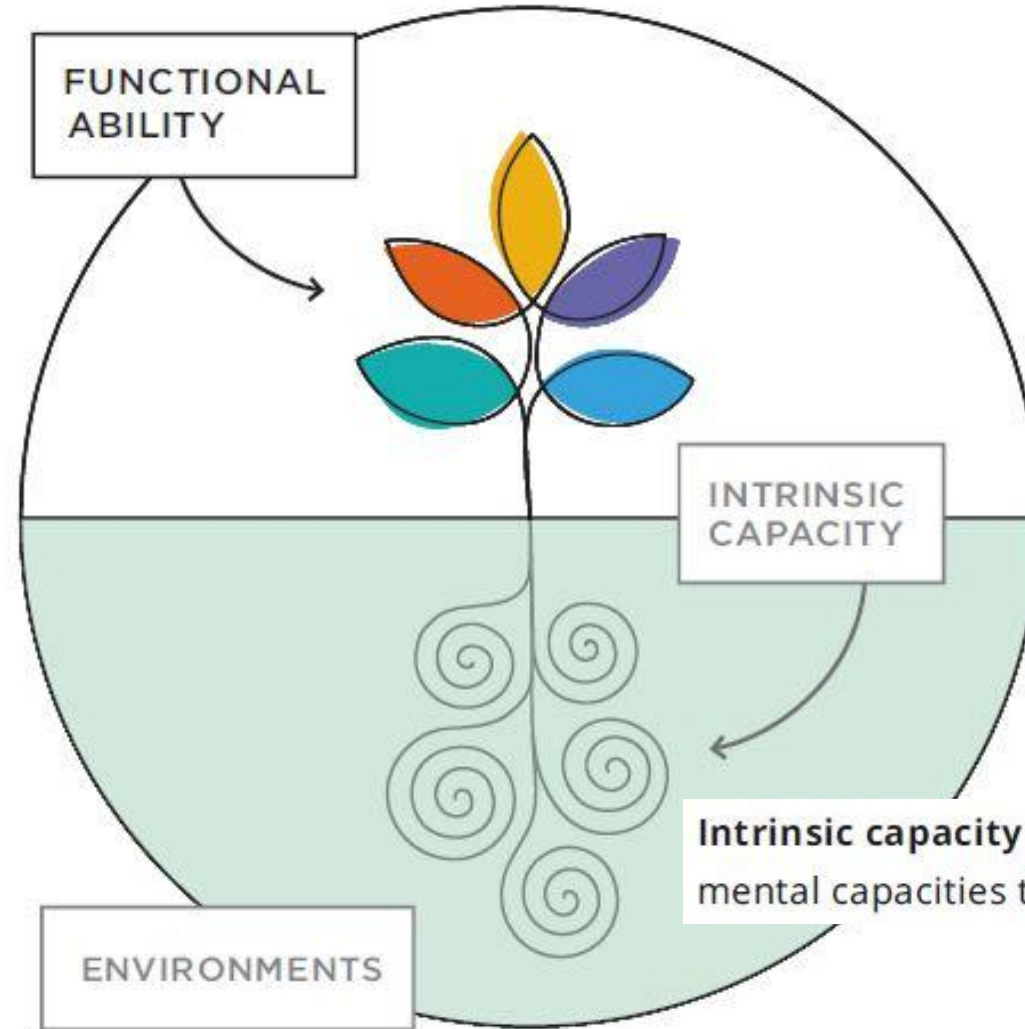
- Over the last century, we have added *decades to life expectancy*, but...
- We have not *added decades to health*. We are living longer, but we are also spending more years in poor health.



Healthy Ageing:

The process of developing and maintaining the functional ability that enables well-being in older age

Functional ability combines the intrinsic capacity of the individual, the environment a person lives in and how people interact with their environment.



Intrinsic capacity comprises all the physical and mental capacities that a person can draw on.

The three components of healthy ageing

Environments are where people live and conduct their lives. Environments shape what older people with a given level of intrinsic capacity can be and do.

UN Decade of Healthy Ageing (2021-2030)

Action Areas

1. Changing how we think, feel and act towards age and ageing
2. Deliver integrated care and primary health services responsive to older people
3. Provide access to long-term care for older people who need it
4. Ensure that communities foster the abilities of older people

Enablers

- Voice and engagement of older people, families, communities
- Nurturing leadership and capacity building
- Connecting stakeholders
- Data, research and innovation



FUNCTIONAL ABILITY

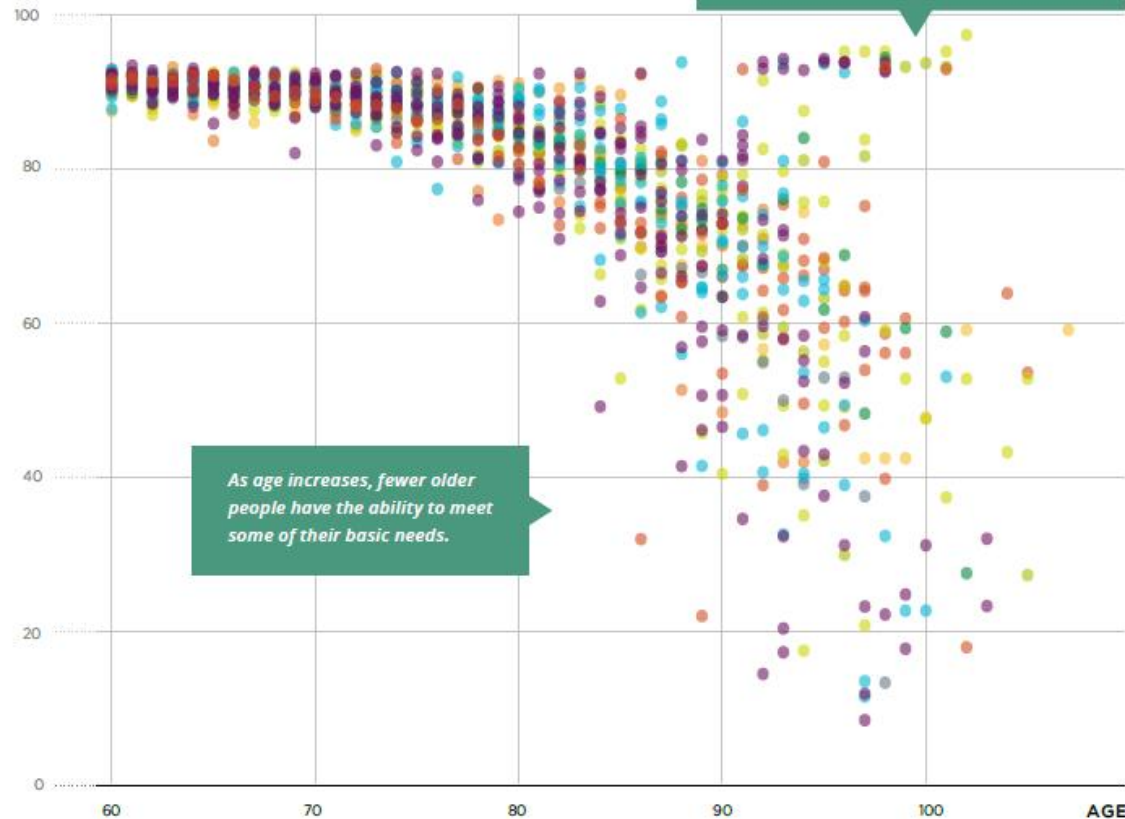
Ability to meet some basic needs by age
in 37 countries*

This score is based on more than 127 000 older persons in 37 countries*. Each colour represents a different country. At every age, there are 37 dots, representing the average score at each age for each country.

On average individuals in some countries have relatively high scores at older ages.

This demonstrates that, at every age, people could be supported to meet their basic needs through a combination of maintaining intrinsic capacities, providing enabling environments, and ensuring targeted support to those who need it.

BASIC NEEDS SCORE



Meeting everyday basic needs
for food, shelter and clothing ...



Key message:

At least 142 million older persons (14% of all older persons) worldwide are unable to meet some of their basic needs.

Yet only 25% of Member States have limited, comparable data.

3

WHAT IMPROVEMENTS
COULD WE EXPECT
BY 2030?

PROGRESS AT NATIONAL LEVEL

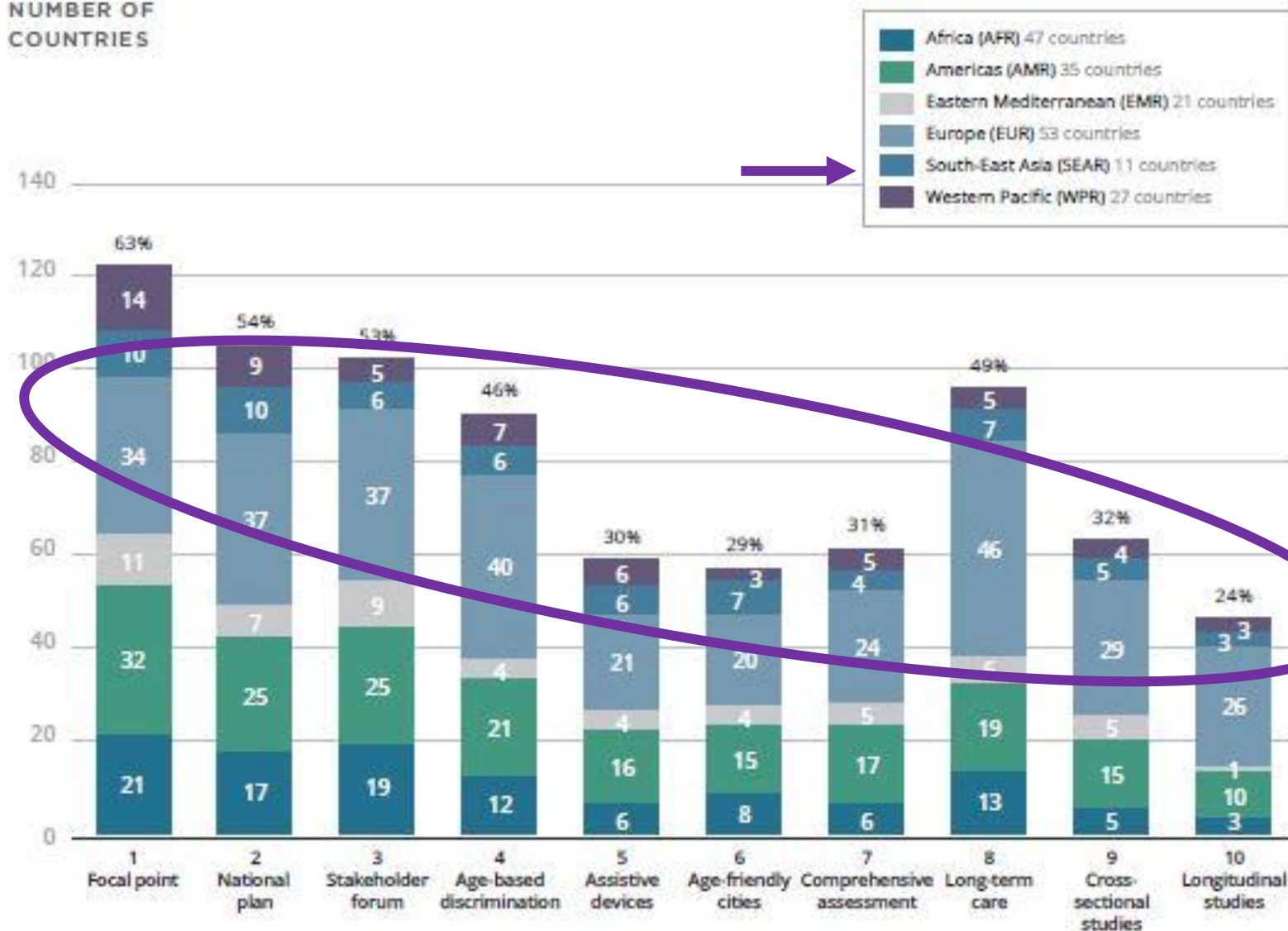
Key message:

Between 2018-2020, most regions document an increase in all 10 progress indicators that demonstrate national commitment.

But progress is unequal and not fast enough.

Number of countries responding “yes” to each indicator
region and percentage of 194 Member States, 2020

NUMBER OF
COUNTRIES



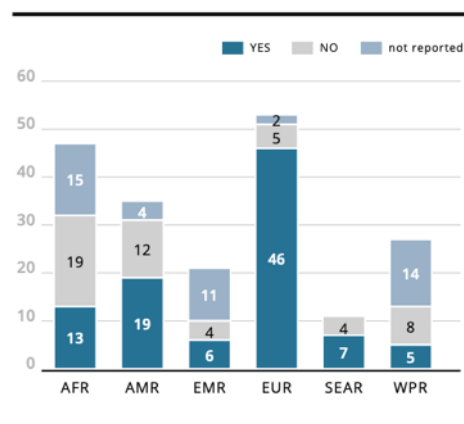
2023 UN Decade: Process Evaluation Survey

Changes in Member State reporting against national process indicators, 2020 and 2022-2023



8

Number of countries with
**a national policy on long-term care,
including homes, communities and
institutions when needed, 2020** → 3.2



Percentage of countries reporting
a national policy on long-term care

	2018	2020
Globally	41%	49%
AFR	23%	28%
AMR	46%	54%
EMR	14%	29%
EUR	72%	87%
SEAR	64%	64%
WPR	19%	19%

Member States commit to ensure legal frameworks and sustainable financial mechanisms for provision of long-term care, within the Decade action area "provide access to long-term care for older people who need it".

Fig. 1 Changes in Member State reporting against national progress indicators, 2020 and 2022



Source: WHO–UN Decade Process Evaluation Survey 2022–2023 [data collection period, September 2022–April 2023] and data for baseline year 2020 collected in 2019 and reported in the WHO baseline report for the Decade of Healthy Ageing (10). Analysis was restricted to countries that participated in both the baseline survey and the follow-up survey in 2022

WHO Ageing Data Portal

WHO compiles ageing data from surveys and existing data sources (e.g. OECD)

But... do we have enough information we need?

MATERNAL, NEWBORN, CHILD AND ADOLESCENT HEALTH AND AGEING
Data portal


All Indicators ▶ All Documents ▶








Home ▾ Maternal & newborn ▾ Child ▾ Adolescent ▾ Ageing ▾ Cross-cutting ▾ Laws & Policies ▾ Global Strategy ▾ Portal search ▾

Ageing data

The Decade of Healthy Ageing (2021-2030), endorsed by the World Health Assembly in August 2020, seeks to improve the lives of older people, their families and communities through collective action in four areas: changing how we think, feel and act towards age and ageism; developing communities in ways that foster the abilities of older people; delivering person-centered integrated care and primary health services responsive to older people; and providing older people who need it with access to quality long-term care.

The WHO Ageing Data Portal brings together data on available global indicators relevant to monitoring the health and well-being of people aged 60 years and over. Through maps, charts and tables, the portal offers tailored options for visualization and analysis of the data. This information will strengthen the visibility of older people, help inform action to improve health and well-being in countries in line with global, regional and national commitments.

 The Decade of Healthy Ageing (2020-2030) is an opportunity to bring together governments, civil society, international agencies, professionals, academia, the media, and the private sector for ten years of concerted, catalytic and collaborative action to improve the lives of older people, their families, and the communities in which they live.

 Demographics	 Mortality/causes of death	 Morbidity	 Risk factors
 Healthy life expectancy	 Healthy ageing	 UN Decade Monitoring	 Age-friendly cities and communities
 Ageism	 ICOPE Integrated care for older people	 Long term care for older people	



Republic of Korea

Demographics and life-expectancy



Aged 60 and above
28.4%



Aged 80 and above
4.9%

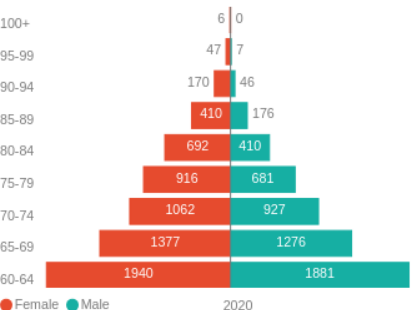


Life-expectancy at age 60
26.2 years

Data source: WHO - Global Health Estimates (GHE) (2021), UN Population Division (2025)



Number of persons aged 60 years or over (thousands)



Data source: UN Population Division



Living arrangements

Percentage

Data source:



Ageism

	Year	%
Crude prevalence of high ageist attitudes	2014	8.8%
Crude prevalence of moderate ageist attitudes	2014	7.3%
Crude prevalence of low ageist attitudes	2014	83.8%

Data source: Global Report on Ageism 2020
(<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7246680/>)



Republic of Korea



Top 10 causes of death in older people and years lived with disability

Rank	Causes of death	Causes of years of healthy life lost due to disability
1	Ischaemic heart disease	Diabetes mellitus
2	Lower respiratory infections	Back and neck pain
3	Stroke	Osteoarthritis
4	Trachea, bronchus, lung cancers	Other hearing loss
5	Alzheimer disease and other dementias	Falls
6	Kidney diseases	Alzheimer disease and other dementias
7	Liver cancer	Stroke
8	Colon and rectum cancers	Chronic obstructive pulmonary disease
9	Chronic obstructive pulmonary disease	Oral conditions

Data source: WHO - Global Health Estimates (GHE) (2021)



Integrated Care for Older People

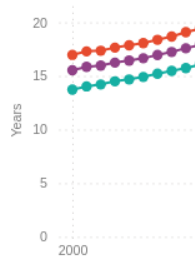
Age Groups	Prevalence and incidence of common health conditions			
	Hearing loss*	Blindness and vision impairment*	Low back pain*	Falls**
60-64	42%	5%	17%	4459
65-69	52%	7%	19%	4884
70-74	61%	9%	21%	6359
75-79	69%	13%	23%	9307
80-84	75%	17%	23%	14609
85-89	79%	23%	22%	21187
90-94	82%	29%	20%	29153
95+	83%	35%	18%	37800

* Prevalence ** Incidence

Data source: IHME (2019,2021)



Healthy life-expectancy



Data source: WHO - Global Health Estimates (GHE) (2021)



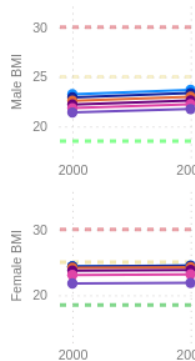
Risk factors

Prevalence of insufficient physical activity (latest data)



Male
44%

Body Mass Index (BMI) by age



Data source: NCD-RisC



Republic of Korea



National commitments

Focal point on ageing and health in the ministry of health	Yes
National plans, policies or strategies on ageing and health	Yes
National multi-stakeholder forum or committee on ageing and health	Yes
National legislation and enforcement strategies against age-based discrimination	Yes
National legislation/regulations that provide older adults with access to assistive devices from the WHO Priority Assistive Product List	Yes
National programme to support activities in line with the WHO global Network for Age-friendly Cities and Communities	Yes
National policies in place to support comprehensive assessments of the health and social care needs for older people	Yes
Long-term care policy/plan/strategy/framework (stand-alone or integrated within an ageing and health plan)	Yes
Cross-sectional nationally representative, publicly available and anonymous individual level data on older persons and their health status and needs	Yes
Longitudinal nationally representative surveys (cohort) on older persons and their status and needs	No
Policy, legislation, strategy, or programme to support combating ageism	Yes
Human rights mechanisms dedicated to the promotion and protection of the rights of older persons	Yes
Specific legal, administrative, or other effective remedies to older persons who have been subject to discrimination	Yes
Contributing to the UN-Open ended working group on ageing	Yes
Implemented actions to support income generation activities for older persons	Yes
Provide out-patient-service free of charge in the public sector for older persons	Yes
Provide assistive devices and technologies free of charge in the public sector for older persons	Yes
Provide pharmaceutical products and/or other medical supplies free of charge in the public sector for older persons	Yes
Capacity-building plans to strengthen the geriatric and gerontology workforce	Yes
National guidelines for organizing geriatric care and training	Yes
National competency frameworks for geriatrics care workers	Yes
Programmes (in-person or online) available for caregivers of older persons	Yes
Policy, legislation, strategy, or programme to support the integration of palliative care services into the structure and financing of national healthcare systems at all levels of care	Yes
Availability of resources (human and finance) to implement actions on ageism	Limited resources
Availability of resources (human and finance) to implement actions on age-friendly environment	Limited resources
Availability of resources (human and finance) to implement actions on integration care for older persons	Substantial resources
Availability of resources (human and finance) to implement actions on long-term care for older persons	Substantial resources

Data source: WHO (2023)



Age-friendly cities and communities

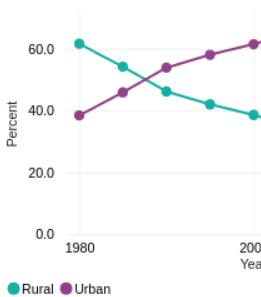
Percentage of older people living in age-friendly cities and communities
Percentage of older people receiving pensions
Percentage of older people active in labor
Percentage of older people living in rural areas
Percentage of older people living in urban areas

More info

Data source: UN Population Division, ILO, etc.



Percentage of older people and urban areas



Data source: UN Population Division



Long-term care for older people

Percentage of older people receiving long-term care at long-term care facilities (aged 65 years or over)
Percentage of older people receiving long-term care at home (aged 65 years or over)
Number of formally employed LTC workers
100 older persons (aged 65 years or over)

Data source: OECD Stats, OECD



India

Demographics and life-expectancy



Aged 60 and above
11.1%



Aged 80 and above
1.1%

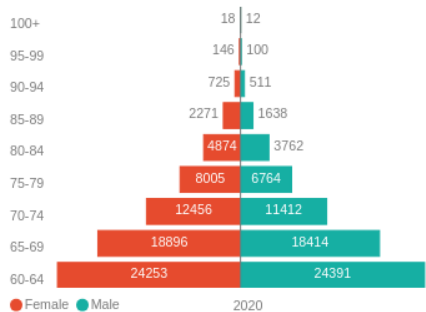


Life-expectancy at age 60
15.6 years

Data source: WHO - Global Health Estimates (GHE) (2021), UN Population Division (2025)



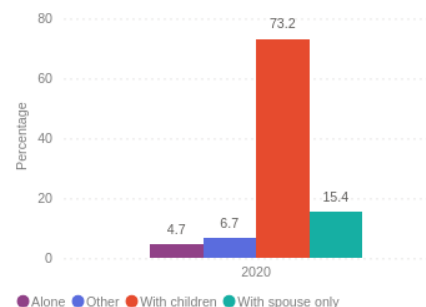
Number of persons aged 60 years or over (thousands)



Data source: UN Population Division



Living arrangements



Data source: UN Population Division



Ageism

	Year	%
Crude prevalence of high ageist attitudes	2014	79.5%
Crude prevalence of moderate ageist attitudes	2014	11.3%
Crude prevalence of low ageist attitudes	2014	9.2%

Data source: Global Report on Ageism 2020
(<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7246680/>)



India



Top 10 causes of death in older people and years lived with disability

Rank	Causes of death	Causes of years of healthy life lost due to disability
1	COVID-19	Other hearing loss
2	Ischaemic heart disease	Back and neck pain
3	Chronic obstructive pulmonary disease	Diabetes mellitus
4	Stroke	Chronic obstructive pulmonary disease
5	Diarrhoeal diseases	Depressive disorders
6	Diabetes mellitus	Falls
7	Lower respiratory infections	Iron-deficiency anaemia
8	Tuberculosis	Uncorrected refractive errors
9	Falls	Cataracts
10	Asthma	Osteoarthritis

Data source: WHO - Global Health Estimates (GHE) (2021)



Integrated Care for Older People

Age Groups	Prevalence and incidence of common health conditions			
	Hearing loss*	Blindness and vision impairment*	Low back pain*	Falls**
60-64	55%	67%	16%	4025
65-69	64%	80%	16%	5589
70-74	71%	90%	17%	7754
75-79	76%	95%	18%	10871
80-84	80%	98%	21%	13880
85-89	82%	99%	22%	15649
90-94	83%	100%	21%	16323
95+	84%	100%	20%	16930

* Prevalence ** Incidence

Data source: IHME (2019,2021)



Age-friendly cities and communities

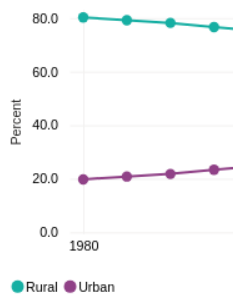
Percentage of older people living in age-friendly cities and communities
Percentage of older people receiving
Percentage of older people active in
Percentage of older people living in
Percentage of older people living in

Mo

Data source: UN Population Division,



Percentage of older people in urban areas



Data source: UN Population Division



Long-term care for older people

Percentage of older people receiving care at long-term care facilities (aged 65 years or over)
Percentage of older people receiving care at home (aged 65 years or over)
Number of formally employed LTC workers per 100 older persons (aged 65 years or over)

Data source:



National commitments

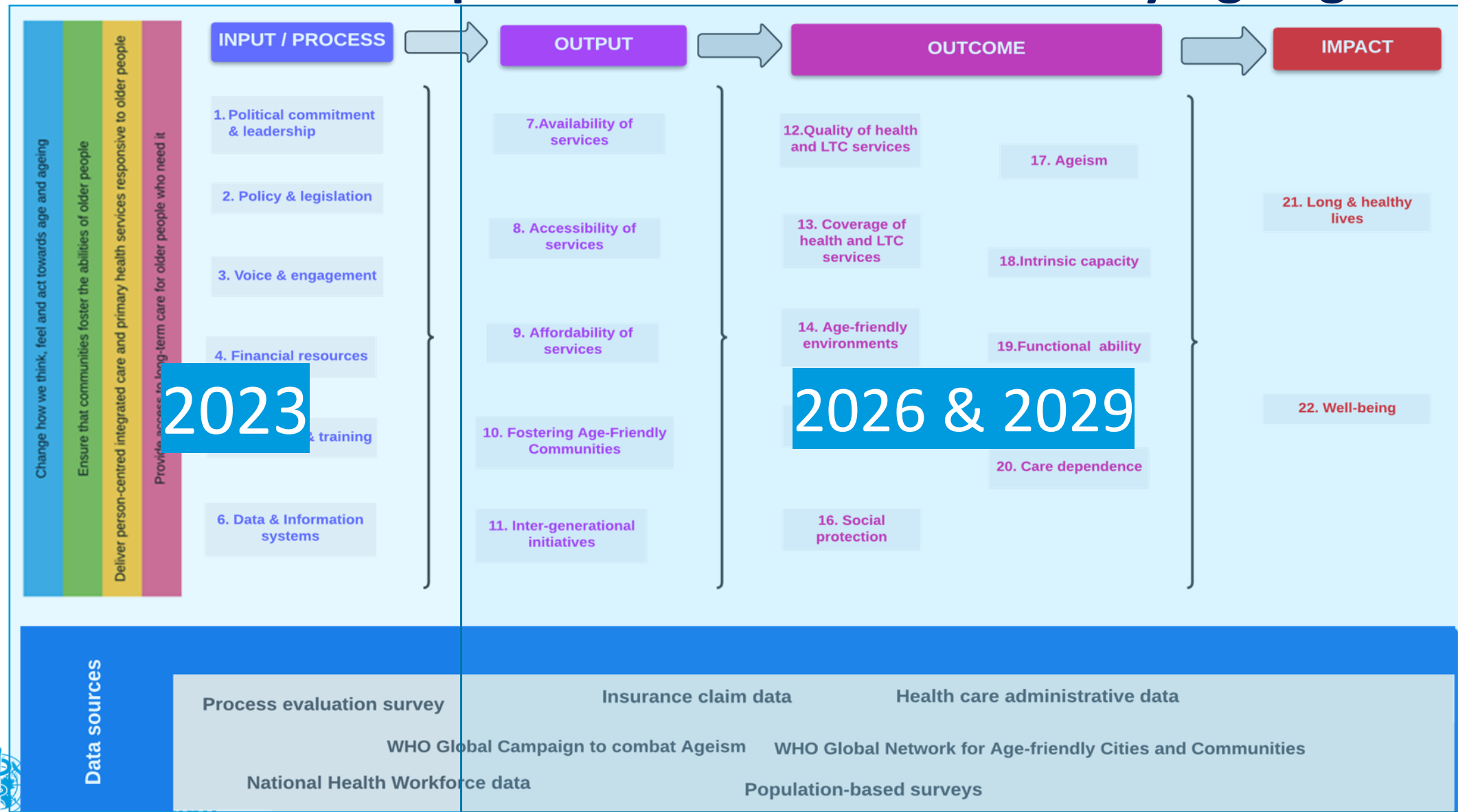
Focal point on ageing and health in the ministry of health
National multi-stakeholder forum or committee on ageing and health
National legislation and enforcement strategies against age-based discrimination
National legislation/regulations that provide older adults with access to assistive devices from the WHO Priority Assistive Product List
National programme to support activities in line with the WHO global Network for Age-friendly Cities and Communities
National policies in place to support comprehensive assessments of the health and social care needs for older people
Long-term care policy/plan/strategy/framework (stand-alone or integrated within an ageing and health plan)
Cross-sectional nationally representative, publicly available and anonymous individual level data on older persons and their health status and needs
Longitudinal nationally representative surveys (cohort) on older persons and their status and needs
Policy, legislation, strategy, or programme to support combating ageism
Human rights mechanisms dedicated to the promotion and protection of the rights of older persons
Specific legal, administrative, or other effective remedies to older persons who have been subject to discrimination
Contributing to the UN-Open ended working group on ageing
Implemented actions to support income generation activities for older persons
Provide out-patient-service free of charge in the public sector for older persons
Provide assistive devices and technologies free of charge in the public sector for older persons
Provide pharmaceutical products and/or other medical supplies free of charge in the public sector for older persons
Capacity-building plans to strengthen the geriatric and gerontology workforce
National guidelines for organizing geriatric care and training
National competency frameworks for geriatrics care workers
Programmes (in-person or online) available for caregivers of older persons
Policy, legislation, strategy, or programme to support the integration of palliative care services into the structure and financing of national healthcare systems at all levels of care
Availability of resources (human and finance) to implement actions on ageism
Availability of resources (human and finance) to implement actions on age-friendly environment
Availability of resources (human and finance) to implement actions on integration care for older persons
Availability of resources (human and finance) to implement actions on long-term care for older persons



WHO Efforts to Improve Ageing Data Availability and Quality

- Healthy Ageing M&E Framework and Indicators
- Global Ageing Population Survey (GAPS)
- Long-Term Care Standards and Assessment



Unified measurement framework to track progress and assess the impact of UN Decade of Healthy Ageing



Domain	Indicators	Indicator type
12. Quality of health and long-term care services 	12.1 Percentage of older people who have received cataract surgery and have a resultant good quality outcome (6/12 or better) relative to the number of people in need of cataract surgery over the past year	Outcome
	12.7 Percentage of older people who received surgical treatment for hip fractures within 48 hours after admission to the hospital, over the past year	Outcome
	12.6 Percentage of older people who report age-based discrimination in health or long-term care services, over the past year	Outcome
13. Coverage of health and long-term care services 	13.4 Percentage of older people with declines in mobility or locomotor capacity who received rehabilitation services over the past year	Outcome
	13.7 Percentage of older people in need of hearing aids who received hearing aid services over the past year	Outcome
	13.8 Percentage of older people diagnosed with depression who received psychosocial, pharmacological, rehabilitation and/ or aftercare services over the past year	Outcome
	13.12 Percentage of informal caregivers (of older people in need of support) who received caregiving training over the past year	Outcome
	13.13 Percentage of older people in need of long-term care services receiving long-term care at facilities or in their home in the community over the past year	Outcome

CODE	Indicators	Domain	Subdomain	Mandated in existing global initiative	Indicator type
18.1	Percentage of older people with higher intrinsic capacity, over the past year	Intrinsic Capacity		Decade	Outcome
19.1	Percentage of older people with higher functional ability, over the past year	Functional Ability		Decade	Outcome
20.1	Percentage of older people who are care-dependent, over the past year	Care dependence			Outcome
20.2	Proportion of time spent (in 24 hours) by family caregivers on unpaid care work for older people over the past year (SDG 5.4.1)	Care dependence		SDG	outcome

Survey methodology

- **Design:** Multi-wave cross-sectional survey (nested longitudinal cohort)
- **Sample:** Nationally representative population of older persons aged 60 years and over
- **Frequency of data collection:** Every three years
- **Interview:** Face-to-face interviews (older persons and carers)



Core+ Survey Module



Aim of the survey:

The overall aim is to collate and analyze valuable data determinants outcomes of healthy ageing (**Intrinsic capacity and functional ability**) that can be effectively utilized to formulate impactful policies and programs, assess the efficacy of public health actions fostering healthy ageing to enrich the lives of older persons, their families, and the communities in which they live.

Design: Nationally Representative Survey of Older Persons

- **WHO-GAPS Core:** Self-reported questions, including a household questionnaire, individual interview questionnaire, and caregiver interview questionnaire.
- **WHO-GAPS Core+:** A comprehensive survey that includes **biospecimens** and extensive physical performance tests (using digital devices) for **intrinsic capacity** and other outcomes
- **WHO-GAPS Core AI:** Real-time monitoring, prediction of future health state, identification of at-risk population groups, and survey diagnosis

Survey modules and sections



Household interview

- Household roster
- Household income and assets
- Housing (safe, affordable, accessible)
- Household consumption expenditure



Individual interview

- Brief cognitive assessment
- Socio-demographics
- Work history
- Functional assessment
- Anthropometric measurements
- Physical performance measures
- Cognitive assessment
- Risk factors and health behaviors
- Health conditions
- Coverage of services
- Psychological assessment
- Age-friendliness of communities



Caregiver interview

- Socio-demographics
- Caregiving time
- Care arrangement
- Caregiving burden
- Cutting back from work
- Caregivers' subjective well-being

** Time for completing all three modules ranges from 60 to 90 minutes.*

Summary of data collected in GAPS core plus

Demographic data

- Date of birth
- Household membership
- Living relatives
- Marital status
- Education
- Country of birth
- Occupation (current/ past)
- Childhood socio-economic status

Household income and assets

- Earnings
- Source of income
- Pensions
- Household assets
- Insurance (health/ life)
- Debts and financial conditions

Housing

- Home safety (hazards for falls)
- Drinking water
- Sanitation
- Hygiene
- Electricity & energy

Consumption expenditure

- Household spending (food, clothing, housing (rent), energy, transport, durable goods, health costs, leisure, miscellaneous services, education of children, etc.)

Behavioural health

- Consumption of fruit and vegetables
- Smoking & tobacco
- Alcohol consumption
- Physical activity

Health conditions & treatment

- Self-rated health
- Physician-diagnosed chronic diseases
- Medications
- Incontinence
- Risk of fracture
- Falls
- Pain
- Fatigue

Health and care services

- Access to coverage of treatment and rehabilitation services (undernutrition, hearing, vision, urinary incontinence, mobility, fractures, chronic diseases, etc.)
- Access and coverage of home care services

Need for long-term care

- Personal care and support
- Informal care and support

Summary of data collected in GAPS core plus

Functional status

- Activities of daily living
- Instrumental activities of daily living
- Life space mobility
- Use of assistive devices

Psychosocial health

- Sleep patterns and disturbance
- Depression
- Social network type (family dependent, community focus, private restricted, etc.)
- Social contacts (frequency, mode, quality)
- Community engagement & participations
- Agesim
- Social isolation
- Loneliness
- Abuse

Cognitive function

- Memory
- Executive function
- Verbal fluency
- Numerical ability
- Logical memory
- Visuospatial ability

Physical examination

- Height and weight
- Visceral fat,
- Waist, hip, skull, calf, mid-arm circumferences
- Leg length
- Blood pressure
- Lung function
- Hearing test
- Vision test (near and distant)
- Grip strength
- Gait speed
- Chair Stand & Balance

Wellbeing

- Life satisfaction
- Well-being

Valuing death

- *Quality of dying & death*

Age-friendliness of community

- Age-friendliness of communities
- Safety of Neighborhood
- Access to local services (e.g GP, transport etc)

Caregivers' health & wellbeing

- Care dependence
- Caregiving burden
- Cutting back from work
- Caregivers' subjective well-being

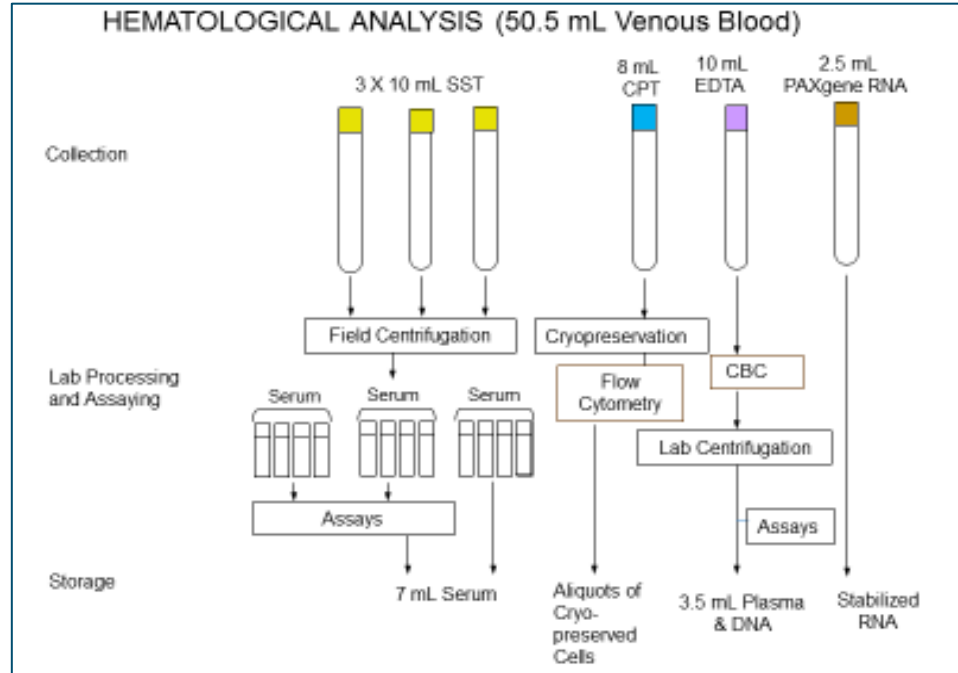


Geospatial data (latitude and longitude)

- Access to health facilities
- Availability of pharmacy and service providers
- Access to transportation
- Access to other services
- Greenspace
- Walkability index
- Neighborhood characteristics

Bio-specimen data

- **Venous blood sample:** Lipid panel, comprehensive metabolic panel, complete blood count, hormone



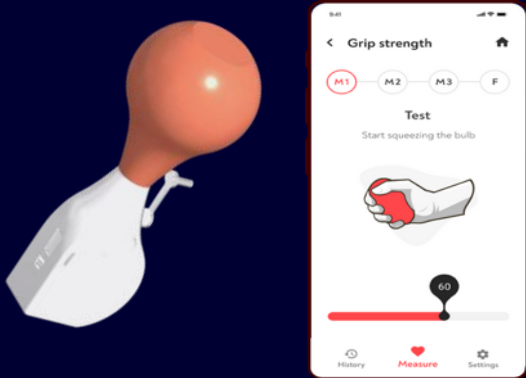
A) Lipid panel	A) Comprehensive Metabolic Panel	A) Complete Blood Count	A) Inflammation	A) Hormone
Total cholesterol	Fasting glucose	Red blood cell count	High sensitivity CRP (hsCRP)	Insulin-like growth factor 1 (IGF-1)
LDL cholesterol	Creatinine	Red cell distribution		Dehydroepiandrosterone sulfate (DHEA-S)
HDL cholesterol	Blood urea nitrogen	Platelets		Testosterone
Triglycerides	Albumin	Corpuscular volume		Estrogen
	Alkaline phosphatase	Hemoglobin concentration		
	Alanine aminotransferase	Hematocrit		
		Hemoglobin		
		Ferritin		
		White blood cell count		

- **Nail sample:** Nail clippings from the toenail or fingernail sample for fracture risk prediction

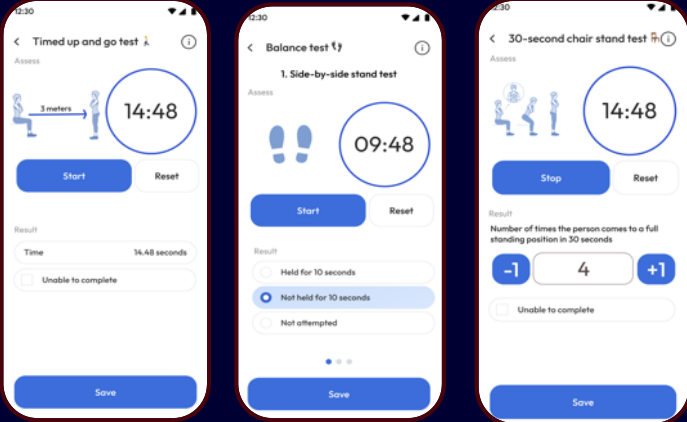


Digital devices and biomarkers

Grip strength



Timed up and go test/ Balance test/30 seconds chair stand test



Lung Function



Vision and hearing



Digital weighing scale



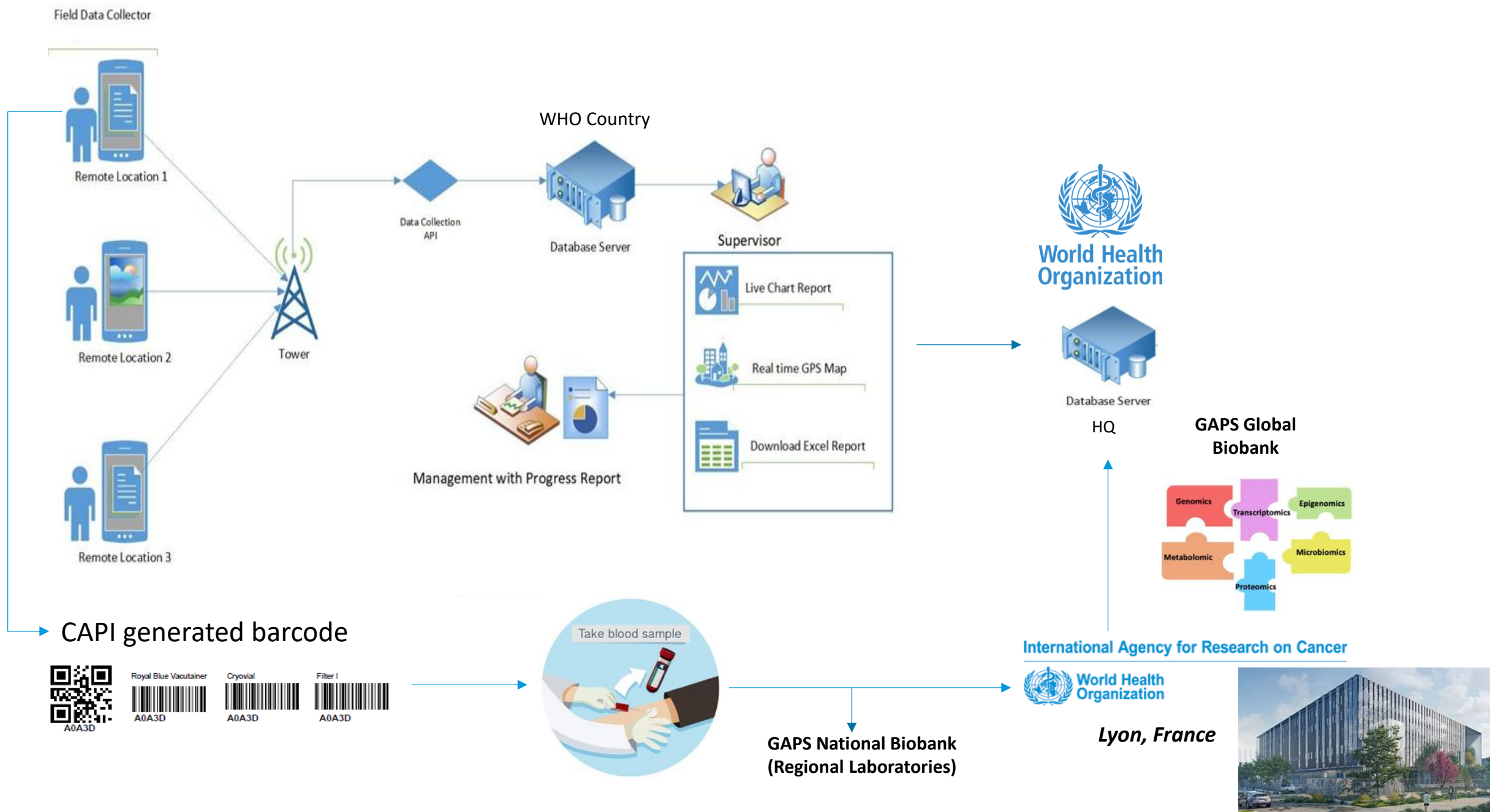
Digital height scale



Blood pressure



Data flow and real time monitoring



WHO mandate and key outputs for LTC and healthy ageing



World Report on Ageing and Health (2015)

- “Healthy Ageing” approach
- Intrinsic capacity and functional ability concepts
- LTC as a key components



Global strategy and action plan on healthy ageing (2016-2020)

- LTC as one of 5 strategic goals
- Developing sustainable and equitable systems for providing long-term care (home, communities, institutions)



UN Decade of Healthy Ageing (2021-2030)

- Action Area 4: “providing access to LTC for older people who need it”



LTC framework (2021)

- Guidance for countries to assess and strengthen LTC systems
- Actions for guiding national planning and decisions for implementing LTC



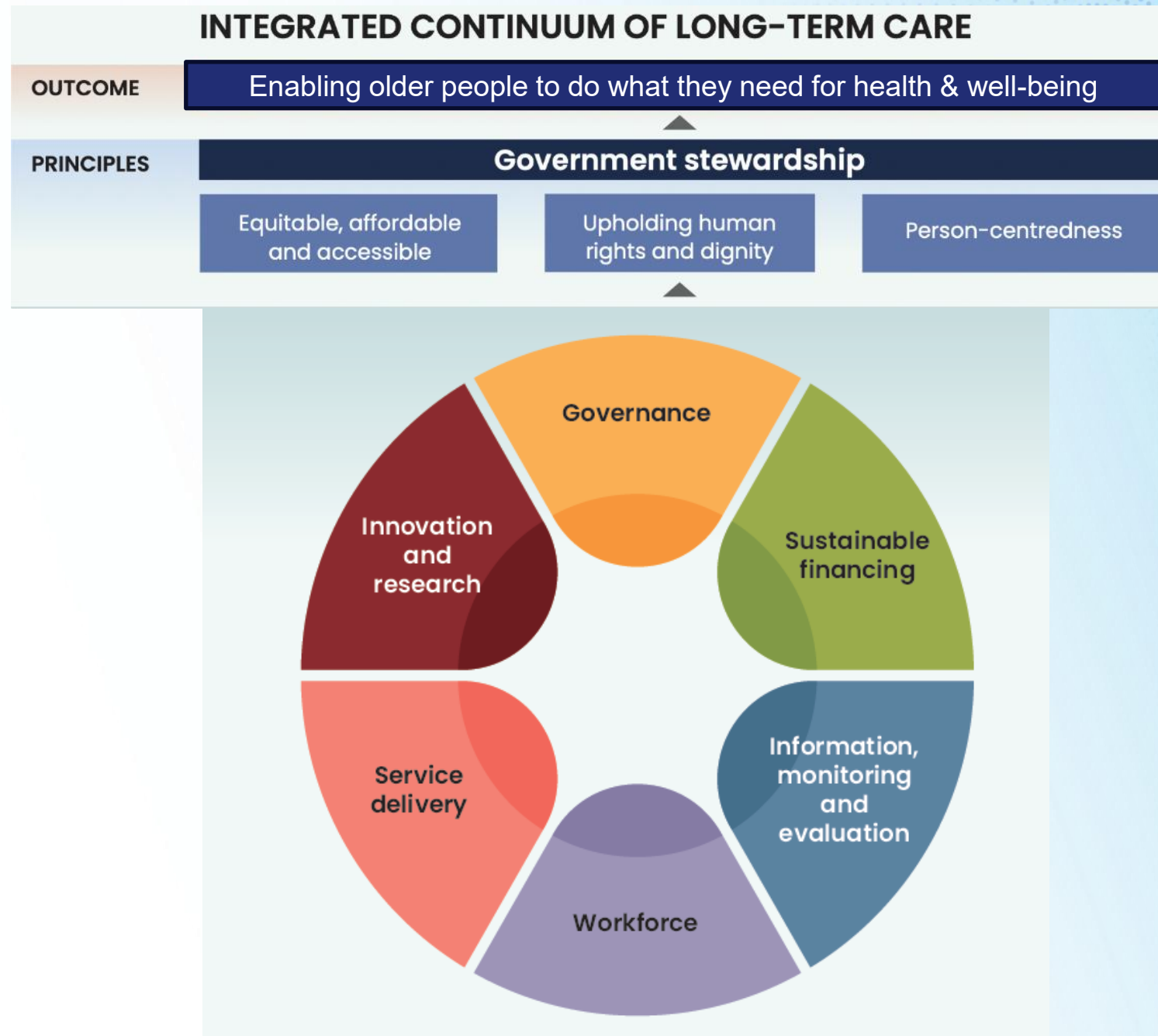
LTC UHC package (2024)

- List of LTC interventions
- Factors to facilitate person-centered integrated LTC
- Education and training for carers and LTC workers



WHO LTC framework (2021)

provides key elements for a sustainable, equitable and affordable LTC system



WHO Global Standards on Long-term care



Why is there a need for the Global Standards on LTC?

- LTC definitions and systems vary widely across countries
- Lack of global consensus on what constitutes LTC
- Absence of standardized guidelines

--> disparities in quality & access of LTC, challenges in ensuring the care continuum and equity.

→ By 2026, WHO will define minimum standards for countries in developing and maintaining quality LTC systems and services.

Ireland: Structure of standards



- Principle

- I-Statement:

The **outcome** a person should expect

- Provider-arrangement (compliance):

What a service provider must do to achieve this

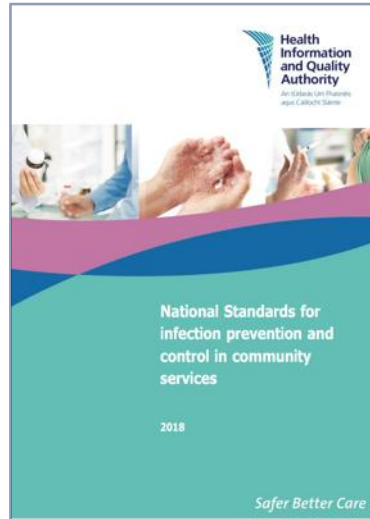
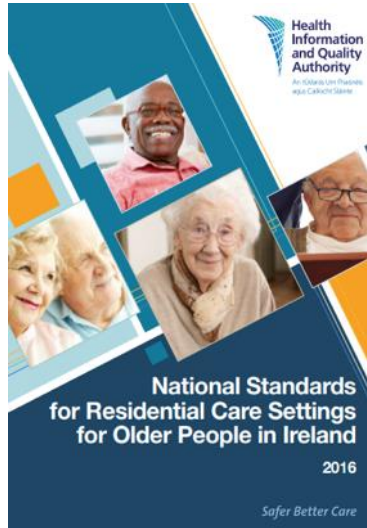
Standards are evidence-based, with wide stakeholder engagement.

Standards are based on 4 principles: responsiveness, safety & wellbeing, accountability, and a human rights based approach, all working together to ensure person-centred care.

Standards are developed based on outcomes for service users.

(Courtesy of Ireland HIQA)

Ireland: National Standards for Health and Social Care

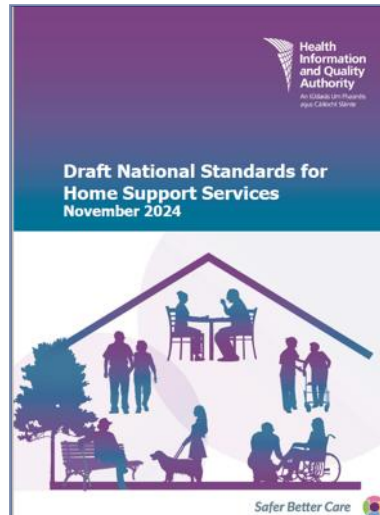
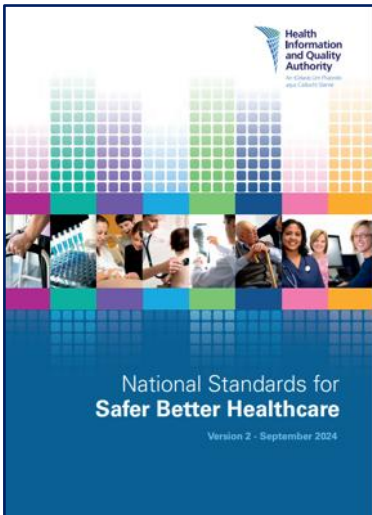


National standards for Health and Social care, available on www.hiqa.ie

Implementation support tools available on the Learning Hub

www.hiqa.ie/learning-hub

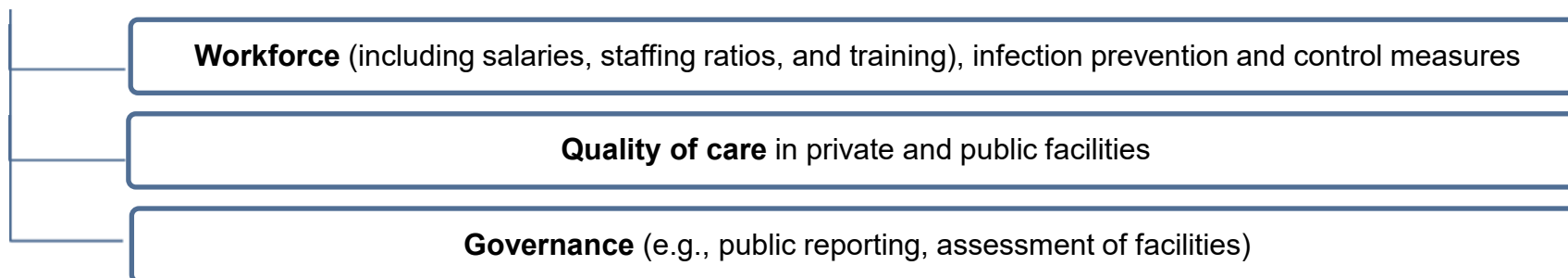
National Care Experience Surveys (nursing homes, end of life, acute hospitals).



(Courtesy of Ireland HIQA)

Canada: LTC Standards and Regulations

While LTC is highly regulated in all provinces and most jurisdictions have some form of legislation, regulation, policy and/or standards for LTC, they vary in scope:



- LTC homes must meet certain provincially-established requirements to operate, and these vary depending on the jurisdiction in which they are located. These requirements may include:
 - **Inspections or assessments**, often as part of the licensing/certification process, that may result in requirements to make certain improvements based on the findings
 - **Standards** set out in provincial legislation or regulations that facilities must meet
 - Some jurisdictions require **accreditation** by an approved third-party accrediting body

Canada: National Standards for Long-Term Care

- In 2020, the Government of Canada committed to working with the provinces and territories to set **new, national standards for long-term care** so that seniors get the best support possible.
- During the pandemic, [CSA Group](#) and the [Health Standards Organization](#) (HSO) worked together with the Standards Council of Canada (SCC) to develop complementary national standards.
- On January 31, 2023, the Government of Canada welcomed the release of complementary, independent national long-term care standards by the two standards development organizations. The standards focus on the delivery of safe, reliable and high-quality LTC services, safe operating practices, and infection prevention and control measures.
- HSO standards are meant to be applied to individual LTC homes through an accreditation process. Provinces and/or facilities may use CSA standards independent of accreditation processes.

HSO 21001: LTC services

Scope: provides LTC homes with criteria and guidelines for delivering resident-centred, high-quality care, enabled by a healthy and competent workforce

Overview:

- Governing LTC Home's Strategies, Activities, and Outcomes
- Upholding Resident-Centred Care
- Enabling a Meaningful Quality of Life for Residents
- Ensuring High-Quality and Safe Care
- Enabling a Healthy and Competent Workforce
- Promoting Quality Improvement

CSA Z8004: LTC home operations and infection prevention and control

Scope: provides guidance on safe operating practices, design, and IPAC in LTCHs while incorporating a person-centred approach

Overview:

- Organizational commitments
- Operations
- Quality improvement
- Infection prevention and control (IPAC)
- Design
- LTCH building systems
- Information technology
- Catastrophic event management
- Training and simulation



Singapore: Standards are a core component of Quality Framework for long-term care

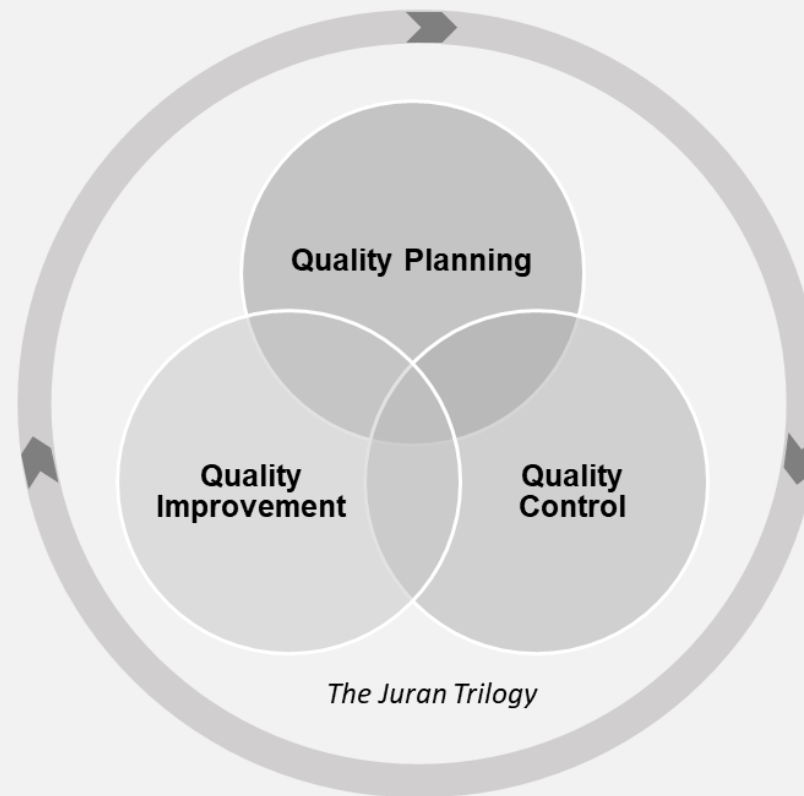
Quality Culture: *Shared values, beliefs and commitment towards quality. This includes leadership and engagement at all levels to build a culture that enables improvement, and supports co-production of quality care with stakeholders*

Quality Planning (QP):

Designing care to meet clients' needs, defining goals and strategies to deliver that quality care.

Quality Improvement (QI):

Seeking better ways of doing things, delivering the improvement using QI methodologies.



The Juran Trilogy

Quality Control (QC):

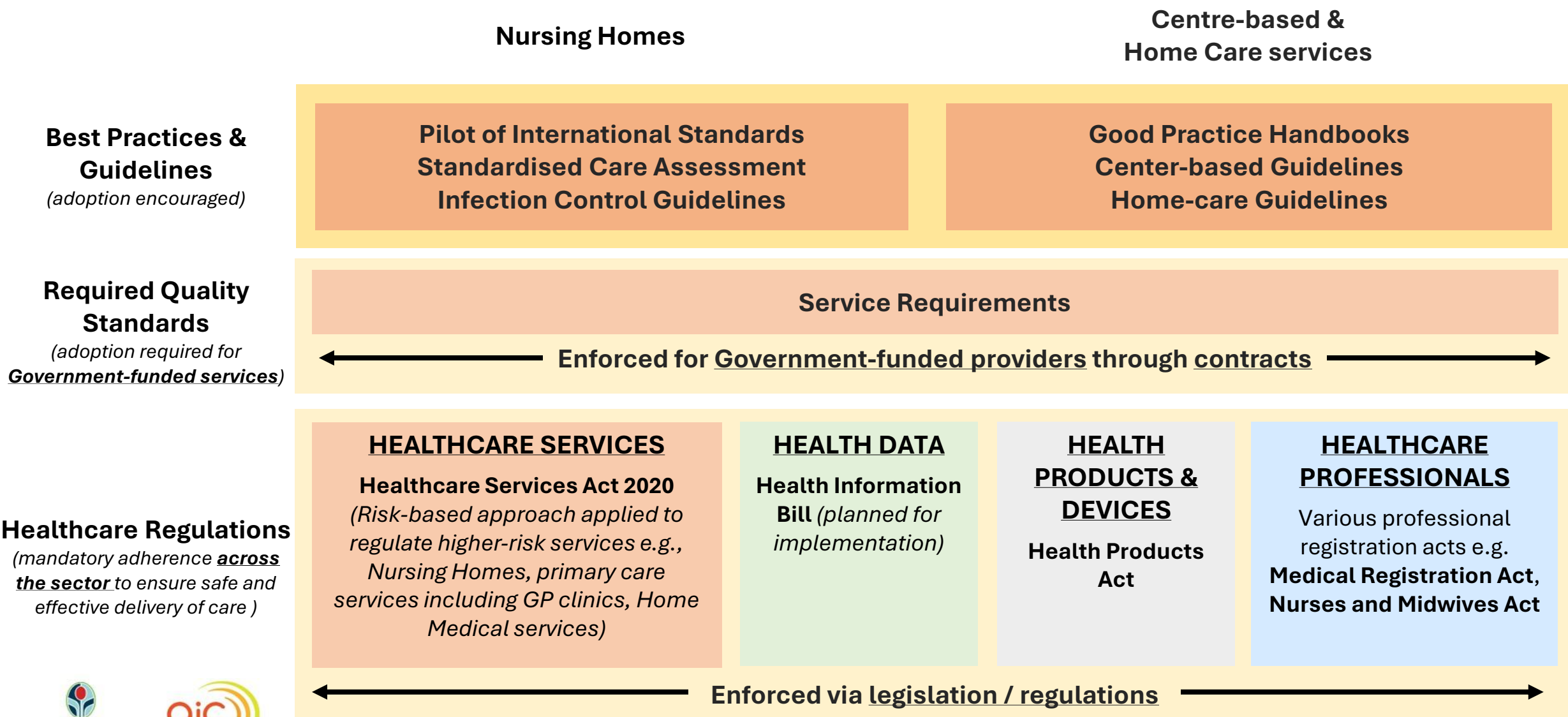
Using data to identify gaps between actual and desired quality, and applying standardisation to close gaps.

Quality Assurance (QA):

External mechanism providing objective evaluation of quality against a set of established standards



Singapore: promote improvements in care through adoption of good practices and enhanced standards



Finland: Quality monitoring in older people services

Ministry of Social Affairs and Health

- drafts legislation and guides its implementation
- recommendations, policy -> information guidance

National Supervisory Authority for Welfare and Health (Valvira)

- central supervising authority with regulatory tasks
- licensing, performance auditing, grant the right to practice as authorized health care professional

Regional State Administrative Agency (AVI)

- primary responsibility on supervising social and health care in their own region; inspection visits

Wellbeing services counties

- responsible for oversight of services both public and private, self-supervision

Finnish Institute for Health and Welfare (THL)

- monitors how well the aging policy and quality recommendations have been implemented in wellbeing service counties and organisations



(Courtesy of the **Finnish Institute for Health and Welfare**)

Data sources	Finnish Institute for Health and Welfare (THL)	Users of information
<p>The Status of Older People's Surveys</p> <ul style="list-style-type: none"> Unit-level data Staffing ratio, structure of staff, adequacy of home care services, management and operating methods of the services, organisation of services etc. 	<ul style="list-style-type: none"> Compiles and stores the data Analyses the data Produces feedback reports, (public) data cubes, statistical report, scientific publications etc. 	<ul style="list-style-type: none"> Decisions makers Directors Supervisor authorities Managers Clients Citizens Researches Developers
<p>The National Client Satisfaction follow-up study</p> <ul style="list-style-type: none"> Older person's own perception of the quality and sufficiency of services 		
<p>RAI assessment system</p> <ul style="list-style-type: none"> Client-level data -> copies to THL <ul style="list-style-type: none"> an individual service, care or rehabilitation plan, the client participates in the assessment. RAI benchmarking (unit, organisation, national) 		
<p>The SOTKANet Indicator Bank</p> <ul style="list-style-type: none"> Provides indicators for monitoring and comparing promotion of health and welfare, service needs, service structure, and finances. 	<ul style="list-style-type: none"> THL maintains and collects data from various sources https://sotkanet.fi/sotkanet/en/index? 	<p>(Courtesy of the Finnish Institute for Health and Welfare)</p>

Proposed Structure and Chapter Topics

-
- 1. Introduction
 - 2. Scope and purpose
 - 3. Definitions and key terms
 - 4. General standards and principles
 - 5. Standards for home and community-based settings
 - 6. Standards for residential LTC facility settings
 - 7. Standards for LTC workforce
 - 8. Standards for unpaid carers
 - 9. Standards measures and monitoring
 - 10. Governance and financing for standards implementation
- Introductory chapters
- Standards – main content
- Implementation

Eight standards: one per domain of the quality of care framework

Three or more quality statements per standard

Several input, output and outcome measures per quality statement

(Example) Standards for Home and Community-Based LTC Settings

Standard on Person-Centered Care Needs Assessment and Care Planning

: Individuals receiving long-term care in home and community-based settings undergo a comprehensive, individualized assessment that informs a regularly updated care plan, reflecting their preferences, needs, and goals, ensuring that services promote dignity, health, and wellbeing.

Quality Statements

- Each individual has an initial assessment conducted by qualified professionals, considering their health, intrinsic capacity, functional ability, and personal preferences.
- Care plans are developed collaboratively with the individual, family, and carers, ensuring they are person-centered and culturally appropriate.
- Care plans are reviewed and updated regularly to adapt to changes in the condition or circumstances of an individual or a family.

(Example) Standards for Home and Community-Based LTC Settings

Standard on Person-Centered Care Needs Assessment and Care Planning

Measures

- Input:
 - Availability of qualified professionals to conduct comprehensive assessments.
- Process:
 - Percentage of individuals receiving initial assessments within an appropriate timeframe.
- Output:
 - Documentation of individual feedback on care planning and its impact on their care experience.
- Outcome:
 - Evidence of improved health outcomes (e.g., reduced hospitalizations, better management of chronic conditions) tied to individualized care planning.


Part 2. Digital Health and AI for Care for Older People

WHO Global Guidance on AI for Health

<https://doi.org/10.1038/s41746-025-01618-x>

Global Initiative on AI for Health (GI-AI4H): strategic priorities advancing governance across the United Nations

 Check for updates

Vijaytha Muralidharan ^{1,2,13} , Madelena Y. Ng ^{3,13} , Shada AlSalamah^{4,5}, Sameer Pujari⁵, Kanika Kalra⁵, Rajeshwari Singh⁵, Denise Schalet⁵, Tobi Olantuji ⁶, Rohit Malpani⁷, Rubeta N. Matin ⁸, Jesutofunmi A. Omiye^{1,9}, Yu Zhao⁵, Anita Sands¹⁰, Andreas Reis¹¹, Jose Eduardo Diaz Mendoza⁵, Tina Hernandez-Boussard ^{3,9}, Roxana Daneshjou ^{1,3,9} & Alain B. Labrique^{5,12}

The Global Initiative on Artificial Intelligence for Health (GI-AI4H), established by the World Health Organization, serves to harmonize governance standards for artificial intelligence (AI). The GI-AI4H

WHO's strategic 'AI for health' (AI4H) approach centers around three pillars, which are:



Standards,
governance,
policies, and
guidance on
evidence-based
AI4H

ENABLE



Pooled
investments
& a global
community
of experts

FACILITATE



Sustainable
models of AI
programs
implementation
at the country
level

IMPLEMENT



Governance Frameworks & Standards

Developing governance frameworks and technical standards for AI to ensure universal health coverage.

Cooperation & Data Sharing

Promoting cooperation on knowledge and data sharing to ensure AI solutions reach all communities.



Scaling Program

Launching a scaling program to assist low- and middle-income countries in adopting AI solutions, with a focus on 12 to 18 countries.

Strategy and Guidance



Ethics and Governance of AI for Health



Generating Evidence for Artificial Intelligence-Based Medical Devices



Regulatory considerations



Ethics and governance – LLM models

Recent Guidance (2025) on LLMs

- AI: algorithms learn from data to automate tasks that humans did step-by-step.
- Generative AI creates new content; large multi-modal models (LMMs) take mixed inputs (text, images, etc.) and produce varied outputs.
- LMMs could reshape care delivery, research, public-health surveillance and drug discovery, though their broad capabilities still need solid proof.



<https://www.who.int/publications/i/item/9789240084759>



<https://iris.who.int/bitstream/handle/10665/375579/9789240084759-eng.pdf?sequence=1>

Opportunity

- **Improve health outcomes & equity** – Early detection, risk prediction, and smart resource allocation drive better results for all populations.
- **Strengthen the workforce** – AI tools relieve workload, guide decisions, and let health-workers focus on person-centred care.
- **Empower people & communities** – Personalized coaching and data insights help individuals manage their own health.
- **Backed by solid evidence & WHO guidance** – Proven use-cases in diagnosis, therapy optimization, and patient-safety already validated by WHO.

Challenge

- **Poor governance may lead to serious harm** – Inadequate oversight might worsen inequity, create care bottlenecks, and harm trust.
- **Ethical safeguards needed** – Protect dignity, autonomy, justice, and data privacy/security in every AI workflow.
- **Tackle technical pitfalls** – Detect & fix algorithmic bias; verify validity, reliability, and transparency of models.
- **Regulation on the rise** – Countries are defining clear oversight roles, liability frameworks, and standards for safe AI in health.

Call to action

- Join the Global Initiative on AI for Health
- Back WHO's efforts in setting standards for AI
- Invest in national AI policies
- Strengthen regulatory capacity for responsible AI deployment

AI for long-term care

REVIEW · [Volume 3, Issue 4](#), E286-E297, April 2022 · [Open Access](#)

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Artificial intelligence for older people receiving long-term care: a systematic review of acceptability and effectiveness studies

[Kate Loveys, PhD^a](#) · [Matthew Prina, PhD^b](#) · [Chloe Axford, MSc^b](#) · [Òscar Ristol Domènec, MSc^b](#) · [William Weng, BSc^c](#) · [Prof Elizabeth Broadbent, PhD^a](#) · et al. [Show more](#)

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Summary

Driving Healthy Ageing Innovation: ITU and WHO 2021-2024

The WSIS Healthy Ageing Innovation Prize recognizes and award the best digital technologies that support healthy and active aging for adults age 60+ in following categories:

- Disease prevention and management
- Frailty
- Immunizations
- Transportation
- Mobility
- Caregiving for older persons
- Financial Tools for Longevity
- Enhancing freedom and independence
- Continuing to work and be active
- Loneliness and social isolation
- Intergenerational Connections



Expert Panel Members



Dr. Anshu Banerjee
*Director, Maternal, Newborn,
Child, Adolescent Health and
Ageing, WHO*



Ms. Daniela Bas
*Director, Division for
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UNDESA*



Dr. Justen Manasa
*Innovation Hub
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University of
Zimbabwe*



Ms. Diane Thomson
*Senior
Director, Global Vaccines
Public AffairsPfizer*



Dr. Kassim Javaid
*Associate
Professor, Metabolic Bone
DiseaseOxford University*



Dr. Ian Philp
*Founder
Age Care Technologies*

Healthy Ageing Innovation Prize

Winner of the WSIS Healthy Ageing Innovation Prize 2024



Stitch

Addressing loneliness & isolation for older adults

A unique tech platform building intergenerational communities with purpose



Winner of the WSIS Healthy Ageing Innovation Prize 2023



Bieke Van Gorp

COO FibriCheck, Belgium



Smartphone app that uses photoplethysmography (PPG) to detect and monitor **atrial fibrillation (AFib)** – a condition common in older adults that can cause strokes.

AI-driven PPG app for AFib detection & monitoring

Healthy Ageing Innovation Prize

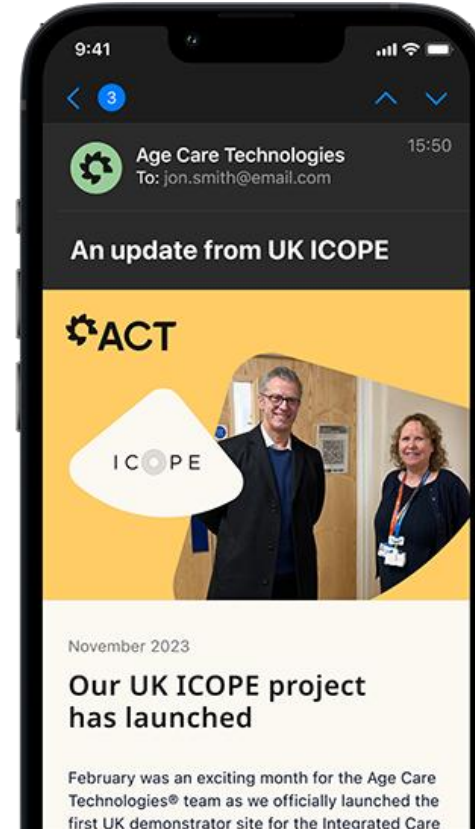
Winner of the WSIS Healthy Ageing Innovation Prize 2022



AI-based wellness kit with
digital twin & chronic disease
detection



Winner of the WSIS Healthy Ageing Innovation Prize 2021



 **Age Care Technologies®**
Improving the lives of 100 million older
people, globally