ORIGINAL INVESTIGATION

Attitudes and Practices Concerning the End of Life

A Comparison Between Physicians From the United States and From the Netherlands

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Background: This study compares attitudes and practices concerning the end-of-life decisions between physicians in the United States and in the Netherlands, using the same set of questions.

Methods: A total of 152 physicians from Oregon and 67 from the Netherlands were interviewed using the same questions about (1) their attitudes toward increasing morphine with premature death as a likely consequence, physician-assisted suicide (PAS), and euthanasia; and (2) their involvement in cases of euthanasia, PAS, or the ending of life without an explicit request from the patient. Odds ratios, with 95% confidence intervals, were calculated to investigate relation between attitudes and various characteristics of the respondents.

Results: American physicians found euthanasia less often acceptable than the Dutch, but there was similarity in attitudes concerning increasing morphine and PAS. American physicians found increasing morphine and PAS more often acceptable in cases where patients were concerned about becoming a burden to their family. There was a discrepancy between the attitudes and practices of Dutch physicians concerning PAS. The proportions of physicians having practiced euthanasia, PAS, or ending of life without an explicit request from the patient differ more between the countries than do their attitudes, with American physicians having been involved in these practices less often than the Dutch.

Conclusions: In this study of American and Dutch physicians, 2 important differences emerge: different attitudes toward the patient who is concerned over being a burden, and different frequency of euthanasia and PAS in the two countries.

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DURING THE past decade, many studies have described the attitudes of physicians in the Western world toward physician-assisted suicide (PAS) and euthanasia.[1-4] However, there are no studies comparing the attitudes of physicians in different countries using the exact same questions. Such comparisons could be useful to highlight some of the important national, cultural, and legal similarities and differences with respect to justifications and practices of PAS and euthanasia.

Studies describing actual practices around the end of life have been done in the Netherlands, and to some extent in other countries.[5-7] Until now, data on the actual performance of PAS and euthanasia in the United States have been scarce.[8-10]

This article describes the results of a study conducted among Dutch internists and physicians from Oregon, in which both the attitudes toward increasing morphine, PAS, and euthanasia, and the practices involving PAS and euthanasia were studied through interviews using identical questions. In the Netherlands, physician-assisted death is still subject to criminal law, but requirements for accepted practice have been formulated by courts and the medical profession, and, in general, physicians will not be prosecuted if they act in accordance with these requirements. The state legislature of Oregon had, at the time of this study, voted to legalize PAS, but because of court challenges the measure had not yet been implemented. Physicians from Oregon may not be representative of American physicians because of the different legal climate concerning the types of decisions studied here, although there are no data suggesting this.

RESULTS

The sociodemographic characteristics of the respondents are given in **Table 2**. There was no important difference in sex distribution between Dutch and American physicians. A higher percentage of American physicians reported being reli-

PARTICIPANTS AND METHODS

As part of a larger study on practices of euthanasia, PAS, and life-ending without an explicit request, we selected all Oregon oncologists listed in the membership list of the American Society of Clinical Oncology and licensed by the Oregon Board of Medical Examiners (74 oncologists). We also randomly selected 6% of the medical internists and family practitioners licensed by the Oregon Board of Medical Examiners (74 internists and 65 family practitioners). Physicians who had died, were retired, were severely ill and not practicing, or no longer practiced in Oregon were not eligible.

Physicians were sent a letter explaining the study and containing a postage-paid opt-out card. Oncologists who did not return the postcard were contacted for a telephone interview by a trained interviewer. Of the 213 physicians selected, 1 had died, 8 retired, 8 were severely ill, and 5 left Oregon. Of the 191 eligible physicians, 56 oncologists, 46 internists, and 50 family physicians (n = 152) completed interviews between February and June 1995. Therefore, the overall response rate was 80%.

To protect confidentiality of respondents, physicians were told that completed surveys would not include individual identifiers but codes and that all forms with individual identifiers would be destroyed before publication of data. These identifiers have been destroyed.

To achieve the highest possible comparability between physicians (taking into account the differences between specialties in the two countries—oncology is not a separate specialty in the Netherlands as in the United States), we decided to compare the answers given by the American physicians with internists in the Netherlands.

As part of a nationwide study intended to evaluate the notification procedure for physician-assisted death in the Netherlands, in which a total of 405 physicians from different specialties were interviewed, we interviewed a random sample of 67 internists. Internists are the primary care physicians of 34% of the deceased in Dutch hospitals (where about 40% of all deaths occur). The internists were identified using the database of the Specialist Registration Committee of the Royal Dutch Medical Association. To be selected for the study, they had to have been practicing since January 1, 1994, and to have worked in the same institution since then. They were excluded from the study if they only did outpatient work. So that the desired number of 67 internists could be interviewed, 106 were sampled. Eighteen did not meet the inclusion criteria, 6 could not be located, and 15 refused (18% of those who met the selection criteria). The interviews were conducted between September 1995 and February 1996, and took 2½ hours on average. They focused on the actual experience with decisions concerning the end of life (most recent cases), and also contained questions about attitudes and opinions.

Part of the questions concerning attitudes and opinions were posed as clinical vignettes that explicitly focused on ethical aspects. Vignettes that had been used in the American study were translated and incorporated into the Dutch interviews with internists. Interviews were conducted face-to-face by physicians who had received special interview training. Anonymity was guaranteed by a statement signed by the interviewer, and all individual identifiers of the physician were removed from the questionnaire. Quality control on the interviews was maintained by systematic review of conducted interviews by the interviewer and the researcher.

Physicians from Oregon and from the Netherlands were presented 4 clinical vignettes (**Table 1**), as previously described.[3] The vignettes were translated from English into Dutch and, to ensure the accuracy of the translation, they were translated back into English by a native American who is fluent in Dutch. After this, a few minor adaptations proved necessary. The only difference between the American and the Dutch vignettes was that in the American interviews potassium chloride was mentioned as an example of a drug to end the patient's life; since it did not seem necessary to give examples in the Netherlands, it was left out of the Dutch text.

After having read the vignette, the interviewer asked 3 questions: "Is it all right to increase morphine even if premature death is a likely consequence?" (in the second vignette we asked, "Is it all right to prescribe or increase [. . .]?"), "Would it have been all right, upon request from the patient, to intentionally prescribe drugs so the patient could end his or her life by overdose?" and "Would it have been all right, upon request from the patient, to administer intravenous drugs, such as potassium, to intentionally end the patient's life?" To avoid misunderstanding with regard to the first question in the second, third, and fourth vignettes (where the patient had no or well-controlled pain), physicians who found fault with the question were readdressed "Morphine is one of the few options doctors have in such cases." The response categories were "yes," "probably yes," "probably no," "no," and "uncertain."

We calculated 95% confidence intervals (CIs) for the differences between the groups using the Confidence Interval Analysis computer program[11]; to calculate *P* values, we used the χ^2 test. We calculated odds ratios (ORs) for the relationships between the answers to the vignettes and various other characteristics, such as religion, gender, age, and having a living will or not.

Euthanasia is defined as the administration of drugs with the explicit intention of ending a patient's life at the patient's explicit request, and PAS is defined as the prescription or supplying of drugs with the explicit intention of enabling the patient to end his or her life by an overdose. The ending of life without an explicit request is defined as the administration of drugs with the explicit intention of ending the patient's life without a concurrent, explicit request by the patient.

Physicians who had at least once performed euthanasia, PAS, or had ended a patient's life without an explicit request were asked in-depth about the details of their most recent case: the diagnosis; the estimated shortening of life; whether there was a request by the patient; whether the physician had discussed the intended action with another physician; the experience of the physician; and whether he or she would perform euthanasia, PAS, or end life without an explicit request again should a similar case occur.

gious than Dutch internists; most religious Oregon physicians were Protestants, while most of the religious Dutch were Catholics. The mean age of the Dutch internists was 48 years and was 44 years for the American physicians.

In the Dutch study, 15 (11%) of the physicians refused to participate. The most frequent reason was lack of time; there was no indication that their views or practices differed from responders.

In the Oregon sample, 39 (20%) refused to participate. Physicians who mailed the opt-out card were not asked for their reasons to do so.

ATTITUDES

Table 3 shows the proportions of American and Dutch physicians who endorsed increasing morphine (even if premature death would be a likely consequence), or providing euthanasia or PAS, in the 4 vignettes. Importantly, except for the vignette about unremitting pain, a similar proportion of Dutch and American physicians agreed with increasing morphine and providing PAS. In the vignette about being a burden to the family, American physicians were more likely than Dutch physicians to find it acceptable to increase morphine and provide PAS to patients. Indeed, more Dutch physicians found it acceptable to provide PAS and euthanasia to a patient who finds life meaningless than to a patient who is concerned about being a burden. Conversely, among the Oregon physicians, as many found it acceptable to provide PAS for a patient who finds life meaningless as for those who worry about being a burden.

In all vignettes, an equal proportion of Dutch physicians considered euthanasia and PAS ethically acceptable. Conversely, American physicians were consistently less likely to find euthanasia acceptable compared with PAS.

With regard to the pain vignette, American physicians who considered themselves religious were signifi-

Table 1. Vignettes

1. Pain
A patient develops metastatic cancer that invades the bones, resulting in *excruciating pain*. Current levels of morphine, nerve blocks, and other treatments are failing to completely control the pain.

2. Debility
A competent patient has terminal cancer with a few months to live. The patient has *no pain* but is debilitated and cannot get out of bed or provide self-care. The patient has seen a psychiatrist and is not clinically depressed, but repeatedly asks for a life-ending injection.

3. Burden
A competent patient has a terminal cancer with a few months to live. The patient has *well-controlled pain and can continue self-care* but is increasingly concerned over the burden that deterioration and death will place on his or her family. The patient has seen a psychiatrist and is not clinically depressed, but repeatedly asks for a life-ending injection.

4. Meaningless
A competent patient has terminal cancer with a few months to live. The patient has *well-controlled pain and can continue self-care* but finds life meaningless and purposeless. The patient has seen a psychiatrist and is not clinically depressed, but repeatedly asks for a life-ending injection because he sees no point in a drawn-out death process.

Table 2. Characteristics of the Physicians Interviewed

	No. (%) of Respondents*	
	United States (Oregon) (n = 152)	The Netherlands (n = 67)
Male	125 (82)	57 (86)
Female	27 (18)	9 (14)
Somewhat or strongly religious	92 (61)	29 (44)
Religion or philosophy of life†		
Protestant	80 (53)	8 (29)
Catholic	33 (22)	12 (43)
Jewish	15 (10)	NA
Other	24 (16)	4 (14)
Humanist	NA	4 (14)
Has living will	51 (34)	2 (3)

*NA indicates not asked.
†One missing from the Dutch study.

Table 3. Attitudes Concerning Physician-Assisted Suicide and Euthanasia

Vignettes	No. (%) of Respondents* United States (Oregon) (n = 152)	The Netherlands (n = 67)	Differences (95% Confidence Interval)	P
Pain				
Increase morphine	147 (97)	64 (96)	1 (–5 to 7)	.67
Physician-assisted suicide	81 (53)	37 (56)	–3 (–17 to 12)	.71
Euthanasia	36 (24)	39 (59)	–35 (–49 to –22)	<.001
Debility				
Prescribe† or increase morphine	54 (36)	29 (43)	–7 (–21 to 7)	.32
Physician-assisted suicide	56 (37)	35 (52)	–15 (–30 to –12)	.03
Euthanasia	21 (14)	33 (49)	–35 (–49 to –22)	<.001
Burden				
Increase morphine	35 (24)	4 (6)	18 (9 to 27)	.007
Physician-assisted suicide	36 (24)	6 (9)	15 (5 to 24)	.01
Euthanasia	8 (7)	3 (4)	3 (–4 to 9)	.44
Meaningless				
Increase morphine	31 (20)	10 (15)	5 (–6 to 15)	.42
Physician-assisted suicide	32 (22)	12 (18)	4 (–7 to 15)	.56
Euthanasia	9 (7)	9 (14)	–7 (–15 to 3)	.14

*Respondents who answered either "yes" or "probably yes."
†In this vignette, the patient may or may not be taking opioids.

Table 4. Requests and Performance Data

	No. (%) of Respondents	
	United States (Oregon) (n = 152)	The Netherlands (n = 67)
Have had patients request PAS* or euthanasia	73 (48)	53 (80)†
Have performed		
Euthanasia	0	
PAS*	11 (7)	30 (45)‡
Life-ending without request	3 (2)	10 (15)§

**In the Dutch study, euthanasia and physician-assisted suicide (PAS) were taken together in this question. The Dutch figure refers to explicit requests at a particular time, not requests for assistance with death at a later time.*

†Difference between percentage of American physicians and percentage of Dutch physicians who had had a request for either euthanasia or PAS: –29 (95% confidence interval, –42 to –16); P*<.001.*

‡Difference: –38 (95% confidence interval, –50 to –24); P*<.001.*

§Difference: –13 (95% confidence interval, –22 to –41).

Table 5. Characteristics of Most Recent Case of Euthanasia, PAS, or Life-Ending Without Request

	No. (%) of Respondents	
	United States (Oregon) (n = 13)	The Netherlands (n = 37)
Diagnosis		
Cancer	11 (82)	33 (89)
Acquired immunodeficiency syndrome	1 (9)	2 (6)
Other	1 (9)	2 (6)
Shortening of life		
>6 mo	0	1 (3)
1-6 mo	1 (8)	6 (16)
1-4 wk	4 (31)	19 (51)
≤1 wk	8 (62)	11 (30)
Explicit request by the patient	10 (77)	30 (81)
Cared for patient for ≥6 mo	13 (100)	18 (68)
Discussed with other physician	1 (8)	34 (92)
Would provide to similar patient again	12 (92)	27 (89)
Physician satisfied/comforted that s/he helped patient end life in the way s/he wished	6 (50)	26 (87)*

**In the Dutch study, this question was only asked when last cases concerned euthanasia and physician-assisted suicide (PAS), not life-ending without explicit request.*

cantly less inclined to support euthanasia (OR, 0.4; 95% CI, 0.2-0.8) or PAS (OR, 0.4; 95% CI, 0.2-0.8). American physicians who had a living will did not give different answers to the vignettes than those who did not. Dutch internists who considered themselves religious were less likely to find euthanasia acceptable in the debility vignette (OR, 0.3; 95% CI, 0.0-0.9), and less likely to find PAS acceptable in the meaninglessness vignette (OR, 0.1; 95% CI, 0.0-0.8).

Regarding gender, female physicians from Oregon were more likely to find increasing morphine (OR, 3.0; 95% CI, 1.2-7.6) and PAS (OR, 3.6; 95% CI, 1.4-8.8) ethically acceptable in the meaninglessness vignette. Dutch female internists were less likely to find PAS acceptable in the pain vignette (OR, 0.2; 95% CI, 0.0-0.9). None of the Dutch female internists considered burden a justifiable reason for PAS or euthanasia, whereas 30% of the American female physicians thought this could be a reason. Because of the small numbers, statistical significance could not be established.

American physicians who had ever performed PAS were more likely to find providing PAS in the pain vignette acceptable (OR, 12.2; 95% CI, 1.5 to 100.0). Dutch internists who said that they had ever performed euthanasia or PAS were more likely to find euthanasia acceptable in the pain vignette (OR, 4.9; 95% CI, 1.3-18.1). For the Dutch internists, having had a request for euthanasia or PAS did not make a significant difference in the answers to the vignettes.

PRACTICES

Table 4 and **Table 5** compare practices of euthanasia, PAS, and life-ending without an explicit request between Dutch and American physicians.

Of the Dutch internists, 30 (45%) had intentionally assisted patients in dying at least once, whereas 14 (9%) of the American physicians had ever done so. Also, a significantly higher percentage of the Dutch internists said they had ever received a request from a patient for euthanasia or PAS (53 [80%] of the Dutch vs 73 [48%] of the American physicians; $P<.001$).

Among Dutch and American physicians, there is great similarity in the cases of PAS, euthanasia, and life-ending without an explicit request concerning the diagnosis of the patients (predominantly cancer and acquired immunodeficiency syndrome), the percentage of the cases in which there was an explicit request from the patient, the percentage of physicians who said they would provide assistance in dying again, and in the estimated length of life forgone. The main differences concern the higher frequency of consultation with another physician by the Dutch, the higher percentage of Dutch physicians who said that they were satisfied that they had helped the patient end life the way she or he wished, and the lower percentage of Dutch who had cared for their patients for more than 6 months. Because of the low numbers of actual cases, it was not possible to calculate CIs or *P* values for these differences.

COMMENT

To our knowledge, this study is the first to compare attitudes and practices regarding euthanasia and PAS using the same questions between different countries. It has several important implications.

First, an important difference that emerges from the vignette study is that American physicians seem to be much less supportive of euthanasia than their Dutch colleagues, but the support for PAS is similar in all 4 vignettes. This suggests a resistance by American physicians to perform the final life-ending action, but at the same time a willingness to help patients who want to end their life. The proportions of physicians having practiced euthanasia, PAS, or life-ending without an explicit

request differ much more between the 2 countries than the attitudes of the physicians; this suggests that the differences in practice may be affected by the legal climate, although differences in level of religious belief may argue against this since those who are religious tend to oppose euthanasia and PAS and American physicians are more religious.

Importantly, American physicians consider the fear of being a burden as an acceptable justification for assistance with dying more often than their Dutch counterparts. In the United States, the emphasis on the importance of being autonomous may lead to the feeling that being dependent on other people may be an acceptable reason to end life. This attitude may be more prevalent in Anglo-American studies, since it was also reported in a study of British physicians.[12] Moreover, in the American health care financing system, long-term palliative care may rapidly become a heavy financial burden to families of patients; the need to take care of a relative sometimes leads to difficulties in the employment situation and to considerable income loss.[13-15] There are no research data on the frequency of such financial problems in the Netherlands, but since virtually all Dutch citizens are insured for all expensive forms of health care, it is improbable that families have to spend large amounts of money on the care of their relatives. However, the caregiving burden that long-term palliative care may put on families and whether this affects interest in euthanasia or PAS needs additional study. The fact that Dutch physicians reject the feeling of being a burden as a reason for euthanasia suggests that the liberal legal climate has not led them to find any reason for euthanasia or PAS acceptable.

Third, these data suggest a discrepancy between the attitudes of Dutch physicians toward PAS and their actual practices. From their answers to the vignettes, Dutch physicians find PAS and euthanasia equally acceptable. This is in agreement with the policy statement of the Royal Dutch Medical Association.[16] Yet this is not the practice: the 67 internists from our study had been involved with 30 cases of euthanasia but only 1 case of PAS. Generally, Dutch physicians perform euthanasia significantly more often than PAS.[5] There are indications that patients often were no longer able to swallow drugs themselves and also that physicians wanted to be sure death would occur rapidly,[17] but the reasons for the discrepancy between theoretical acceptability and actual practice need more study.

Fourth, in countries where PAS and euthanasia are not tolerated, increasing morphine is often seen as the only possibility to help a patient die, because morphine is a routine therapeutic intervention for terminally ill patients. In the vignette where the patient was in pain, more physicians in both countries thought increasing morphine acceptable than intentionally prescribing or administering life-ending drugs. However, in the vignettes in which the patient had no pain, there was a much smaller difference; most of the Dutch and American physicians who would allow for prescribing or increasing morphine also considered PAS ethically acceptable.

Fifth, the higher percentage of Dutch physicians who had consulted a colleague before assisting a patient to die may be explained by the demands of the Dutch notification procedure.[18] For American physicians, others have also found low consultation rates, probably because euthanasia and PAS are illegal and consultation exposes physicians to potential legal prosecution and peer censure.[8,9,19]

It is remarkable that as many American physicians as Dutch who had performed PAS said they would act in the same way with a similar patient, while only half of the American physicians said that they were satisfied they had helped the patient ending life the way desired. This possibly indicates more ambivalence among American physicians.

The higher percentage of Dutch physicians who, at some time, had received requests for euthanasia or PAS indicates a greater readiness on the part of patients in the Netherlands to ask for help in dying.

Finally, almost none of the Dutch physicians reported having a living will as compared with one third of the American physicians. Interestingly, the fact that the Netherlands has a liberal policy with regard to euthanasia does not lead its physicians to write living wills for themselves.

This study has 2 limitations. First, there was a difference in interview context: in the Netherlands, the vignettes were part of a much longer face-to-face interview, while in the United States, interviews were shorter and were conducted on the telephone. However, studies do show reasonable comparability in results between telephone and face-to-face interviews, although there may be a lower response rate for telephone interviews on sensitive issues.[20,21] Our telephone interviews, however, had a high response rate. A second limitation lies in the low number of actual cases, making a thorough statistical comparison of the data about the performance of physician-assisted death impossible.

In conclusion, there is great similarity between attitudes of American and Dutch physicians concerning increasing morphine and PAS. Important differences between the physicians in our study concerned euthanasia and also expected burden to the family as a reason for PAS. More research is needed into the reasons for these differences.

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