

# Statistical Analysis of Senility Death in Japan

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Senility death, defined here as the death which the underlying cause is senility (R54), is currently the third leading cause of death in Japan, and the number and percentage of senility deaths are increasing every year. This increase cannot be explained solely by the increase of older persons or deaths at the long-term care facility. Internationally, since ICD-6 was adopted in 1948, senility is considered to be an ill-defined cause and deaths caused by senility are rare in many countries, with Japan being an exception.

In 2020, 93.8% of the senility deaths had only one entry filled by the certifying doctor in the death certificate, most of the cases simply written as "senility". This percentage has been increasing since 2005 (87.4%). In cases more than one cause were written, marasmus (E41), muscle wasting and atrophy (M62.5), dysphagia (R13), or eating disorder (F50.9) are mentioned, apart from other ill-defined causes such as heart failure (I50.9), fatigue (R53) or respiratory failure (J96.9). On the other hand, around half of the deaths related to senility, where the word "senility" is mentioned somewhere in the death certificate, were caused by senility, followed by cerebral infarction (I69.3), dementia (F03), pneumonia (J18.9), and heart failure (I50.9). In terms of the time interval from onset of senility to death, one month is the most common description, but it varies from 1 day, 1 week, 1 month, 1 year, and in a few cases, age is described as the duration of senility. It indicates that the certifying doctors have different ways of perceiving senility.

If the cause of death listed on the death certificate is just "senility," it is possible that the true cause of death is hidden or not discovered. This could happen by the negligence of the caregiver, but also out of better care, seeking the quality of life and death, avoiding unnecessary medical tests and examinations. Also, there may be "true" senility deaths that can only be described as senility, without any other particular diseases. It may be necessary to consider how to describe true senility in the death certificate so that it can be distinguished from ill-defined deaths. Given the increasing number of deaths at very old age, the death certificate should be remodelled to describe better the process of the deaths, incorporating not only medical causes but also disability and functioning status towards the end of life.

【Keywords】 senility, vital statistics, underlying cause of death, multiple cause of death, Japan