Creating Healthy Societies

Prof EK Yeoh

Director, The Jockey Club School of Public Health and Primary Care
Head, Division of Health System, Policy and Management

香港中文大學醫學院
Faculty of Medicine
The Chinese University of Hong Kong
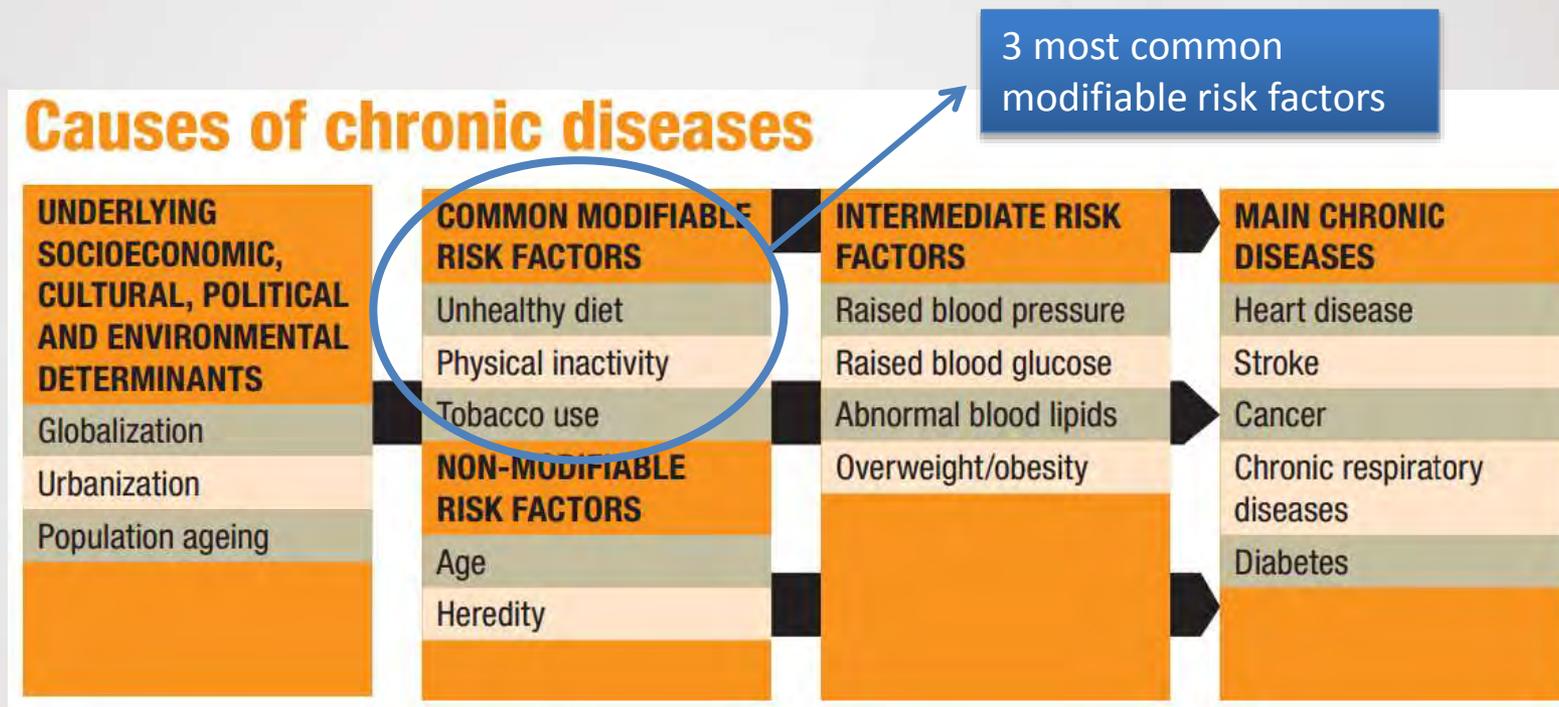
The Ottawa Charter
for Health Promotion (1986)

"Health is created and lived by people within the settings of their everyday life; where they learn, work, play and love.

Health is created by caring for oneself and others, by being able to take decisions and have control over one's life circumstances,

and by ensuring that the society one lives in **creates conditions that allow the attainment of health by all its members**."

Global action plan

- "To reduce modifiable risk factors for NCDs and underlying social determinants through creation of **health-promoting environments**." (World Health Organization, 2013)

Global action plan for the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization; 2013

Lifestyle change is necessary

Causes of chronic diseases

3 most common modifiable risk factors

UNDERLYING SOCIOECONOMIC, CULTURAL, POLITICAL AND ENVIRONMENTAL DETERMINANTS	COMMON MODIFIABLE RISK FACTORS	INTERMEDIATE RISK FACTORS	MAIN CHRONIC DISEASES
Globalization	Unhealthy diet	Raised blood pressure	Heart disease
Urbanization	Physical inactivity	Raised blood glucose	Stroke
Population ageing	Tobacco use	Abnormal blood lipids	Cancer
	NON-MODIFIABLE RISK FACTORS	Overweight/obesity	Chronic respiratory diseases
	Age		Diabetes
	Heredity		

Source: WHO, 2005

Ecological perspective

Social Determinants of Health

Human ecology theory

Bronfenbrenner's ecological systems theory - the 5 systems:

1. **Microsystem**: institutions and groups directly impact

2. **Mesosystem**: interconnections between microsystem, interactions between family and teachers, relationship between child's peers and the family

3. **Exosystem**: links between a social setting in which the individual does not have an active role and individual's immediate context

4. **Macrosystem**: cultural contexts in which individuals live, socioeconomic status, poverty, and ethnicity

5. **Chronosystem**: environmental events and transitions over the lift course

Ecological models of health behavior

- There are many different ecological models, but they can be summarized into **4 core principles**
  - Multiple levels of influences
  - Influences interact across levels
  - Behavior specific
  - Intervention needs to target multiple levels
- From the ecological perspective, in order to achieve the desired outcomes(s), one need to systematically target factors across multiple levels (eg individual, community, organization, and socio-economic) that are important for the specific behavior

Sallis JF, Owen N, Fisher EB. Ecological models of health behavior. In: Glanz K, Rimer BK, Viswanath K, editors. Health behavior and health education: theory, research, and practice. 4th ed. Jossey-Bass. 2008

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Ecological models of health behavior

- **Multiple levels of influences**
    1. Intrapersonal (biological, psychological)
    2. Interpersonal (social, cultural)
    3. Organizational
    4. Community
    5. Physical environmental
    6. Policy

Sustainable behavior change

- **Consistent healthful choices require:**

  1. Motivated and educated individuals

  2. Conducive environments and policies support

  3. Social norms and social support
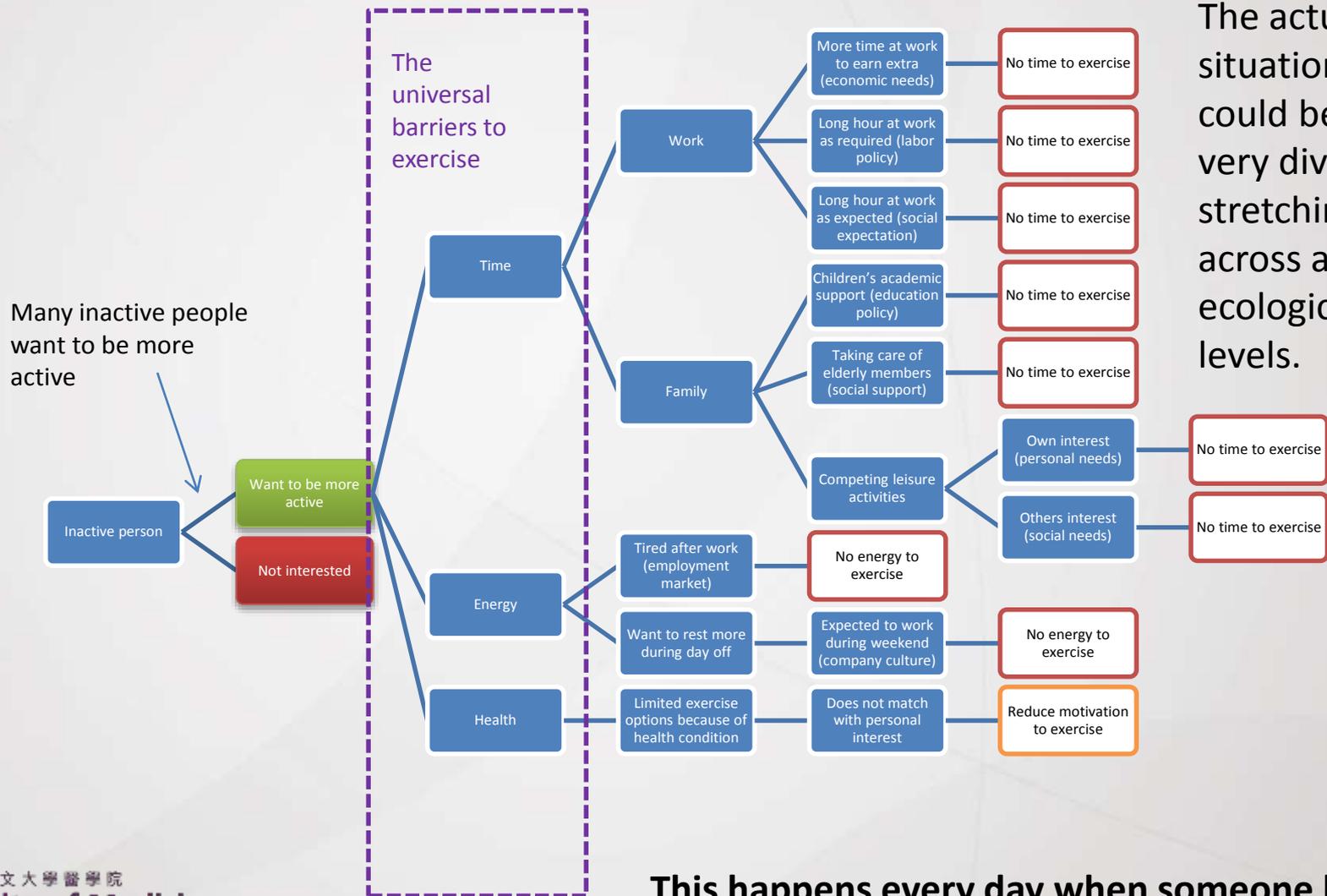
Diabetes self-management example

Multiple levels of influences

Interaction across levels

Target multiple levels to achieve desired outcomes

Behavior specific

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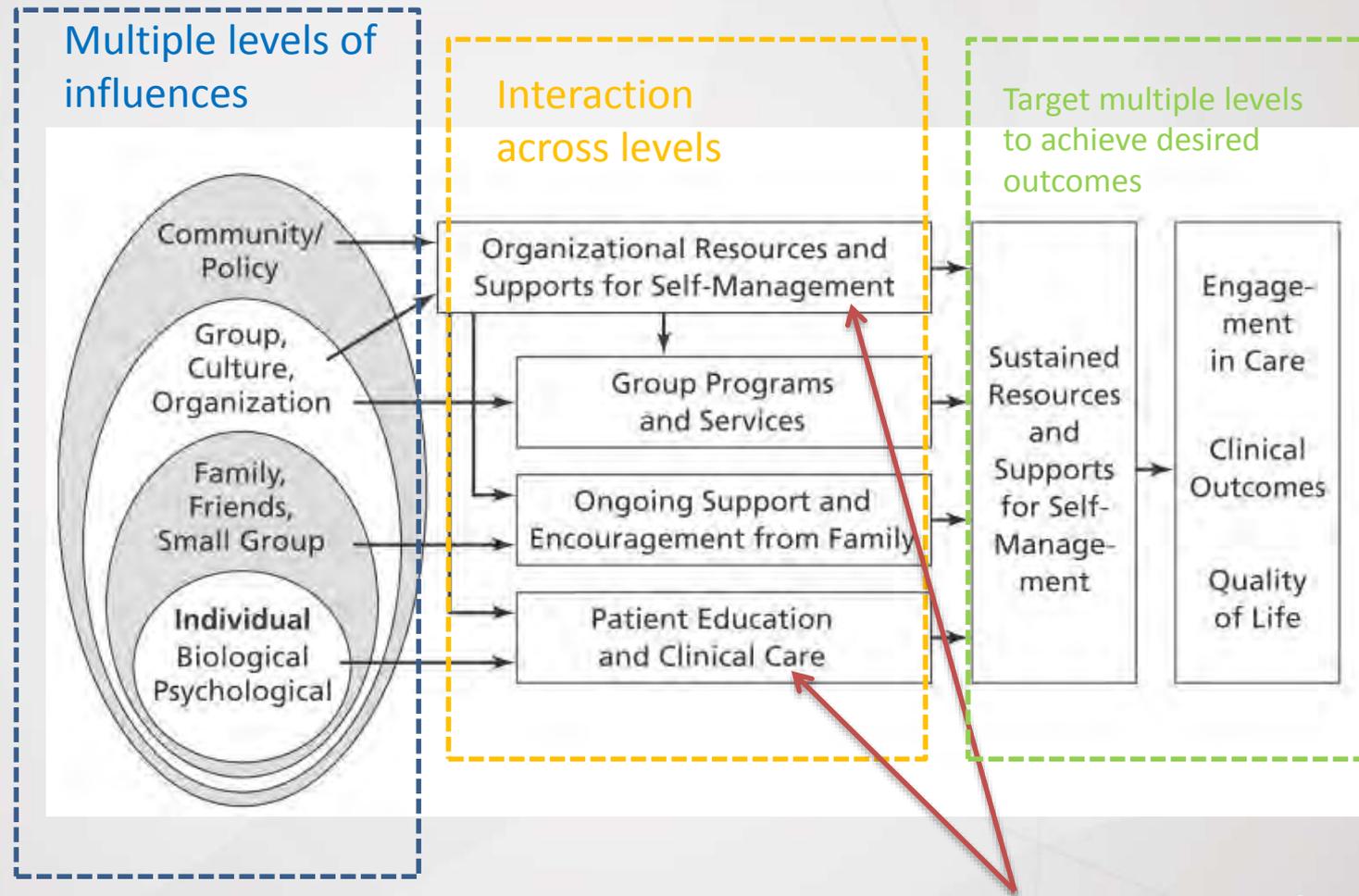
Neighborhood designs

- Physical environment
  - Proximity of housing to amenities
  - Range of public facilities / amenities
  - Safety & convenience
  - Availability of parks / open space

- Social environment
  - Community centers as a place for social gathering
  - No. of social events
  - Attract residents from different backgrounds, ages, cultures → intergeneration, intercultural integration

Source: WHO, 2010

The "user experience" of choosing to be active

The universal barriers to exercise

Many inactive people want to be more active

Inactive person

Want to be more active

Not interested

Time

Work

More time at work to earn extra (economic needs) → No time to exercise

Long hour at work as required (labor policy) → No time to exercise

Long hour at work as expected (social expectation) → No time to exercise

Family

Children's academic support (education policy) → No time to exercise

Taking care of elderly members (social support) → No time to exercise

Competing leisure activities

Own interest (personal needs) → No time to exercise

Others interest (social needs) → No time to exercise

Energy

Tired after work (employment market) → No energy to exercise

Want to rest more during day off → Expected to work during weekend (company culture) → No energy to exercise

Health

Limited exercise options because of health condition → Does not match with personal interest → Reduce motivation to exercise

The actual situation could be very diverse, stretching across all ecological levels.

This happens <u>every day</u> when someone have to make the decision to exercise.

Difficulty of making healthy choice

- The real choice is not between healthy and unhealthy lifestyle, as illustrated in the previous "choosing to be active" example

- For smokers, they are constantly attacked by cravings and withdrawal

- For healthy diet, research found that people have to make 200-300 decisions about what to eat on a typical day (Wansink and Sobal, 2007)

Wansink B, Sobal J. Mindless eating: the 200 daily food decisions we overlook. Environment and Behavior. 2007;39:106-123.

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Dual-system framework of human behavior

1. **Automatic System (default system)**
    - rapid intuitive solutions
    - associative, influenced by context
    - sensitive to immediate pleasure
    - save cognitive effort

2. **Slow System**
    - takes over when default solution feel wrong
    - controlled
    - deliberative
    - dependent on cognitive capacity

Human decision making

- We are not aware that we made those 300 dietary decisions every day because we don't actually "think" about them when we made the decisions

- Decisions that require deliberate thoughts are processed by the (slow) Reflective System (System 2)

- Using the Reflective System is mentally taxing. And it requires the person to have complete information about the situation (which we usually don't have)

- Therefore, we mostly make decisions under familiar situations using the (much faster) Automatic System (System 1) to reduce cognitive loads

- We typically use a few rule of thumbs as mental short-cuts to make decisions through the Automatic System (Amos and Kahneman, 1974). That can lead to seemingly irrational behavior

Amos T, Kahneman D. Judgment under uncertainty: heuristics and biases. Science. 1974;185:1124-31.

Choice architecture

- Thaler and Sunstein (2008) coined the term "choice architecture" to reflect the needs to design the a **system** that could "nudge" people towards more desirable behaviors

- The choice architecture approach respects the personal freedom to choose, to make informed-decision

- The key is to construct the different options in such a way that people are <u>more likely</u> to choose the more desirable option

Thaler RH, Sunstein CR. Nudge: improving decisions about health, wealth and happiness. New Haven: Yale Univ Press. 2008.

Choice architecture

Process of designing systems and services in such a way that the "good choice is easy and rewarding and does not take much effort.

How would you open this door?

Stimulus response compatibility

- Seeing flat plate on door signals pushing

- Handle on door signals pulling

- But many of us have encountered doors with handles on both sides that can only be opened to one side. That violates stimulus response compatibility

Image from: http://todayyesterdayandtomorro.blogspot.com/2014/05/entrance-glass-doors.html
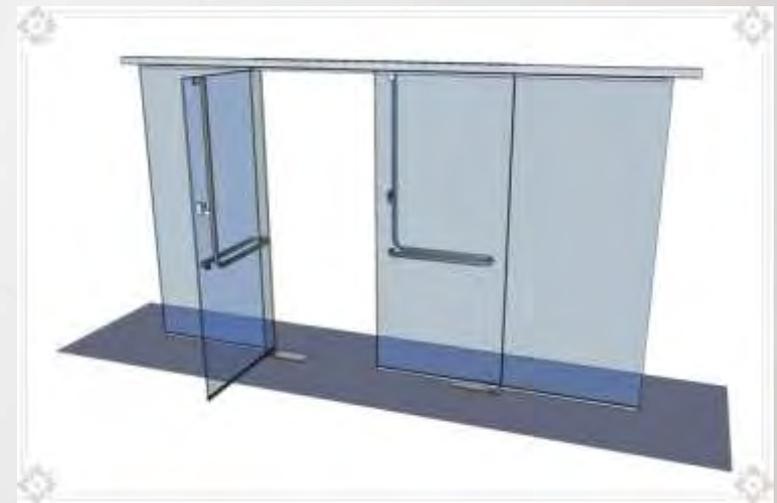
Good design?

Successful design if the desired outcome is separation of smoker and non-smoker to reduce 2nd hand smoke

Design failure if the desired outcome is for smokers to not smoke or quit

What would smokers choose?

More desirable outcome

A. Quit smoking
B. Walk by and pretending they did not get a craving for a smoke
C. Go inside and smoke

More likely to happen

Collaboration across ministries

- (Using Hong Kong as an example)

- *Food and Health Bureau* (the health ministry) handles health-related matters, but policies related to leisure physical activity is under the *Home Affairs Bureau*

- Although the environment has major influence on health, it is under the *Environment Bureau*, which also handles protection of water quality, especially on discharge into the environment

- However, quality of water <u>supply</u> is under the *Development Bureau*, which is also responsible for building quality

- But then, public housing falls under the *Transport and Housing Bureau*, which also decides the transportation policy

- The *Labour and Welfare Bureau* takes care of labor rights and social welfare, but the policies can sometimes go against the business's interest which is under the *Commerce and Economic Development Bureau*

- The *Security Bureau* handles border control which can be important when there is an outbreak

- *Financial Services and Treasury Bureau* is responsible for census statistics which is very important for informed policy making, and is also responsible for tax policy that enables all government services

- To know all this, a good education is needs, which falls under the *Education Bureau*

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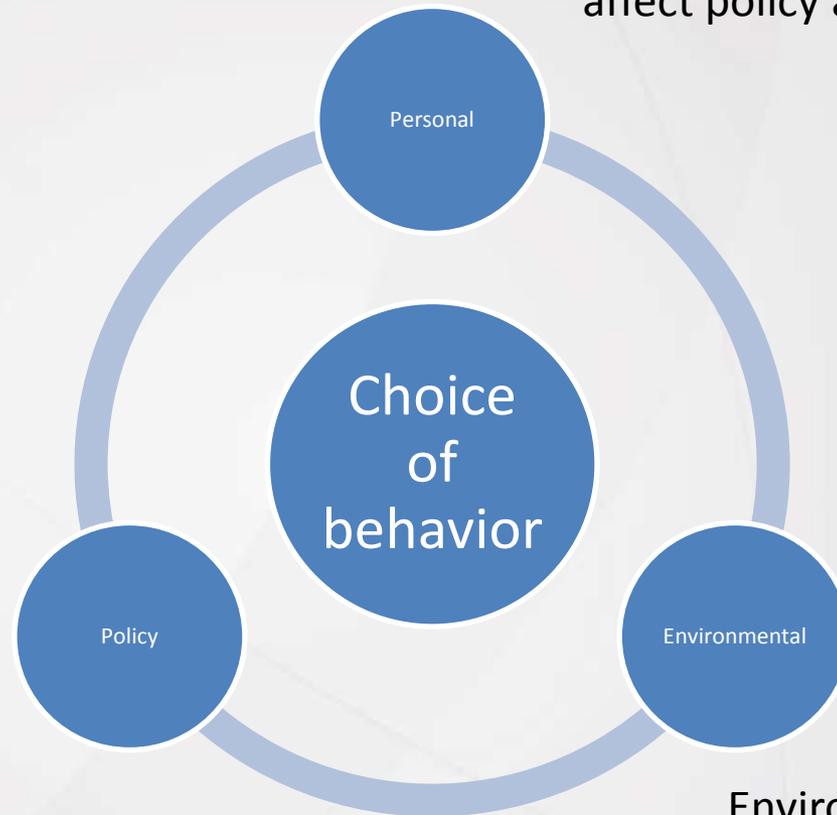
Designing for an ageing society

- A supportive environment is needed to support "ageing in place"
- Not just the built environment, but the choice environment should be carefully constructed
- The aim is to **create good choices and user experience** for the people so they are more likely to perform the desired behaviors (not smoking, active lifestyle, healthy diet, etc.) instead of the current top-down approach that placed the responsibility on the people themselves.
- All departments in the government need to work together and consider the health impact in their policy and practice (Helsinki Statement on Health in All Policies, 2013)
- **Health is everybody's business**

Thank You!

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