

# **The Estimation of Centenarians in Thailand**

## **Introduction**

The demographic structure of Thailand is changing to an aging population due to the effects of the fertility and mortality reduction and increasing longevity. The numbers of elderly including a special group who are aged 100 years and over has also been increasing rapidly. In Thailand, the source of centenarian data is mainly from civil registration. Although it might be expected that the quality of the civil registration system has improved over time, several recent studies have found continuing incompleteness of death registration and have recommend further improvements. When death registration figures are incomplete, estimates of the number of surviving centenarians is likely to be inflated. The inconsistency of these numbers of centenarians leads to have the questions about the exact number of centenarians in Thailand and the quality of data of civil registration.

## **Objective**

This study aims to estimate the number of centenarians in 2010 and to assess the quality of registration data about the elderly population in Thailand by following all recorded centenarians in civil registration from two sample provinces of Thailand.

## **Methodology**

This study used both quantitative and qualitative research methods to estimate the number of surviving centenarians in 2010 based on Life table survival ratios method. The population estimates were based on several sources of data, i.e. the 2000 Population Census (NSO, 2002), a life table constructed by using mortality data from the Survey of Population Change (SPC) during the period 2005-2006 (NSO, 2008), and Coale and Guo's new regional model life tables (Coale & Guo, 1991). Qualitative fieldwork was conducted by following up with centenarians recorded in the registration system in two sampled provinces to support and qualitatively explain the prior quantitative finding. In-depth interviews with village/sub-district headmen, registrars, and relatives of deceased persons were conducted.

## **Finding**

It was found that the estimated number of Thai centenarians in 2010 was far lower than the recorded number of centenarians in civil registration. There were 1,700 estimated centenarians, comprising of 511 males and 1,200 females. The estimated number of centenarians was only 12 percent of the number recorded in official civil registration figures.

All centenarians recorded in civil registration in the two provinces included in the sample group were followed in order to explain the reasons for incorrectness of the registration data. Among 429 recorded centenarians in two sample provinces, only 43 cases (10%) were found to be true centenarians. Among the remaining 90% of recorded centenarians, most had already died and some were found to have ages of less than 100 years. The ages of all centenarians over 106 years were found to be incorrectly recorded and were over reported in all cases.

Two important causes of the inconsistencies occurring in centenarian data were incompleteness of death registration and incorrect age recording. Many reasons were found for the incompleteness of death registration such as non-registered deaths and failure to delete the names of the deceased from registration data. Failure to notify the appropriate officials of a death was found to be the main reason for not discharging the names of deceased persons from registration data. The name of a deceased person cannot be deleted from the register if the death certificate is not provided to the registrar. The process of death notification is inflexible and the multiple steps required prevent the deletion of deceased people from registration records. This study also found that most people completed the first step of death of registration (reporting the death to the village headman or a police officer, or receiving a death certificate from the hospital) but did not report the death to registrars at the district or municipality office.

Another important reason for an exaggerated number of centenarians in civil registration was incorrect recording of age. The study found many reasons for incorrect reporting of age. Among these reasons were the tendencies to over report age by one cycle of animal years (12 years). The traditional way of reporting dates of birth in Thailand is based on the lunar calendar and a twelve-year cycle in which each year is assigned an animal. This traditional

calendar system would have been commonly used to record the dates of birth of people who were born approximately one hundred years ago. When the civil registration system was computerized in the 1980s, birth dates recorded using the traditional calendar system of animal years and lunar months were converted to solar calendar years (in Christian Era (A.D.) or Buddhist Era (B.E.)). During this conversion process mistakes in age recording could have easily occurred. Age mis-recording also could be due to mistake in counting age and errors during data entry such mis-keying or miscoding age. These errors may lead to the mis-recording of age in registration data.

## **Conclusion**

This study can be concluded that the number of centenarians reported in civil registration are definite over-reported. These findings indicate the need to improve the quality of civil registration data in Thailand. The exaggeration of number of centenarians as found in this study reflects the quality of registration data, especially on the oldest population. Since population data from registration are officially used as the base for several activities such as to arrange the electoral zoning, and to allocate government budget and welfare resources, its accuracy is very meaningful. The finding of this study suggests many points to improve the quality of registration data. The deletion of deceased persons' names by less complicated procedure is one among others. The correction of birth date should also be done. While the Thai society has been ageing very rapidly, many programs concerning the elderly's quality of life are being purposed. The programs such as special welfare and value raising campaign for elderly and centenarians are recommended. In performing such programs efficiently, the accurate data are needed. In Thailand, the civil registration is still the main source of population data. Thus, the improvement of registration system will certainly benefit to government and the Thai people.