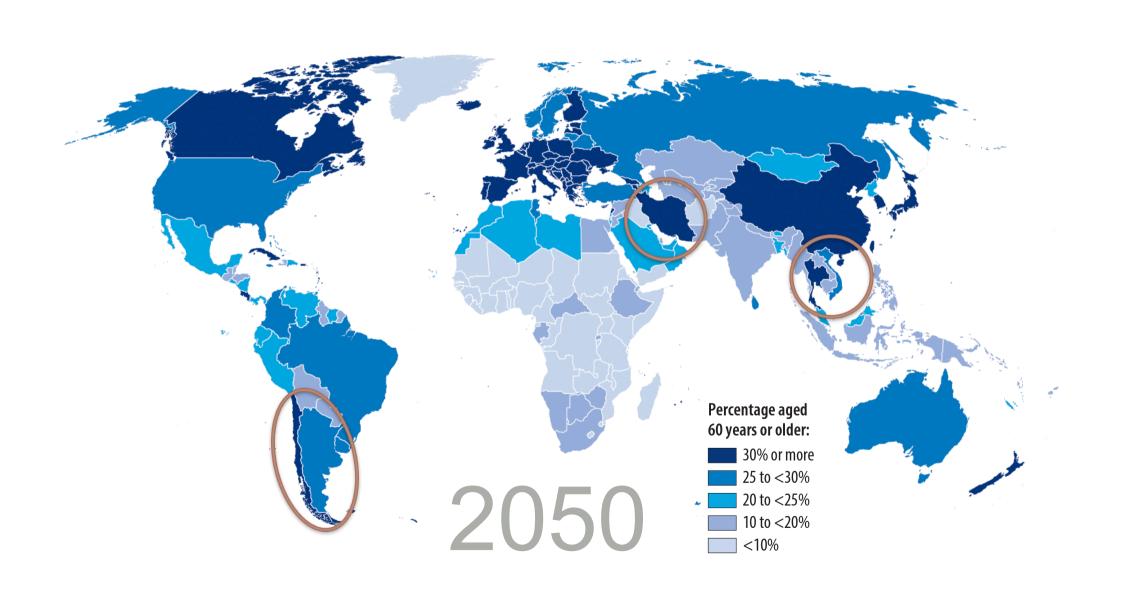
MEASURING AND EVALUATING AGE-FRIENDLY CITIES AND COMMUNITIES

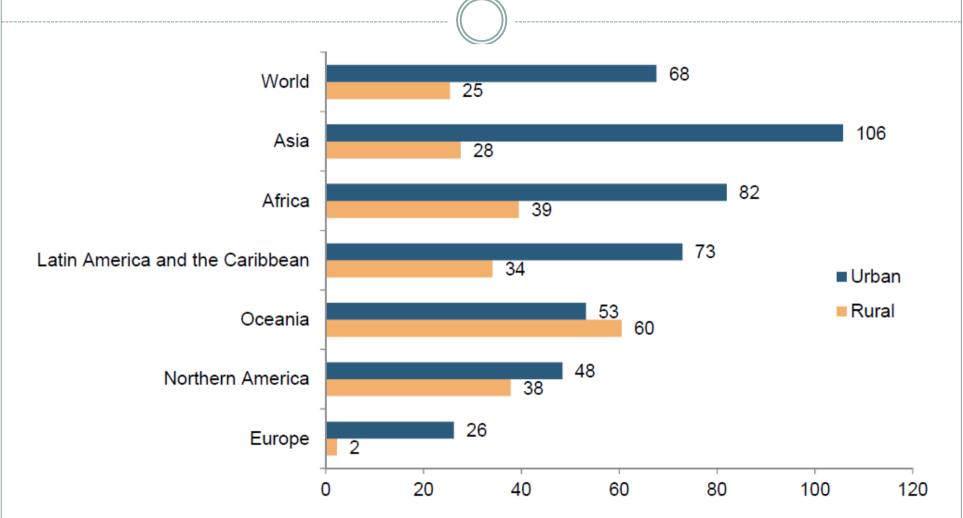
Megumi Rosenberg, DrPH Technical Officer



Populations are getting older



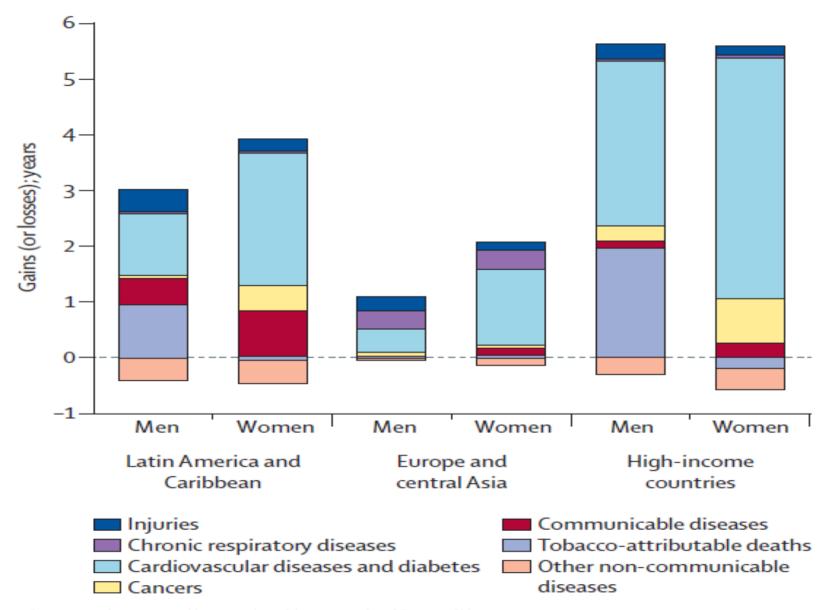
Rapid Older Population Growth in Urban Areas



Percentage change in the population aged 60 years or over between 2000 and 2015

Source: UNDESA, Population Division. World Population Ageing 2015.

NCDs are key to extending longevity in old age



出典: Mathers C et al. Causes of international increases in older age life expectancy. *Lancet*. 2015, 385, 540-48.

NCD risk factors - "The Big Four"

	Tobacco Use	Unhealthy diets	Physical Inactivity	Harmful Use of Alcohol
Cardio- vascular				
Diabetes				
Cancer				
Chronic Respiratory				

Environmental risks to health are significant



CANCERS



UNIPOLAR DEPRESSIVE DISORDER



CARDIO-VASCULAR DISEASES



CHRONIC
OBSTRUCTIVE
PULMONARY
DISEASE



MUSKULO-SKELETAL ASTHMA DISEASES



49 million

20%

Air pollution, management of chemicals, radiation and workers' protection 8 million

11%

Occupational stress, work-life imbalance

119 million

31%

Household and ambient air pollution, secondhand tobacco smoke, chemicals 32 million

35%

Household air pollution, workers' protection 11 million

44%

Air pollution, secondhand tobacco smoke, indoor mould and dampness, occupational asthmagens 23 million

22%

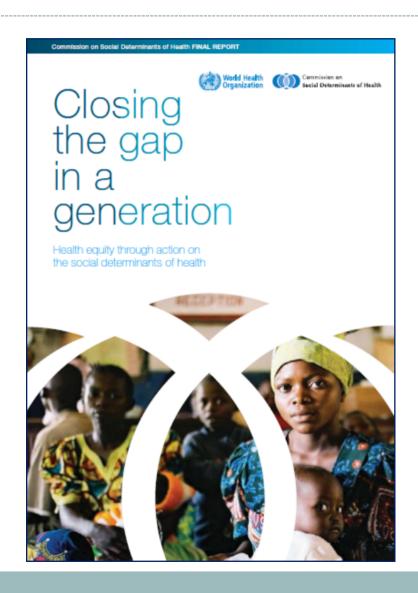
Occupational stressors, poor work postures, prolonged sitting, carrying water and solid fuels for household needs

- DALYs due to preventable environmental risks
- Proportion of disease attributable to the environment
- Main areas of environmental action to prevent disease

出典:WHO (2016) Preventing disease through healthy environments: a global assessment of the burden of disease from environmental risks.

Social and structural determinants of health

"Social stratification likewise determines differential access to and utilization of health care, with consequences for the inequitable promotion of health and wellbeing, disease prevention, and illness recovery and survival." (WHO, 2008)



Conceptual framework of the determinants of health



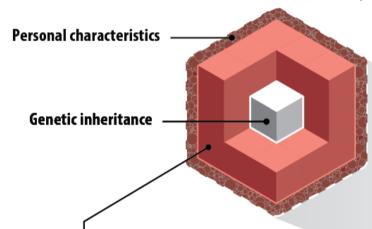
Being "healthy" in old age: a paradigm shift

Healthy Ageing is the process of developing and maintaining the **functional ability** that enables wellbeing in older age

Health is a state of complete physical, mental and social well-being and **not merely the absence of disease or infirmity**.

Conceptual model of functional ability

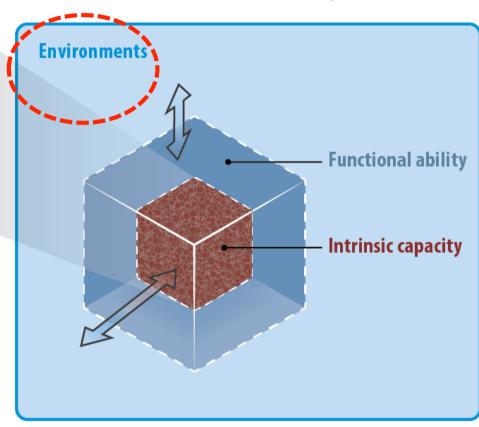
Intrinsic capacity



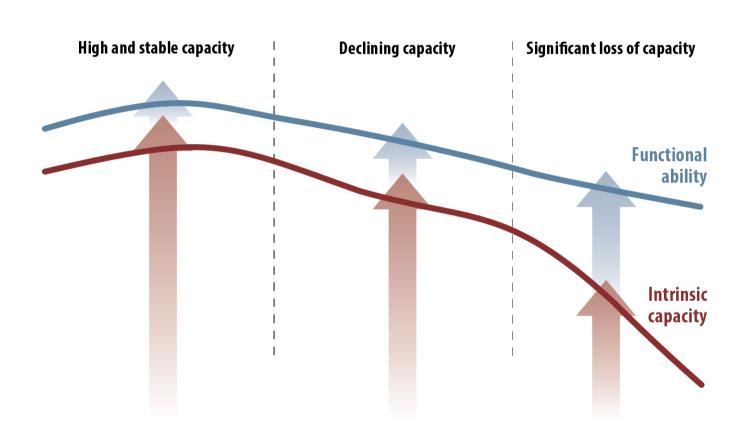
Health characteristics

- · Underlying age-related trends
- · Health-related behaviours, traits and skills
- Physiological changes and risk factors
- Diseases and injuries
- Changes to homeostasis
- Broader geriatric syndromes

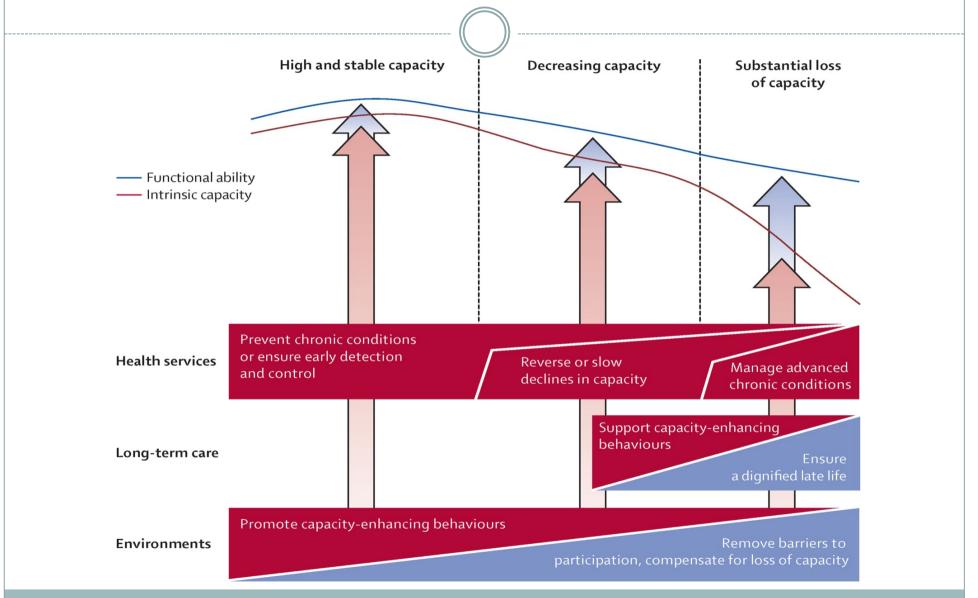
Functional ability



Life course trajectory of health and functioning



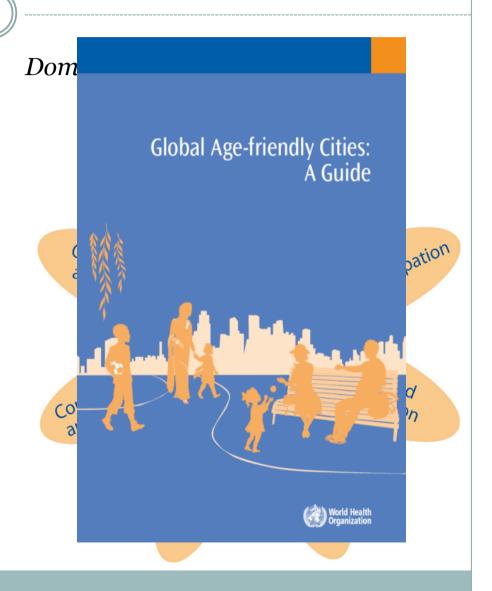
Public health framework of healthy ageing



Source: Beard et al. 2016. The World report on ageing and health: a policy framework for healthy ageing. The Lancet, 387, 2145-54. DOI: 10.1016/S0140-6736(15)00516-4

Concept of Age-friendly City

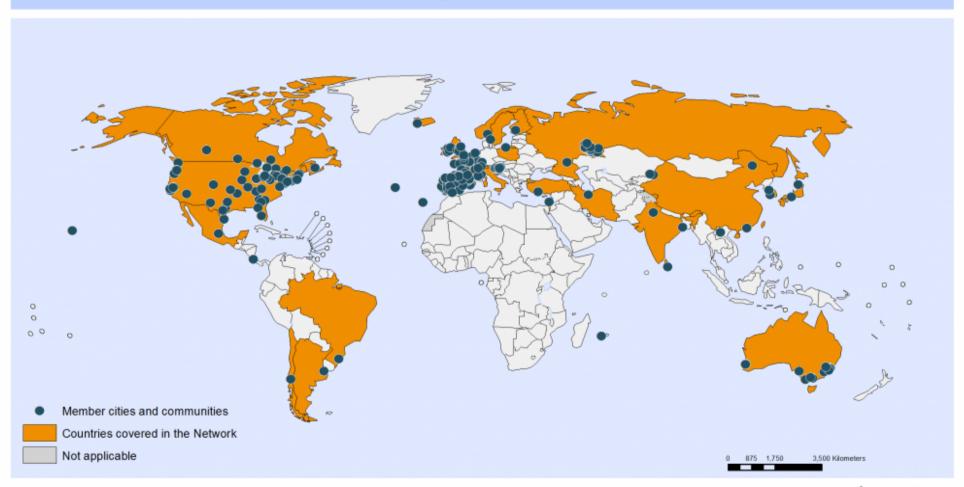
An Age-friendly City is an inclusive and accessible community environment that optimizes opportunities for health, participation and security for all people in order that quality of life and dignity are ensured as people age.



WHO Global Network of Age-friendly Cities and Communities

400 member cities in 37 countries covering over 146 million people worldwide

WHO Global Network of Age-friendly Cities and Communities



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization Map Production: Health Statistics and Information Systems (HSI) World Health Organization





Adding life to years

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AGE-FRIENDLY WORLD

adding life to years

Welcome to Age-friendly World



What is an age-friendly world?

It is a place that enables people of all ages to actively participate in community activities. It is a place that treats everyone with respect, regardless of their age. It is a place that makes it easy to stay connected to those around you and those you love. It is a place that helps people stay healthy and active even at the oldest ages. And it is a place that helps those who can no longer look after themselves to live with dignity and enjoyment. Many cities and communities are already taking active steps towards becoming more age-friendly. You will find more information about these in our section on the WHO Global Network of Age-friendly Cities and Communities. However, many barriers persist. Some of these are physical, for example, poorly designed buildings or lack of

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WHO Global Network

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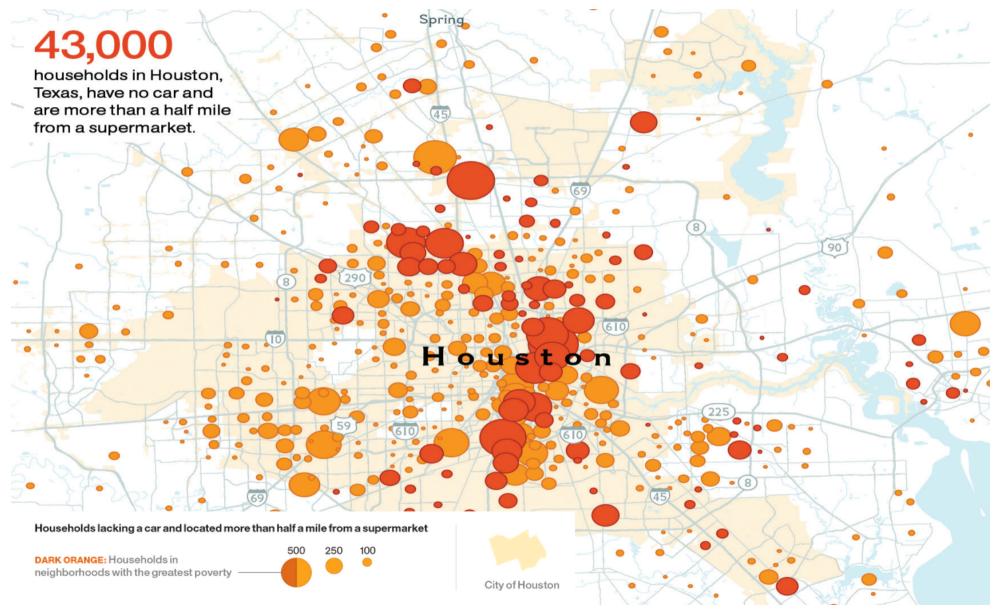
Cities and Communities

<u>12</u>

Many factors in staying mobile



"Food deserts" in the U.S.A.

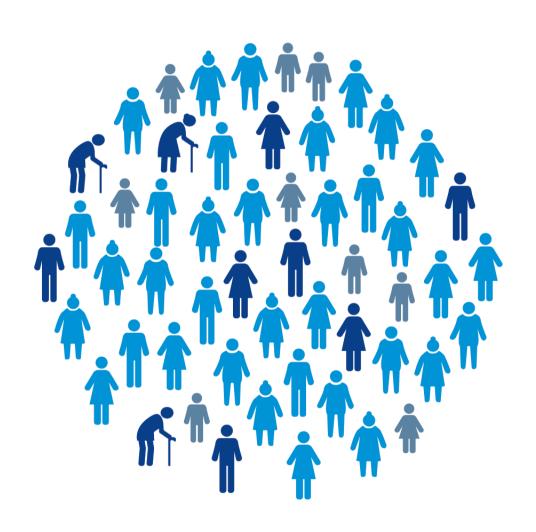


Source: National Geographic http://www.nationalgeographic.com/foodfeatures/hunger/

Functional Ability is the result of different sectors working together



An Age-friendly City is for people of all ages



Age-friendly City Case Studies

- Buffel et al. 2014. **Developing age-friendly cities: case studies from Brussels and Manchester and implications for policy and practice.**Journal of Aging & Social Policy, 26, 1-2, 52-72.
- Green et al. 2015. **Healthy cities as catalysts for caring and supportive environments.** Health Promotion International, Suppl 1, i99-i107.
- Menec et al. 2014. Lessons learned from a Canadian province-wide agefriendly initiative: The Age-Friendly Manitoba Initiative. Journal of Aging & Social Policy, 26, 1-2, 33-51.
- Neal et al. 2014. **Age-Friendly Portland: a university-city-community** partnership. Journal of Aging & Social Policy, 26, 1-2, 88-101.

Local Governance Factors

- Leadership/Champions
- Participatory governance
- Active citizenship
- Social inclusion
- Multisectoral collaboration

Environmental Effects on Health of Older People

- Cerin et al. 2017. The neighbourhood physical environment and active travel in older adults: a systematic review and meta-analysis.

 International Journal of Behavioral Nutrition and Physical Activity, 14, 15.
- Rosso et al. 2011. The urban built environment and mobility in older adults: a comprehensive review. Journal of Aging Research, 2011.
- Sawyer et al. 2017. Simultaneous evaluation of physical and social environmental correlates of physical activity in adults: A systematic review. SSM Population Health, 3, 506–15.
- Smith et al. 2017. **The association between social support and physical activity in older adults: a systematic review.** International Journal of Behavioral Nutrition and Physical Activity, 14, 56.
- Yen et al. 2009. Neighborhood environment in studies of health of older adults: a systematic review. American Journal of Preventive Medicine, 37, 5, 455–63.

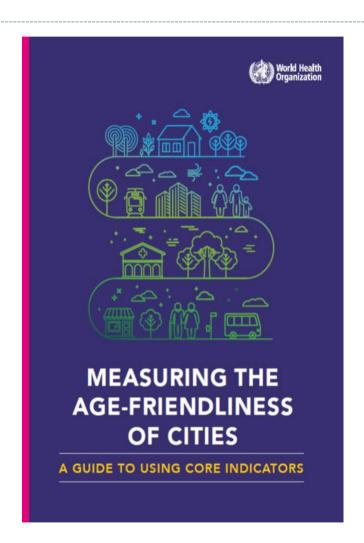
State of the Art

- Physical environment factors that promote mobility and physical activity
 - higher street connectivity leading to shorter pedestrian distances, street and traffic conditions, proximity to destinations such as retail establishments, parks, and green spaces
- Social environment factors affecting physical, mental and self-reported health
 - participation in groups, sense of belonging, trust, social network, neighborhood-level socioeconomic status

Evaluation guides for AFC

- Handler. 2014. A Research and Evaluation Framework for Age-friendly Cities. UK Urban Ageing Consortium, Manchester.
- Harrell et al. 2014. Is This a Good Place to Live? Measuring Community Quality of Life for All Ages. AARP Public Policy Institute, Washington, DC.
- Neal & Wernher. 2014. Evaluating Your Age-Friendly Community Program: A Step-by-Step Guide. AARP, Washington, D. C.
- Public Health Agency of Canada. 2015. Age-Friendly Communities
 Evaluation Guide: Using Indicators to Measure Progress. Public Health
 Agency of Canada, Ottawa.

WHO Age-friendly City Core Indicator Guide



- Identifies a framework for selecting local indicator set
- Defines core indicators
 - Physical environment
 - Social environment
 - Impact
 - Equity
- Examples from pilot sites
- Published in 2015
- Available at: http://apps.who.int/iris/handle/ 10665/203830

Framework for selecting local AFC indicator set

EQUIT)

INPUTS

Resources and structures which act as key enabling factors.

- → High-level political commitment
- → Collaboration of multiple stake holder groups
- → Shared ownership by older people
- → Financial & human resources



OUTPUTS

Interventions to create an age friendly environment.

Physical environment

- → Planning and land use
- → Design of public spaces & buildings
- → Housing design& cost options
- → Transportation design

Social environment

- → Culture & recreation programmes
- → Communication & advocacy
- → Health & social care services
- → Employment & business opportunities

OUTCOMES

Short/medium term charges achieved in creating an age friendly environment.

hysical environment

- \rightarrow Walkability
- → Accessibility of public spaces, buildings and transport
- → Affordability of housing
- \rightarrow Safety

Social environment

- → Volunteer activity
- Participation in decision making
- Economic security
- → Positive social attitude toward ageing & older adults
- → Accessible information & services

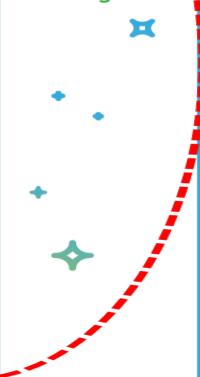
IMI ACT

Long term changes achieved as a result of improvements it an age friendly environment.

Health

Wellbeing







Age-friendly City Core Indicators

EQUITY MEASURES

Difference between population average and highest attainable level of outcome

Difference between two reference groups

ACE-FRIENDLY ENVIRONMENT OUTCOMES

Accessible physical environment

Neighbourhood walkability Accessibility of public spaces and buildings Accessibility of public transportation vehicles Accessibility of public transportation stops

Affordability of housing

Inclusive social environment

Positive social attitude toward older people Engagement in colunteer activity

Engagement in paid employment

Engagement in socio-cultural activity
Participation in local decision-making
Availability of information
Availability of health and social services
Economic security

IMPACT ON WELLBEING

Quality of life



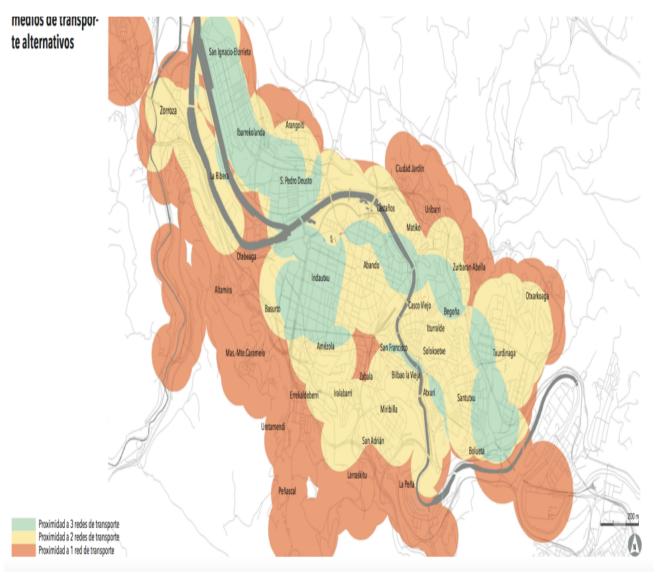
Global Pilot Study, 2014-15



- Entire city or town assessed
- Specific districts or neighbourhoods assessed

Bilbao, Spain

Improving mobility and transport that is healthy for people and the environment









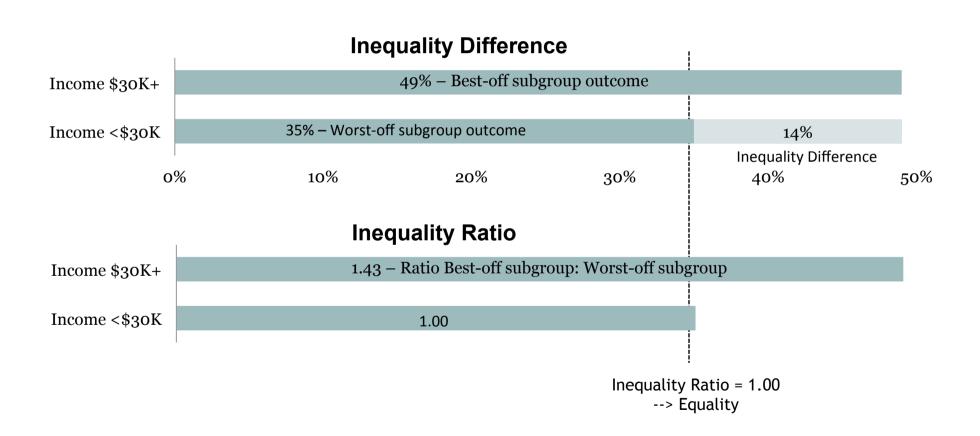
Banyule, Australia Assessing engagement and participation

Engagement in volunteer activity	Proportion of older people (aged 60+ years) who reported undertaking voluntary work through an organisation or group in the last 12 months	17.9%
Engagement in socio-cultural activity	Proportion of older adults (aged 55+ years) among all adults (aged 18+ years) that reported participating in arts and related activities in the last 3 months Proportion of people	30·3% 57·8%
	(aged 55+ years) who participated in arts and related activities in the last 3 months	

Participation in local decision making	Proportion of eligible voters (aged 70+ years) who voted in the most recent local Government election	48.0%
	Proportion of adult population (aged 18+ years) who are members of a decision-making board or committee	19.1%
Participation in leisure- time physical activity in a group	Proportion of older people (aged 60+ years) who are members of leisure centres owned by Banyule Council	5.3%
	Proportion of older people (aged 60+ years) that report participating in sports clubs	12.7%

New Haven, USA Measuring equity among older people

Social participation: volunteer activity





Pilot study findings

- Measuring and comparing indicators were more difficult for social environment indicators
- Citizens' perceptions were considered to be as important as objective measures
- Engagement of older people was a highly valued principle and a practical strategy
- Provided validity and status to the team's work
- Increased awareness within the community and reinforced collaborative relationships

Conclusion: Future Research Needs

- Greater coherence in research methods in order to improve comparability and to facilitate evidence synthesis.
- Evaluation of both independent and interactive effects of physical and social factors which are modifiable by intervention.
- Evaluation of the **overall social impact** of an integrated set of Age-friendly interventions, demonstrating efficiencies and synergies.
- Prospective studies to establish causal associations.
- Assessments of both objective and perceived measures and their associations with health outcomes.
- Greater consideration of **neighbourhood environmental factors** in health equity research.
- Inclusion of older community members as research partners to enhance neighborhood-level efficacy and to sustain advocacy efforts over time.

WHO Centre for Health Development (WHO Kobe Centre)



Webpage www.who.int/kobe_centre

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Thank you!