The rapid rise of the older population in Thailand requires the speedy action of the country’s government to support the change. Projections show that the ageing of populations requires policy action and investment. With regard to health-related aspects, research into the health status of the older population is required for the development of care plan strategies. This article will focus on the structural change of population which leads to the necessity of health assessment in older people.

Structure change of the population: worldwide and Thailand

The worldwide population is ageing. Global population ageing is a result of the demographic transition by which both mortality and fertility decline. The growth rate of the older population is faster than that of the total population globally. In the population aged 60 years and above, the growth rate is estimated to be 1.1 times worldwide, 0.7 times in more developed countries, and 1.5 times in less developed countries from the years 2000 to 2050. In the population aged 80 and above, these rates are projected to be much higher, that is 2.7, 2.1, and 3.7 in respective order. Developing countries are predicted to reach the stage of an ageing society over a much shorter time than that experienced by more developed countries despite low economic development in some countries. The older-age dependency ratio, which reflects the burden to the workingage population, is also expected to increase faster in less developed countries (1.7 times) compared to developed countries (1.2 times) from the year 2000 to 2050.

The move towards ageing in Thailand is the result of a decrease in the birth rate and an increase in life expectancy as has already occurred in most of the developed countries. The estimated Thai total population at midyear 2008 was 63.1 million; 11.2% of whom were aged 60 years and over. The life expectancy at birth for Thai men is 69.5 years and 76.3 years for women in the year 2008. The growth rate of populations aged 60 and over and 80 and over are considerably faster than the rates worldwide (Fig 1 and 2). The age dependency ratio is projected to increase 3.4 times from the year 2000 to 2050 (Fig 3). As a result of this structural change, health problems in older people are the major threat to healthcare providers. Health assessment is then needed to produce the best outcome in caring for this enlarging population.
Health and ill health in the older population

Assessment of health status is a fundamental process necessary to direct public healthcare policy. The purpose of health assessment is to support needs assessment, policy making, planning and implementation, and evaluation of interventions and programmes. It can also identify important areas where research is needed. The health status of populations can be measured to study the determinants of health or health status. The scope of health status measures includes determinants of health and health status. The determinants of health encompass: a) Susceptibilities: markers, genetic factors or endogenous susceptibilities b) Physical, emotional, social, economic, and environmental influences c) Health attitudes and health-related behaviours d) Health protection, collective prevention, and health promotion and e) Health and social care, both physical and mental. Assessment of the health status includes self-assessed health status, assessment of symptom frequency or disease frequency, assessment of disability, impairment or handicap and assessment of mortality.

The assessment of health status in the older population needs to cover physical health, psychological health, social and environmental relationships. All of these aspects fall in the domains of quality of life (QOL) which is an individual’s perception of their life in the context of culture and value systems, their personal goals, expectations, standards and concerns. Combining these domains of assessment can provide a health indicator. In terms of physical health, self-perceived global health (SPGH), and self-reported physical illness show reasonable correlation with medical conditions.

The use of medicine and instruments to maintain the activities of daily living (ADLs), and the presence of specific ailments can also reflect the health status of the studied population. Functional ability is the ability to perform basic activities of daily life without support, which is key to overall independence and quality of life. The functional ability to perform ADLs is a part of the global health status in the older people as it is closely related to physical illness. In all studies, most people rate their health as good, despite chronic disease and symptoms from different organ systems. It is only when illness restricts possibilities or limits ADLs that it affects overall health. ADLs can range from the most basic self-care to higher functions. They vary across cultures, thus evaluation of the ADLs needs to be specific to the population under study. Several limitations in ADL assessment tools have been proposed, for example: ceiling effect, where the tool hardly detects mild impairment in people with a high level of function, gender bias in some items of the assessment, and clinical setting dependent (hospital, community, or rehabilitation). Additionally, limitations of the performance can be from social factor, e.g., sex, family, mood, or culture, not necessarily from physical illnesses.

Neuropsychiatric disorders are the leading cause of burden of disease in disability-adjusted life years (DALYs). Though outweighed in prevalence by psychiatric disorders, dementia causes the highest disease burden compared to other neurological disorders. The Mini-Mental Status Examination (MMSE) is one test that has been used extensively across countries both in clinical practice and research for cognition and dementia. It has been translated to a number of languages and validated for screening purposes for cognitive deficit with high test-retest reliability and inter-rater reliability. However, the test lacks precision in diagnosing dementia. The MMSE has a focus on the various cognitive aspects of mental function, but does not cover mood and other psychiatric aspects.

To fill this gap, the psychological well being should be assessed to determine the psychiatric health status of the population.

Physical illnesses in the older population: Epidemiology worldwide and in Thailand

It has been reported that the most common chronic diseases in the older population in Europe are arthrosis/arthritis, hypertension, ischaemic heart disease, respiratory problems and diabetes. Several population-based surveys have been conducted in Thailand. From the survey of QOL of Thai people aged 60 years and over in 2001 by the Institute of Geriatric Medicine, Ministry of Public Health, the most common illnesses are hypertension, diabetes, joint disease, asthma, and paralysis. However, the data conflict with the survey by the National Statistical Office in 2002 which revealed that the top 5 illnesses that the older people had were body ache (including backache and joint pain), insomnia, vertigo, eye diseases, and dementia. A survey in 2006 by the Ministry of Social Development and Human Security revealed that three quarters of all older people suffered from common illnesses such as hypertension, bone and joint diseases, diabetes, eye diseases and cardiovascular diseases. The most common causes of death in the Thai elderly are reported to be cancer, heart disease, cerebrovascular disease, pneumonia, kidney disease and diabetes.

From the World Health Organization information, non-communicable diseases are now a major problem in Thailand and the world. They cause more deaths than communicable, perinatal, maternal and nutritional diseases and from injuries. Among the non-communicable diseases, cardiovascular disease, malignant neoplasms, respiratory diseases, digestive diseases and neuropsychiatric conditions are the top five causes of deaths in the world. In Thailand, malignant neoplasms, cardiovascular diseases, respiratory diseases, diabetes mellitus and genitourinary diseases are the most common five non-communicable disease causes of deaths of all age groups.

Regarding the DALYs, the proportion of non-communicable diseases in Thailand is higher than the
proportion globally, where the proportions of communicable and non-communicable diseases are almost the same. Neuropsychiatric conditions, cardiovascular diseases, malignant neoplasms, respiratory diseases and digestive diseases were reported to be the most common five non-communicable diseases in the world which had the highest DALYs. In Thailand, it was reported that neuropsychiatric conditions, sense organ diseases, cardiovascular diseases, malignant neoplasms and respiratory diseases ranked as the non-communicable diseases with the five highest DALYs. This highlights the necessity of including sense organ diseases (hearing and visual problems) in the physical assessment. Compared to younger adults, Thai older people had higher DALYs in cardiovascular diseases and cancers and lower DALYS in infectious diseases and injuries.17

Assessment of the physical illness in the community

Physical illness screening in the older population is not simply an extrapolation of screening in younger people. Some screenings are specific for this age group, i.e. risk assessment for fall, nutritional assessment, visual and hearing problems, bone mineral density, depression, and abdominal aortic aneurysm. Generally the guidelines for physical check-up do not state the age limit at which screening should not be performed further. In the older population, life expectancy and disability are the main factors which every physical assessment should take into account on top of the other 4 major dimensions in screening; disease condition, test, treatment and healthcare system.

The comprehensive geriatric assessment (CGA) is an interdisciplinary approach used to identify and address the multiple medical and psychosocial problems of older people. Its use yields benefits in reduced mortality and hospitalisation, and improved physical and cognitive functioning. However, employment of the CGA in community populations who are relatively healthier than hospitalized patients will lessen the effectiveness of the assessment. Identifying those who are at risk and worth being assessed by the CGA is essential.

Self-reported physical illness is frequently used in population-based epidemiologic studies as it is less costly, less time-consuming and more convenient than using medical records. However, the validity is its greatest limitation. Registries and national databases have been developed for research and surveillance purposes. They have been shown to be reliable in many studies.18,19 However, over and under-estimation have been reported.20 Disease severity and care setting affected the validity of registry data.21 Moreover, in several countries such systems have not been well developed.

There has been no study conducted in Thailand to establish the concordance of self-reported physical illness with objective diagnosis. The differences in healthcare systems, health education strategies and educational background might make the self-reported physical illnesses in Thailand less reliable. Self-reported health can provide a more holistic view of health which may not be reflected by objective measures such as those based on specific medical diagnosis. There is still only a limited number of studies in developing countries. A cross-sectional survey by Assantachai et al., showed that poor self-perceived global health was a predictor of hospital admission in the elderly.22 Another study demonstrated the association between certain demographic, socioeconomic and geographic characteristics with self-reported morbidity and self-assessed health.23 However, there has been no study investigating potential health factors which are associated with reporting poor SPGH.

**CONCLUSION**

Thailand will become the ageing society in the near future. Assessment of older people is more complicated than that of younger people, because there is often more to assess. There is a lack of health measures in all aspects for the older Thai population. Previous surveys only reported cognitive health, psychological health, physical health or functional ability separately. A global assessment of individual levels which lead to public health impacts needs to include health measures in all aspects, because concurrent ill health is common.

**REFERENCES**