Spending the last days of life in hospital is becoming less frequent. But not for the oldest of the old. Credit: photocase: davidpereiras

In many countries, the proportion of people dying in hospital has been decreasing for years. Until now, this was thought to apply to all age groups. A new study now draws attention to disturbing exceptions.

Most people want to spend their last hours at home – and not in hospital, as is still often the case. But the trend reversal has been initiated, as a new study by the Max Planck Institute for Demographic Research (MPIDR) in Rostock shows. According to the study, the proportion of elderly people dying in a clinic has been declining for years. Excluded from this positive development, however, are the elderly aged 80 and over.

In their study, the scientists around Angela Carollo trace the development of hospital deaths in Denmark between 1980 and 2014. To this end, they analyzed data on all women and men aged 50 and over who died during this period. After evaluating a total of about 1.8 million data records, the following picture emerged: Whereas in 1980 56 percent of men died in the clinic, in 2014 the figure was only 44 percent; among women the proportion fell from 49 percent to 39 percent in the same period.

**The trend reverses in old age**

The researchers observed the greatest decline among the 50- to 59-year-olds: Whereas in 1980 two thirds (66.3 percent) of this age group died in a clinic, in 2014 it was just under half (48.9 percent). The downward trend continues in the period under study up to the age of 79 years and comes to a standstill among the 80 to 89-year-olds. In this group, around 40.2 percent die in hospital today – a proportion that has hardly changed since 1980. What surprises the researchers is the enormous 23 percent increase in the number of over-90s.

Angela Carollo says that Danish population registers are particularly suitable for such analyses because of their extensive data series dating back so far. The results, which are unique in their sharpness of detail, reflect developments in large parts of Europe and North America and are therefore of international significance. Even in countries such as the USA, Great Britain or Belgium, patients are increasingly able to die a dignified death at home, in a hospice or at another location of their choice, says Carollo: “This is very welcome, because death in hospital is not a good death for most people.”

**Stagnation in Germany**

In the old Federal Republic of Germany, the proportion of hospital deaths reached a maximum value in 1980 with 55 percent of all deaths, only to decline to 46 percent for the whole of Germany in 2016. “The proportion of hospital deaths in Germany has remained at this level for years,” says Angela Carollo.

The Rostock scientists see the development of the over-90s as an alarm signal. “They are not only the most frail, but also the fastest growing population group in many countries,” says Angela Carollo. Far too often the last wish for a farewell in a private setting is not fulfilled.
The detailed results of the Rostock study are particularly revealing. According to it, more women than men die from cardiovascular disease in younger age groups in hospital. The difference loses itself at around seventy and then reverses: From the age of 80 onwards, the male proportion of cardiovascular deaths in hospitals predominates. "It is quite possible that more younger men than women die of cardiovascular diseases before they reach the hospital," suspects Angela Carollo. However, this needs to be investigated in more detail.

Marriage makes the difference

The study also finds that medium- and high-income earners have higher odds of dying as recipients than low-income individuals. Where older people die also depends strongly on whether they are married or not: On average, more married people die in hospital than unmarried people, but in the over-90s it is increasingly the unmarried who die. Angela Carollo says that several stays in hospital within one year also increase the risk, adding: "Conversely, the avoidance of long hospital stays, as has been common practice for years, together with the extension of in-home care and nursing homes, probably led to fewer deaths on the wards."

The number one cause of death in hospitals is respiratory diseases, especially in the oldest age group. Strokes and cancer follow in the ranks, with these showing the sharpest decline since 2005. The study does not provide information on other places of death. Carollo: "We can only assume that those who did not die in hospital either died at home or in a nursing home or hospice."

The researchers from Rostock associate their findings with an urgent appeal to politicians. Carollo: "It is now important to expand care, and to make sure that existing healthcare and social care regulations are sufficient. Our goal should be to enable old people to live at home or in a home care and to avoid unnecessary hospital stays shortly before death."
