Euthanasia and old age

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Abstract

Objective: to obtain insight into the relationship between euthanasia/physician-assisted suicide (EAS) and the age of patients to whom it was administered.

Design: a descriptive retrospective study.

Sample: cases of EAS reported between 1984 and 1993, in the province of North Holland in The Netherlands. These data are not available for the rest of The Netherlands.

Results: between 1984 and 1993, 1707 cases of EAS were reported to the Public Prosecutor in North Holland. The average age of the female patients to whom EAS was administered was 65 years; for men the average age was 62. For both men and women EAS was most frequently performed in the age-categories of 60–69 years and 70–79 years. Cancer and cerebrovascular accidents were positively related to age, while AIDS and multiple sclerosis were negatively related to age. In all physician reports the number of cases of EAS increased until the age-category of 70–79 years, after which EAS was less frequently performed by general practitioners, but more frequently by nursing-home physicians. In the age-groups of 70–79 years and 80 years and over the number of cases of EAS increased over the years. There were differences in the distribution of age between the patients to whom EAS was administered and all deaths. In the younger age-groups EAS was performed relatively more frequently, while the lowest percentage was found in the group aged 85 years and over.

Conclusion: the suggestion that EAS is mainly performed among elderly people in The Netherlands is not supported by our study.

Keywords: elderly, euthanasia, physician-assisted suicide, The Netherlands

Introduction

The legal status of euthanasia and physician-assisted suicide (EAS) in The Netherlands is quite complex. Both are punishable offences; physicians have to report EAS to the Public Prosecutor as a case of unnatural death. In recent decades the requirements for prudent practice have been developed in jurisprudence. Examples of these requirements are, for instance: the patient must experience his or her suffering as unbearable and hopeless; a second physician must be consulted and the request for EAS must be voluntary (i.e. it must be a choice of the patient’s own free will). If physicians meet the requirements for prudent practice they can expect not to be prosecuted, although this is never certain [1].

In other countries concern has sometimes been expressed that by tolerating the practice of EAS, The Netherlands have entered ‘the slippery slope’ and many vulnerable, especially (very) old people will feel forced to opt for EAS [2–4]. Research has indicated, however, that EAS is not primarily performed in older age-groups [5–7]. To examine the relationship between EAS and age more extensively and over a longer period, we conducted this study as part of a 10-year survey of cases of EAS reported to the Public Prosecutor [8].

Our study focused on obtaining insight into the relationship between euthanasia and assisted suicide on the one hand, and the age of patients on the other. Our research questions were:

1. Can the age of the patient be related to any of the following factors: sex, disease or the speciality of the doctor involved [medical specialist (hospital physician), nursing-home physician and general practitioner]?
2. Has the relation between age and EAS changed over the period of observation?
3. Are there differences in age at death between people who die of natural causes and patients in whom EAS is performed?
Methods

Definitions
We took our definitions of EAS directly from those of the State Commission on Euthanasia: "euthanasia is the intentional termination of life, by someone other than the patient, at the patient’s request; assisted suicide is the intentional assistance to a patient with the termination of his or her life and given at his or her request" [9].

Design
The study is descriptive and retrospective. Between 1984 and 1993, we collected data from each reported case of EAS, which was made possible by a special arrangement between the Inspectorate for Health Care and the three district offices of the Public Prosecutor in the province of North Holland. With 2.3 million inhabitants, this is one of the largest provinces in The Netherlands (total population 15 million). These data are not available for the rest of The Netherlands. Until the end of 1990, the data were collected from police reports which were compiled when a physician reported a case of euthanasia to the coroner, the police, or directly to the Public Prosecutor. The police reports always included a coroner’s report, the patient’s files, an interview with the physician who had performed EAS and, usually, an interview with other people involved (e.g. family of the patient, the physician consulted), reports or letters from the co-attending physicians involved and a living will. After the end of 1990, data were collected from the report sent by the Public Prosecutor to the Attorney-General, which includes the physician’s report and the coroner’s report. Frequently they also include reports from the consulted and/or co-attending physicians and a living will, and very occasionally a report from the police or the Inspector for Health Care.

Measuring instruments
The following variables were taken from the police reports and, after 1990, the reports to the Attorney-General: age, sex and disease of the patient, specialization of the physician, and whether the death was a result of euthanasia or assisted suicide. In the analysis, age was considered as the dependent variable. The diseases were classified according to the International Classification of Diseases, Injuries and Deaths (ICD-9). Data on the total number of deaths due to a specific disease per year (1984-93) in North Holland were derived from Statistics Netherlands.

Results

Number of cases reported
Between 1984 and 1993, 1707 cases of EAS were reported to the Public Prosecutor in North Holland. The number of reported cases of EAS increased over this period. In 1984 only one case was reported, but the figures for 1992 and 1993 were 435 and 426 respectively (data not shown).

Age and sex
The average age of the female patients on whom EAS was performed was 65 years (SD 15 years; range 17-95). For men the average age was 62 years (SD 15 years; range 15-94). The difference in age between men and women was significant (t-test; P < 0.001). EAS was performed more often on men (57%) than women (43%), with the exception of the age-category over 80 years (where the figures were 54 and 46%). For both men and women EAS was performed most often in the age-categories of 60-69 years and 70-79 years (Table 1).

Age and diagnosis
Table 2 shows that there were age-related differences in the incidence of EAS within some diagnoses. The

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Table 1. Age-distribution of patients on whom euthanasia/physician-assisted suicide was performed (and reported) in the period 1984–93, inclusive

<table>
<thead>
<tr>
<th>Age-group (years)</th>
<th>Men (n = 965)</th>
<th>Women (n = 719)</th>
<th>Total (n = 1684)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;40</td>
<td>101 (73)</td>
<td>38 (27)</td>
<td>139 (8)</td>
</tr>
<tr>
<td>40–49</td>
<td>111 (61)</td>
<td>70 (39)</td>
<td>181 (11)</td>
</tr>
<tr>
<td>50–59</td>
<td>142 (54)</td>
<td>120 (46)</td>
<td>262 (16)</td>
</tr>
<tr>
<td>60–69</td>
<td>239 (57)</td>
<td>181 (43)</td>
<td>420 (25)</td>
</tr>
<tr>
<td>70–79</td>
<td>266 (59)</td>
<td>187 (41)</td>
<td>453 (27)</td>
</tr>
<tr>
<td>&gt;80</td>
<td>106 (46)</td>
<td>123 (54)</td>
<td>229 (14)</td>
</tr>
<tr>
<td>Total</td>
<td>965 (57)</td>
<td>719 (43)</td>
<td>1684 (100)</td>
</tr>
</tbody>
</table>

*23 missing cases.
percentage of cancer patients on whom EAS was performed increased with age up to a certain point and then decreased again. For some forms of cancer the highest prevalence was in the age-group of 60–69 years: 29% for cancers of the colon and rectum, 25% for breast cancer, 34% for stomach cancer and 29% for uterine cancer. For other forms of cancer the highest prevalence was found in the age category of 70–79 years: 32% for lung carcinoma and 30% for leukaemia. Especially AIDS, but also multiple sclerosis, were negatively related to age; these diseases were most prevalent in the youngest age-groups. AIDS was most prevalent in the age-group of under 40 years (51%) and multiple sclerosis in the 50–59-year group (35%). Cerebrovascular accidents, however, were positively related to age, with frequencies ranging from 0% in the youngest age-category to 44% of those in the oldest age-group (Table 2).

### Age and physician specialism

For all physicians the number of cases of EAS administered increased until the age-category of 70–79 years, after which EAS was less frequently performed by general practitioners and specialists, but more frequently by nursing-home physicians. The differences between the three types of physicians were significant ($\chi^2$-test; $P < 0.001$; Table 3).
Table 4. Age-distribution of patients on whom euthanasia/physician-assisted suicide was performed in the period 1984-93, inclusive, in relation to time (n = 1700)

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>1984–87 (n = 130)</th>
<th>1988–90 (n = 452)</th>
<th>1991–93 (n = 1118)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;40</td>
<td>10 (8)</td>
<td>41 (9)</td>
<td>91 (8)</td>
</tr>
<tr>
<td>40–49</td>
<td>18 (14)</td>
<td>36 (8)</td>
<td>128 (11)</td>
</tr>
<tr>
<td>50–59</td>
<td>18 (14)</td>
<td>72 (16)</td>
<td>173 (16)</td>
</tr>
<tr>
<td>60–69</td>
<td>46 (35)</td>
<td>119 (26)</td>
<td>258 (23)</td>
</tr>
<tr>
<td>70–79</td>
<td>26 (20)</td>
<td>124 (27)</td>
<td>307 (28)</td>
</tr>
<tr>
<td>&gt;80</td>
<td>12 (9)</td>
<td>60 (13)</td>
<td>161 (14)</td>
</tr>
</tbody>
</table>

*Seven missing cases.

Trend of age distribution of EAS over time

It seems that in the age-groups of 70–79 years and 80 years and over the number of cases of EAS increased over the years. In the age-group of 70–79 years the percentage increased from 20% in 1984–87 to 28% in 1991–93. In the oldest age-group these percentages were 9% and 14%, respectively. However, the differences found were not significant (Mantel-Haenszel test for linear association; \( P = 0.34 \); Table 4). Likewise, when we constructed smaller age-groups (i.e. 60–64, 65–69, 70–74 and 75–79 years) no significant differences were found (\( P = 0.21 \); data not shown).

Comparison between the EAS group and patients who died from natural causes

Table 5 shows that there were differences in the distribution of age between the patients to whom EAS was administered and all deaths. The modal age-group of patients on whom EAS was performed was 55–64 years (20%), while the modal age-group of all deaths was that of patients aged 85 years and over (26%). In the younger age-groups EAS was performed relatively more frequently: 3.39% of all deaths that occurred in age-group of 25–44 years by EAS and 2.42% of all deaths which occurred in age-group of 45–54 years were EAS, while on average 0.82% of all deaths involved EAS. The lowest percentage was found in the age-group of 85 years and over (0.19%). For most age-groups there were no differences between men and women in the percentages of deaths that were due to EAS. Exceptions were the age-groups of 25–44 years (male, 3.81%; female, 2.67%) and 55–64 years (male, 1.28%; female 1.99%).

Table 5. Age-distribution of patients on whom euthanasia/physician-assisted suicide (EAS) was performed and of all deaths in the period 1984–93, inclusive

<table>
<thead>
<tr>
<th>Age-group (years)</th>
<th>EAS (and rounded %) of deaths</th>
<th>All (and rounded %) of deaths</th>
<th>EAS as percentage of all deaths (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤24</td>
<td>13 (1)</td>
<td>3643 (&lt;1)</td>
<td>0.36 (0.19–0.60)</td>
</tr>
<tr>
<td>25–44</td>
<td>220 (13)</td>
<td>6444 (3)</td>
<td>3.39 (3.00–3.86)</td>
</tr>
<tr>
<td>45–54</td>
<td>213 (13)</td>
<td>8791 (4)</td>
<td>2.42 (2.10–2.74)</td>
</tr>
<tr>
<td>55–64</td>
<td>335 (20)</td>
<td>21 618 (11)</td>
<td>1.55 (1.38–1.71)</td>
</tr>
<tr>
<td>65–69</td>
<td>229 (13)</td>
<td>18 954 (9)</td>
<td>1.21 (1.05–1.36)</td>
</tr>
<tr>
<td>70–74</td>
<td>248 (15)</td>
<td>25 698 (13)</td>
<td>0.65 (0.85–1.08)</td>
</tr>
<tr>
<td>75–79</td>
<td>211 (12)</td>
<td>32 693 (16)</td>
<td>0.97 (0.56–0.73)</td>
</tr>
<tr>
<td>80–84</td>
<td>135 (8)</td>
<td>33 890 (17)</td>
<td>0.39 (0.33–0.46)</td>
</tr>
<tr>
<td>≥85</td>
<td>100 (6)</td>
<td>52 191 (26)</td>
<td>0.19 (0.15–0.23)</td>
</tr>
<tr>
<td>Total</td>
<td>1702*</td>
<td>206 777</td>
<td>0.82 (0.78–0.86)</td>
</tr>
</tbody>
</table>

*Five missing cases.
Discussion

The purpose of this investigation was to examine the relationship between age and EAS, in particular whether EAS is mainly administered to elderly patients. We found that EAS was performed most often in the age-groups of 60–69 and 70–79 years, and less frequently in the age-group of 80 years and older. The percentages of cases of EAS among all deaths are largest for the age-groups of 25–44 and 45–54 years, and smallest for the age-group of 80 years and older.

One limitation of our investigation is that we only studied reported cases of EAS, so our results do not include the 'dark numbers'—the cases of EAS that were not reported. However, another study found no differences between reported and unreported cases of EAS with regard to sex, age and diagnosis of the patient [5]. Another limitation of the methods used is that the data collected do not allow interpretation of motivation for opting for EAS. However it did provide data on all cases reported over a substantial period of time.

EAS was found to occur most frequently among younger men. This is mainly due to AIDS: almost all of those with AIDS on whom EAS was performed were men, and most of them were under the age of 50.

With regard to diagnoses, some differences were found between the age-distribution of patients to whom EAS was administered. In general it can be stated that for cancer patients the number of cases of EAS increases until the age-group of 70–79 years and decreases dramatically above the age of 80. Among cerebrovascular accident patients the number of cases of EAS even increased above the age of 80 years. This is probably caused by the greater incidence of cerebrovascular accident in elderly people. EAS occurs most frequently in the younger age-groups of multiple sclerosis and AIDS patients, which is probably a result of the higher incidence of these diseases in these age-groups. Finally, the high prevalence of patients with dementia in nursing homes means that fewer are able to make an informed decision to undergo EAS.

There are differences in age-distribution of cases of EAS performed by nursing-home physicians, on the one hand, and general practitioners and medical specialists, on the other. Nursing-home physicians are employed by a nursing home, have about 100 patients under their care and are mainly concerned with care for patients and less concerned with cure. The differences found are most likely due to differences in the patient populations of the three groups of physicians. Nursing-home patients often have multiple diseases and severe handicaps. Moreover, the average age of somatic nursing-home patients (physically disabled, not suffering from dementia) when they die is relatively high: 79 years for men and 82 years for women [7]. In contrast, for patients who die at home or in a hospital the average ages are 69 years for men and 74 years for women [5].

Although the number of cases of EAS reported per year increased, there was no significant trend of age distribution of EAS over time. Therefore, this study does not give evidence for the existence of a 'slippery slope' in The Netherlands, resulting in euthanasia being increasingly performed on elderly people. The small increase that was found might well be caused by differences between the elderly populations of 1984 and the elderly of 1993. It is plausible that the first category, being an older generation, was less inclined to discuss the subject with their physician or to request EAS, and was more tolerant of suffering. It has been shown that elderly people were less favourable to the administration of EAS in 1966 than in 1991 [10]. Of course, this study does not give insight into other groups of vulnerable patients.

Our data show that the percentage of EAS in all deaths is especially high in the younger age-groups and especially low in the oldest age-groups. Therefore, the suggestion that EAS is mainly performed among the elderly in The Netherlands is a misconception. Since another study found no differences between reported and unreported cases of EAS by general practitioners with regard to age, this probably applies to all cases of EAS, whether reported or not, at least for the largest group of cases which were performed by general practitioners [5].

Key points

- The proportion of euthanasia and physician-assisted suicide among all deaths is lowest in people over 80 years.
- The proportion of euthanasia and physician-assisted suicide among all deaths is highest in people between 25 and 44 years.
- Between 1984 and 1993 euthanasia and physician-assisted suicide were not increasingly performed on elderly people.

References


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