

## **Concept Paper: Ageing and Health**

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### **I. Introduction**

The demographic transition, which is characterized by declined fertility and mortality, leading to population ageing, has changed the age structure of the population all over the world as well as the world itself. It seems that the world is changing and have to be changed correspondingly by the dramatic change of age structure of its population, namely, population ageing. We, as the global civilian, are facing the challenge in adjusting ourselves and our world. Today fertilities in 60 countries are below replacement levels, and around a dozen have dropped below 1.3. The only developed country remaining at replacement level is the US, and that is mainly because immigrant women have high birth rates. Moreover, although the demographers were warning about the ageing phenomenon, it took 20 years before the politicians of most MDCs, and their populations, began to fully realize the impact that this would have. However, the developing countries are confronting the challenge of much faster population ageing than the developed countries. Especially, some countries, where the family planning programs have been effectively implemented since late 20<sup>th</sup> century, are experiencing the fastest ageing process in the human history.

In recent years, scholars have increasingly recognized that population ageing, with its growing number of elderly, has profound implications for the nation's economic, social, and health services. Health, as one of important factors in shaping the needs of the people in the world, deserves our special concern in research. Through our collaborating research among IARU, health planners and policy makers must fully understand and respond to the effect of increasing issues of population ageing.

Increased human longevity in both developed and developing world has challenged policymakers to concern with the potential implications of health care burden of unhealthy elderly, because the increase in life expectancy might accompany with a parallel increase in severe disability due to the expansion of morbidity, which has been found in many developed countries and some developing countries where the data are available.

From epidemiological perspective, contemporary health issues were also shaped by the epidemiological transition: a change in mortality patterns from contagious diseases to chronic and degenerative ones. Chronic conditions are the main causes of disability, which have increased health expenditure in developed countries. By contrast, developing countries face the double burden of diseases: an increasing numbers of non-communicable diseases such as cardiovascular diseases, stroke, diabetes, cancer, on the one hand, and the alarming infectious diseases such as malaria and HIV/AIDS, on the other. These double burdens consume the bulk of scarce health resource in these countries. It is notable that the expenditure of health care for the elderly will increase 36 percent in developing countries and 48 percent in developed countries from 2000 to 2050.

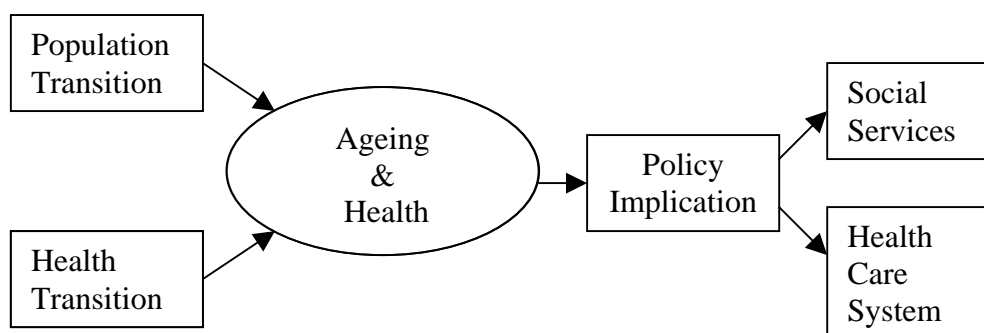
Developing countries face different problems in terms of ageing and health from developed countries. The main problems in developing countries derive from scarce

health resources, declining family sizes, lack of family support for elderly, lack of social security for the elderly, and the doubling of disease burdens.

It is more obvious that the health improvement has practically focused more on the chronic than on acute diseases, more on morbidity and disability than on mortality, more on quality of life than on duration of life. In response to this perspective, the World Health Organization, in the program “health for all in year 2000” has defined precisely three relevant objectives: “to add life to years”, “to improve the chances of disabled people” and “to reduce morbidity and disability”.

## **II. Scale and Scope of Possible IARU Research**

Our research scope and framework can be shown at the Flowchart below. We try to use the core, Ageing and Health, to link policies with population transition and health transition, which are the two determinants impacting the adjustment of social policies in the world.



Based on the Chart, we should explore the processes of the two transitions, population transition and health transition. Population transition was caused by the fertility and mortality decline and migration with respect to particular countries. Different countries have different steps and extent in population transition to the extent of population ageing. Health transition was achieved by the improvement of medical techniques and other factors. We can measure the health transition based on the indicators of healthy life expectancy which combining the two changes of morbidity and mortality.

It is very important to estimate the age-specific prevalence rates of health outcomes such as functional limitation, chronic conditions, and self-assessed health status, prevalence of disability and rates of mortality, examine recent trends, and explore individual-level transition rates in health status, and calculate healthy life expectancy. The collaborative research can compare the health expectancy in developed and developing countries using a number of new health indicators, such as DFLE (disability free life expectancy) and ALE (active life expectancy), measure not only how long someone at given age can expect to live on average, but also what fraction of the expected remaining years would be free from disability. In China, albeit more and more researchers have paid attention to the health of the elderly, literature on these issues is relatively scarce.

We should monitor the changes of the relationships between morbidity and mortality in both developed countries and developing countries in order to trace the trajectory of the changes of health expectancies in a long run, even though we found that the compression and expansion of morbidity occurred alternately in different countries.

It is also critical to investigate the effects of socio-economic status, family network characteristics and social support, and health behaviours on the transitions of health status among older people and how these relationships differ across the world.

Health care provision for the elder are quite different in developing countries compared to developed countries. In developing countries, health care of older parents relied primarily on their adult children on both instrumental and economic basis. Shrinking family sizes brought by rapid reductions in fertility, especially in China, and changes in parent-child roles instigated by modernization of the economy have posed serious challenges to the traditional family care and support system for senior people. This confronts the government to assume greater responsibility to develop the social security system dealing with care and support of the senior. Changing elder support system has shown its impact on health outcomes of the elderly. The proposed collaboration will help developing countries to deal with the emerging elder health issue via learning the experiences from developed countries.

### **III. Issues that could be anticipated as being of interest to many or all IARU members**

Based on the theoretical framework given above, we generated some key issues which all the member of IARU might be interested in collaboration in coming research.

#### *1. Causes of individual ageing in terms of biological and environmental impacts*

Individual Ageing is characterized internally by cellular level and externally by environmental level or social level. The key issue is to identify the causes of the both factors and their interactions in causing the individual ageing. This research may involve factors impacting the decrease of the risk of morbidity and increase of the length of life.

#### *2. Causes and determinants of population ageing and the variations among different countries in the world*

Ageing is a privilege and a human achievement. It is also a challenge, which influences all aspects of the new century. The key issue we should focus is to identify the diverse ageing processes in different countries in dealing with the determinant factors such as fertility, mortality, and migration. In addition, ageing problems under different socioeconomic status and different scenario of ageing process in different countries will be explored.

#### *3. Causes of changes of active health expectancy and disability-free health expectancy*

This study will be mainly devoted to the study of disability, as well as ADL and IADL, concepts, methodological developments in population health evaluation, relations among morbidity, disability, disabled in ADL and IADL by testing the theories of compression, expansion, or equilibrium of morbidity, and mortality, determinants and consequences of disabled problems, and relevant comparisons among regions and social stratifications using the health expectancy approach and its application to policy issues. Data dealing with disability, as well as ADL and IADL, can be found and available in almost all the IARU located countries. China will conduct the second national disability survey, with 2.4 million samples, in the early of this year. This will provide a good condition for the research of this topic. Since we have changed our

perspectives from a strictly medical model that emphasizes medical conditions or organ impairment to a model that recognizes the social and environmental context of disability and the importance of participation, it is worthwhile that we examine health expectancy in terms of social context. The different perspectives are important to consider because they lead to fundamentally different ways of thinking about, measuring, and classifying disability in the population. The tools of International Classification of Functioning, Disabilities, and health (ICF) can be used in measuring the disability.

#### *4. Institutional adjustment or reform and its policy implications*

In response to the determination of population transition and health transition, the social institution of each country has to be adjusted such as health care system and social services. The key issue for this study is to identify if our old health care system could not meet the needs of the fast transitions in both population and health, to explore how the adjustment should be made, and finally to put forward some suggestion to policymakers in the reform of the old system.

### **IV. The achievement we anticipated through IARU collaboration**

The proposed collaboration can contribute to the development of both theories and methodologies on ageing and health based on data available in both developed and developing countries so as to help to shape ageing policies at the national levels.

The proposed collaboration can provide a valuable opportunity to understand the causes and consequences of the demographic transitions and the differences and similarities of health transitions and health patterns across countries.

The proposed collaboration can work on the assumptions and concepts of morbidity and mortality and likely effect of declining mortality and increasing life expectancy on volume of morbidity and disability in the population.

The proposed collaboration will have a profound impact on social policies of health for the ageing society in both developed and developing countries alike. There are much in-depth analyses of the patterns and determinants of health transitions for aged as well as medical care and medical aid in developed countries, whereas little academic research has ever been done in China and elsewhere in developing regions.

Therefore, the proposed collaboration can work on comparative analyses in ageing and health across both time (target on transition) and geographic boundaries (between developed and developing countries) by investigating the universality of findings across different settings. Such studies are essential to our understanding of population ageing and health processes, and testing if the theories on population ageing and health ruled the developed countries are also applicable to developing countries.