

# Euthanasia and Physician-Assisted Suicide

## *A Review of the Empirical Data From the United States*

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**F**or more than a decade, there has been an intense debate about the ethics and legality of euthanasia and physician-assisted suicide (PAS) in the United States.<sup>1-5</sup> In June 1997, the US Supreme Court unanimously ruled that there is neither a constitutional right nor a constitutional prohibition to euthanasia or PAS.<sup>6,7</sup> This permitted Oregon to experiment with legalizing PAS. During this decade, most other states have consistently opposed legalization. In the weeks after the US Supreme Court decision, the Florida Supreme Court also ruled that there is no constitutional right to PAS.<sup>8</sup> At least 7 state legislatures have voted to explicitly prohibit euthanasia and PAS.<sup>9</sup> Indeed, a bill to legalize euthanasia or PAS has been considered by a full chamber of a state legislature in only one state, Maine, and that bill was defeated 99 to 42.<sup>10</sup> In November 1998, 70% of the voters of Michigan resoundingly defeated a referendum to legalize PAS, while in November 2000 Maine voters also rejected legalizing PAS.<sup>11</sup>

The extensive debates for and against euthanasia and PAS have made the arguments more refined, subtle, and sophisticated. Yet the essential claims—arguments based on patients' autonomy to control their own lives and beneficence in relieving excruciating pain and suffering—have remained remarkably the same since the late 19th-century debates about euthanasia.<sup>5,12</sup> However, the current debate has spawned significant and unprecedented empirical research, illuminating many aspects of and claims about euthanasia and PAS. This article reviews the empirical data about euthanasia and PAS in the United States regarding: (1) the public's attitudes, (2) physicians' attitudes, (3) physicians' practices and experiences, (4) nonphysician health care professionals' attitudes and practices, and (5) patients' attitudes and experiences. It will conclude with a summary of the most important question in need of additional empirical inquiry.

In this article, whenever the term *euthanasia* is used, *voluntary active euthanasia* is meant. Other forms of euthanasia, nonvoluntary or involuntary, have not been extensively advocated or studied.<sup>5</sup>

### ATTITUDES OF THE AMERICAN PUBLIC

There have been innumerable surveys of the American public on euthanasia and PAS.<sup>13-15</sup> Most information derives from a few questions added to general surveys and do not probe deeply; only a few surveys have been in-depth analyses. In general, opponents and proponents of euthanasia or PAS endorse 4 conclusions from these data.

First, depending on how questions are worded and the types of choices offered, public support for euthanasia or PAS can vary widely, from about 34% to about 65% (**Table 1**).<sup>13,14</sup> In other words, some Americans are firm in their views of euthanasia and PAS, while others are more labile. The best way to understand public opinion might be by the "Rule of Thirds." Roughly, one third of Americans seem to support voluntary active euthanasia or PAS no matter what the circumstances. For instance, 29.3% of Americans support euthanasia or PAS for terminally ill patients who are not in pain but desire these interventions because they view life as meaningless. Similarly, 36.2% support euthanasia or PAS for terminally ill patients who give as their reason not wanting to be a burden on their family.<sup>16</sup> These are the approximate one third whose support for euthanasia or PAS is

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**Table 1. Framing Effects: Variations in the Public's Attitudes Toward Euthanasia and Physician-Assisted Suicide (PAS) Depending on the Questions Asked\***

Survey Question	Year	Proportion of Public Supporting Euthanasia or PAS, %
When a person has a disease that cannot be cured, do you think doctors should be allowed to end the patient's life if the patient and his or her family request it?*	1950	34
	1973	53
	1977	60
	1982	61
	1991	63
	1998	59
	1993	65.6
A patient develops metastatic cancer, which invades the bones and causes excruciating pain. Current levels of morphine, nerve blocks, and other treatments are failing to control the pain completely. In this case, would it be all right, upon request from the patient, for the doctor to administer intravenous drugs, such as potassium chloride, to intentionally end the patient's life?†		
As you may know, physician-assisted suicide involves a doctor giving a terminally ill patient the means to end his or her life. Do you think it should be legal for a doctor to help a terminally ill patient commit suicide?‡	1997	45
If patients have a disease that will ultimately destroy the mind or body and want to take their own life but cannot do it by themselves, should a doctor be allowed to administer lethal drugs to end the person's life?§	1998	47
Sometimes, terminally ill patients want to die and ask a doctor to help them commit suicide. Should it be legal for doctors to give a lethal dose of drugs to terminally ill patients who ask for it?	1999	54

\*Data from Emanuel et al.<sup>15</sup> and Gallup Poll, June 1998.

†Data from Emanuel et al.<sup>16</sup>

‡Data from Princeton Survey Research Associates for the Kaiser Family Foundation and Harvard University, November 5, 1997.

§CBS News Poll, November 23-24, 1998.

||Rasmussen Research, March 30, 1999.

**Table 2. Variations in the Public's Support for Euthanasia and Physician-Assisted Suicide (PAS) by Scenario and Intervention\***

Scenario	Public		Terminally Ill Patients	Caregivers of Terminally Ill Patients
	Euthanasia	PAS	Euthanasia or PAS	Euthanasia or PAS
Terminally ill patient with:				
Unremitting pain, despite narcotics, nerve blocks, and other pain treatments	65.6	66.5	54.8	58.7
Functional debility—no pain but cannot get out of bed or provide self-care	49.2	48.1	NA	NA
Burden on family—has no pain but is concerned about the burden that deterioration might place on the family	36.2	36.2	32.7	29.1
Views life as meaningless—has no pain but finds waiting for death meaningless and purposeless	29.3	32.8	NA	NA

\*Data are given as percentages and are from Emanuel et al.<sup>15,16</sup> NA indicates not available.

not affected by the interventions, the patient's motivations, or the circumstances. Conversely, another third or so of Americans oppose euthanasia or PAS no matter what the circumstances. Almost all the surveys report the highest levels of support for euthanasia or PAS to be about 65%.<sup>13-16</sup> These data mean that roughly one third of Americans—the difference between 100% of the public and the 65% who support euthanasia for patients in pain—oppose euthanasia or PAS even for terminally ill patients who are expe-

riencing unremitting pain, despite optimal management. The remaining third or so of Americans constitute the volatile public. They support euthanasia or PAS in some circumstances, usually involving extreme pain, but oppose it in other circumstances, such as for reasons of indignity or because the patient does not want to be a burden (**Table 2**).

Consequently, support for euthanasia or PAS is not as extensive as the reports that two thirds of Americans support these interventions make it appear. Furthermore,

for few of these people is legalizing euthanasia or PAS a leading issue, the primary element that will determine their vote. In this sense, unlike abortion, euthanasia and PAS do not appear to be litmus test issues.

Second, surveys that assess trends over time indicate that the significant rise in support for euthanasia and PAS occurred in the mid 1970s, not the 1990s.<sup>14</sup> Indeed, since the mid 1970s, support for these interventions has been constant (Table 1). Interestingly, this is similar to the trends found in the Netherlands.<sup>17</sup>

**Table 3. Attitudes Toward Euthanasia and Physician-Assisted Suicide (PAS) Among American Physicians<sup>a</sup>**

Study	Publication Date	Type of Survey	Response Rate	Types of Physicians Surveyed	Support for		Support Legalization of Either Euthanasia or PAS	Willing to Perform	
					Euthanasia	PAS		Euthanasia	PAS
Heilig <sup>19</sup>	1989	Mail	38.8	676 San Francisco, Calif, physicians	70 <sup>b</sup>	NA	NA	45 <sup>b</sup>	NA
Washington State Medical Association <sup>20</sup>	1991	Mail	55	1105 Washington State physicians	27.8 <sup>c</sup>	39.6 <sup>c</sup>	49.1 <sup>c</sup>	29.7 <sup>c</sup>	
Overmyer <sup>21</sup>	1991	Mail	24.9	498 Physicians subscribing to <i>Physician's Management</i>	29.9 <sup>d</sup>		NA	NA	NA
American Society of Internal Medicine (ASIM) <sup>22</sup>	1992	Unstated	40	402 ASIM members	NA	NA	28.9 <sup>e</sup>	NA	NA
Caralis and Hammond <sup>23</sup>	1992	Mail	66	360 Medical students, house staff, and physicians at University of Miami, Miami, Fla	<5 <sup>f</sup>	NA	NA	NA	NA
Fried et al <sup>25</sup>	1993	Mail	65	265 Rhode Island physicians	1.2 <sup>g</sup>	8.6 <sup>g</sup>	35	28	NA
Shapiro et al <sup>28</sup>	1994	Mail	33	740 Wisconsin internists, family practitioners, and geriatricians	17.4 <sup>h</sup>	NA	NA	27.8	NA
Cohen et al <sup>29</sup>	1994	Mail	69	938 Washington State physicians	42 <sup>i</sup>	50 <sup>i</sup>	53	33	40
Doukas et al <sup>30</sup>	1995	Mail	61.6	154 Michigan oncologists	NA	NA	20.8	8	14
Duberstein et al <sup>31</sup>	1995	Mail	61.3	114 Monroe County, New York, physicians	NA	51 <sup>j</sup>	31 <sup>j</sup>	NA	NA
Bachman et al <sup>32</sup>	1996	Mail	74	1119 Michigan physicians	59 <sup>k</sup>		56 <sup>k</sup>	35 <sup>k</sup>	
Lee et al <sup>33</sup>	1996	Mail	70	2761 Oregon physicians	NA	66 <sup>l</sup>	60 <sup>l</sup>	NA	46 <sup>l</sup>
Emanuel et al <sup>15</sup>	1996	Telephone	73	355 US oncologists	22.5 <sup>m</sup>	45.5 <sup>m</sup>	43.1	NA	NA
Dickinson et al <sup>35</sup>	1996	Mail	54	587 South Carolina physicians	55 <sup>j</sup>	58 <sup>j</sup>	52	29	33
Ganzini et al <sup>36</sup>	1996	Mail	77	321 Oregon psychiatrists	NA	69 <sup>n</sup>	56	NA	NA
Siaw and Tan <sup>37</sup>	1996	Mail	34.1	1028 Hawaii physicians, resident physicians, and medical students	58.4 <sup>o</sup>	60.0 <sup>o</sup>	NA	27.6	28.8
Portenoy et al <sup>38</sup>	1997	Mail	33	200 New York City physicians involved in cancer care	9.8 <sup>o</sup>	15.6 <sup>o</sup>	NA	NA	NA
Slome et al <sup>39</sup>	1997	Mail	60	118 San Francisco AIDS physicians	NA	48 <sup>p</sup>	NA	NA	NA
Abramson et al <sup>42</sup>	1998	Mail	35	133 Florida oncologists	42	NA	NA	NA	NA
			32	210 Florida nononcologist physicians	65	NA	NA	NA	NA
Meier et al <sup>43</sup>	1998	Mail	61	1902 US physicians	NA	NA	NA	24 <sup>q</sup>	36 <sup>q</sup>
			71	275 US oncologists	NA	NA	NA	27 <sup>q</sup>	44 <sup>q</sup>
Carver et al <sup>45</sup>	1999	Mail	65	370 US neurologists	NA	NA	50 <sup>r</sup>	29 <sup>r</sup>	44 <sup>r</sup>
			77	114 US amyotrophic lateral sclerosis specialists	NA	NA	48 <sup>r</sup>	25 <sup>r</sup>	47 <sup>r</sup>
			65	161 US neuro-oncologists	NA	NA	49 <sup>r</sup>	28 <sup>r</sup>	41 <sup>r</sup>

(continued)

Consequently, the extensive public debates during the last decade do not appear to have shifted public opinion significantly.

Third, while medical ethicists, philosophers, lawyers, and others have spent much time debating whether euthanasia is fundamentally different from PAS and elucidating potential distinctions, the American public does not seem to make much of the distinction. Polls show that Americans support euthanasia at the same rate that they support PAS (Table 2).<sup>15</sup> Conversely, the public does distinguish withdrawing life support or providing pain medications, even with the increased risk of respiratory depression and death from euthanasia and

PAS.<sup>14,15</sup> Despite arguments by some philosophers suggesting that there is no moral difference,<sup>18</sup> more than 90% of the public deem withdrawing life support as ethical, while at best 65% support euthanasia or PAS.<sup>15</sup>

Finally, certain sociodemographic characteristics consistently predict support and opposition to euthanasia or PAS.<sup>13-15</sup> Catholics and people who report themselves to be more religious are significantly more opposed to euthanasia or PAS. Similarly, African Americans and older individuals are significantly more opposed to euthanasia or PAS. Finally, some, but not all, surveys suggest that women are significantly more opposed to euthanasia

or PAS. Interestingly, patients with terminal illnesses, such as cancer and chronic obstructive pulmonary disease, have attitudes that are almost identical to the public's.<sup>16</sup> In other words, having a serious, life-threatening illness itself does not seem to alter attitudes toward the permissibility or opposition to euthanasia or PAS. Similarly, being a caregiver for a terminally ill patient or a recently bereaved caregiver does not seem to affect attitudes toward euthanasia or PAS.<sup>16</sup>

#### ATTITUDES OF US PHYSICIANS

During the last decade, US physicians have been extensively sur-

**Table 3. Attitudes Toward Euthanasia and Physician-Assisted Suicide (PAS) Among American Physicians<sup>a</sup> (cont)**

Study	Publication Date	Type of Survey	Response Rate	Types of Physicians Surveyed	Support for		Support Legalization of Either Euthanasia or PAS	Willing to Perform	
					Euthanasia	PAS		Euthanasia	PAS
Mangus et al <sup>46</sup>	1999	Mail	58	227 Oregon medical students	NA	NA	64 <sup>l</sup>	NA	52 <sup>l</sup>
			33	113 Non-Oregon medical students	NA	NA	66 <sup>l</sup>	NA	60 <sup>l</sup>
Willems et al <sup>47</sup>	2000	Telephone	80	152 Oregon oncologists, internists, and family practitioners	24 <sup>m</sup>	53 <sup>m</sup>	NA	NA	NA
American Society of Clinical Oncology <sup>48</sup>	2000	Mail	41.7 <sup>c</sup>	3299 US oncologists	6.5 <sup>m</sup>	22.5 <sup>m</sup>	NA	2.0 <sup>m</sup>	15.6 <sup>m</sup>

<sup>a</sup> Data are given as percentages unless otherwise indicated. NA indicates not available. In many surveys, the precise wording of the question was not specified.

<sup>b</sup> The questions stated: "Do you feel that patients should have the option of requesting active euthanasia when faced with incurable terminal illness?" and "If the Humane and Dignified Death Act is passed by California voters, would you participate in carrying out a patient's request for active voluntary euthanasia?"

<sup>c</sup> The questions stated: "Suppose you had a patient who was terminally ill, mentally competent, and who requested in writing from you aid-in-dying. Should a physician have the legal right to give that patient a lethal injection to knowingly hasten death?" or "Would you give a prescription for a lethal dose of medication to be self-administered by the patient?" "Would you be willing to be personally involved in aiding a patient's death?"

<sup>d</sup> The question stated: "There are circumstances in which a physician would be justified in deliberately causing a patient's death."

<sup>e</sup> The question asked how respondents would vote on Washington State Initiative 119 to legalize euthanasia.

<sup>f</sup> The question asked about support for administering intravenous medication to cause cardiac arrest to a 29-year-old patient with acquired immunodeficiency syndrome (AIDS) with bowel obstructions who requests "medication to induce cardiopulmonary arrest."

<sup>g</sup> The questions stated that there was an "80-year-old man, who had terminal metastatic lung cancer," competent and not depressed, whose "pain was under satisfactory control, but he cannot bear being so debilitated that he can no longer do any of the things that made his life meaningful. He is asking for you to prescribe enough sleeping pills so that if he took them all, he would kill himself." Similarly, "the patient is in the hospital, too weak to swallow a lot of pills, and wishes to end his life. He is asking for a lethal injection."

<sup>h</sup> The question asked whether physicians would agree to perform euthanasia for a 24-year-old burn victim who had to undergo daily painful treatments, repeatedly stated a desire for death, and requests euthanasia. Respondents were also asked whether they would be willing to perform euthanasia if it were legalized.

<sup>i</sup> The proportion of physicians who disagree with the statement that euthanasia or PAS "is never ethically justified."

<sup>j</sup> The yes or no questions stated: "Suicide may be an acceptable alternative for a patient with painful, debilitating terminal illness," and "I support legislation to legalize physician-assisted suicide under certain circumstances."

<sup>k</sup> The questions and choice of answers stated: "Suppose that the Michigan legislature were deciding between just 2 choices: (1) enacting a law banning all physician-assisted suicide or (2) enacting Plan A for physician-assisted suicide [which would legalize PAS]." "I support some forms of PAS, but only if the patient takes the final action." "I support the physician taking the final action." "I might be willing to participate in some forms of PAS."

<sup>l</sup> The yes or no questions stated: PAS "would be ethical in some cases" and "should be legal in some cases." "I might be willing in some cases to write a prescription for a lethal dose of medication requested by a terminally ill patient, if PAS were legal."

<sup>m</sup> The question stated: "A patient develops metastatic cancer, which invades the bones and causes excruciating pain. Current levels of morphine, nerve blocks, and other treatments are failing to control the pain completely. Would it be all right for the doctor, upon request from the patient, to administer intravenous drugs, such as potassium chloride intentionally to end the patient's life or to prescribe drugs so the patient could end his or her own life by overdose?"

<sup>n</sup> The questions stated whether, at least under some circumstances, physicians should be permitted to "write a prescription for medication whose sole purpose would be to allow [a competent terminally ill patient] to end his or her life?" and whether they supported implementation of Oregon Measure 16 to legalize PAS.

<sup>o</sup> The larger proportion are those physicians who approve of euthanasia or PAS in "some circumstances (unstipulated)," whereas the smaller proportion are those physicians who think it would be acceptable to perform euthanasia or PAS on a "terminally ill competent patient with lung cancer" who requests these interventions.

<sup>p</sup> The question stated whether physicians would prescribe a dose of lethal medication for a competent AIDS patient to commit suicide at a future date.

<sup>q</sup> The proportion of physicians who would be willing under some circumstances to perform euthanasia or prescribe a medication for PAS if they were legal.

<sup>r</sup> The question stated whether PAS should be made explicitly legal by statute for terminally ill patients. The question about willingness to perform euthanasia or PAS asked, "Are there any clinical circumstances under which you would participate in [euthanasia or PAS] if legalized?"

veyed about euthanasia and PAS.<sup>19-48</sup> Many of the surveys, especially the early ones, are problematic in their methods.<sup>5</sup> The surveyed cohorts are narrow or biased, and the response rates are low. More important, questions are frequently worded poorly and abstractly in a confusing, emotionally laden, or biased manner. For instance, they often conflate terminating medical treatments with euthanasia or ask whether euthanasia or PAS is never ethically justified. Furthermore, many of the questions use multiple hypothetical propositions—requiring leaps of imagination by respondents—that are known to make the data unreliable. For instance, physicians are fre-

quently asked, if euthanasia or PAS were legalized, would there be some circumstances in which they would be willing to perform euthanasia or PAS? In addition, there has been no consistency among the questions, making it difficult to compare the data across different surveys. In recent years, the surveys have addressed some of these problems, making the data more reliable, although there still appears to be the problem that physicians confound euthanasia with terminating life-sustaining treatments and euthanasia with PAS.<sup>16,43</sup>

Surveys of physicians' attitudes have evaluated 3 issues that have not usually been clearly distinguished: (1)

belief that euthanasia or PAS is ethically justifiable, (2) support for legalization of either intervention, and (3) willingness to perform either intervention (Table 3).<sup>19-48</sup> The more reliable surveys find that most US physicians do not view euthanasia or PAS as ethical. The major exceptions seem to ask abstractly whether these interventions might be justifiable "in some circumstances" (Table 3). More typical are surveys that report that fewer than half of physicians support euthanasia or PAS, or those in which respondents find suicide rational in some cases but believe that physicians should not assist (Table 3).

Regarding legalization, among physicians there seems to be no con-

sistent pattern, probably because questions ask about specific legislation that varies and because respondents may not be familiar with the particular facets of the legislation. For instance, in a survey of Michigan physicians, Bachman et al<sup>32</sup> could demonstrate most physicians (56.6%) supporting PAS only when they were forced to choose either legalization or an explicit ban; without being forced into this choice, only 38.9% supported permitting PAS. Consistently, few physicians would be willing to perform euthanasia or PAS if either were legalized (Table 3).

These data demonstrate another important factor: unlike the American public, US physicians distinguish between euthanasia and PAS. They are much more likely to support providing PAS than euthanasia.<sup>15,20,25,29,37,47,48</sup> Only a few studies<sup>19,35,37,42</sup> have found most physicians supporting euthanasia. Therefore, unlike the American public, support for euthanasia or PAS among US physicians crucially depends on the intervention being asked about.<sup>15</sup> This is different from Dutch physicians, who do not seem to distinguish euthanasia and PAS.<sup>47</sup>

There are important factors associated with support for euthanasia or PAS. Like the American public, US physicians who are Catholic or religious are significantly less likely to support euthanasia or PAS.\* Similarly, surveys have reported certain specialties as more supportive of euthanasia or PAS than others.<sup>29,31,33,43,48</sup> Surgical oncologists are more likely to support euthanasia or PAS than medical oncologists. Psychiatrists and obstetricians and gynecologists are more supportive of euthanasia or PAS, with internists, especially oncologists, less supportive. Still, others have found family or general practitioners as more supportive than internists.

Finally, at least among US oncologists, there appears to be a significant decline in support for euthanasia or PAS between the early and late 1990s.<sup>15,44,48</sup> Between 1994 and 1998, support for euthanasia and

PAS significantly declined among oncologists in the scenario of a patient terminally ill with cancer who had unremitting pain.<sup>15,48</sup> Although it is hard to know precisely why this decline has occurred, 2 explanations seem reasonable. The recent focus on end-of-life care has revealed the multiplicity of interventions, besides euthanasia and PAS, that can be used to improve the quality of life of the terminally ill. Consequently, euthanasia and PAS seem less necessary and desirable to ensure good end-of-life care. Furthermore, support tends to be higher when considering euthanasia and PAS in the abstract, as a philosophical question. But as they become more real and personal and physicians may be called on to actually perform these interventions, physicians are likely to be less supportive. This may also partially explain why psychiatrists, obstetricians, surgeons, and others who rarely care for terminally ill patients are more supportive than oncologists.

#### PRACTICES OF US PHYSICIANS

Numerous studies have documented the practices of US physicians regarding euthanasia or PAS (**Table 4**). The precise proportion of physicians who have received such requests is unclear because there is significant variation in the reported frequencies. The different reported rates of requests for euthanasia and PAS may reflect methodological issues, such as: (1) the differences between mailed and telephone surveys; (2) the different dates of the surveys, with physicians being more willing to acknowledge performing these interventions in later years, as the debate becomes more public and accepted; (3) the different regions of the country, with those in the West having requests more frequently than those in the New England or North Central regions<sup>43</sup>; and (4) the different investigators, with physicians more willing to acknowledge performing these interventions when the survey comes from investigators from the same state or a colleague in the same specialty.<sup>15,30,32-34,39,43,48</sup> However, in general, it appears that oncologists have received many more requests than nononcologists. Fewer than 20% of

nononcologists have received requests for PAS, while it appears that among oncologists as many as 50% have received requests for euthanasia or PAS (Table 4). This is probably because oncologists are more likely to care for dying patients than internists, surgeons, neurologists, or other physicians. Nevertheless, even among oncologists, the survey results vary considerably, suggesting residual methodological issues.

In general, physicians who have received requests have received few requests.<sup>34,39,43,45</sup> For instance, Meier et al<sup>43</sup> report that, overall, physicians who received requests for PAS received a median of 3 requests (range, 1-100) in their careers and a median of 4 requests (range, 1-50) for euthanasia. Carver et al<sup>45</sup> reported that, among neurologists who received requests, the mean number of requests for PAS was 7 and was 5 for euthanasia.

Many studies indicate that a small, but definite, proportion of US physicians have performed euthanasia or PAS, despite its being illegal. Again, the data provide conflicting evidence on the precise frequency of such interventions, with reported frequencies varying more than 6-fold even among the best studies (Table 4). As with requests, oncologists generally report having performed euthanasia or PAS more frequently. Much of this variation may be attributable to the reasons already cited, especially the differences in specialties. However, there is another methodological concern. The study by Meier et al<sup>43</sup> is the only study to have reported that more US physicians perform euthanasia than PAS. This finding contrasts with the data showing that US physicians are significantly more supportive of PAS than euthanasia.<sup>15,20,25,29,37,47,48</sup> This result may be because physicians were classifying cases of terminating care as euthanasia. As reported by Emanuel et al,<sup>49</sup> despite careful wording, physicians frequently confound euthanasia and terminating life-sustaining treatments, and this may be more common and harder to control for in mailed rather than telephone surveys.

When US physicians have performed euthanasia or PAS, they have done so rarely. Meier et al<sup>43</sup> reported that the median number of PAS cases

\*References 15, 21, 25, 29, 32, 33, 38, 42, 43, 47, 48.

**Table 4. Requests for and Performance of Euthanasia and Physician-Assisted Suicide (PAS) Among American Physicians\***

Study	Publication Date	Type of Survey	Response Rate	Types of Physicians Surveyed	Requests for		Performance of	
					Euthanasia	PAS	Euthanasia	PAS
Overmyer <sup>21</sup>	1991	Mail	24.9	498 Physicians subscribing to <i>Physician's Management</i>	NA	19.0†	9.4†	3.7†
American Society of Internal Medicine (ASIM) <sup>22</sup>	1992	Unstated	40	402 ASIM members	NA	24.3‡	20.6‡	
Caralis and Hammond <sup>23</sup>	1992	Mail	66	360 Medical students, house staff, and physicians at University of Miami, Miami, Fla	34.2§		NA	NA
Fried et al <sup>25</sup>	1993	Mail	65	265 Rhode Island physicians	13.2	18.9	1.3	2.5
Shapiro et al <sup>28</sup>	1994	Mail	33	740 Wisconsin internists, family practitioners, and geriatricians	48.2	NA	2.2	NA
Doukas et al <sup>30</sup>	1995	Mail	61.6	154 Michigan oncologists	43	38	4	18
Lee et al <sup>33</sup>	1996	Mail	70	2761 Oregon physicians	NA	21	NA	7
Back et al <sup>34</sup>	1996	Mail	57	828 Washington State physicians	4	12	1.7	4.6
			56	107 Washington State oncologists	9	18	NA	NA
Emanuel et al <sup>15</sup>	1996	Telephone	73	355 US oncologists	37.6	50.6	1.8	13.5
Portenoy et al <sup>38</sup>	1997	Mail	33	200 New York City physicians involved in cancer care	40	52	NA	NA
Slome et al <sup>39</sup>	1997	Mail	60	118 San Francisco, Calif, acquired immunodeficiency virus (AIDS) physicians	NA	NA	NA	53
Abramson et al <sup>42</sup>	1998	Mail	35	133 Florida oncologists	62	56	NA	NA
			32	210 Florida physicians	20	20	NA	NA
Meier et al <sup>43</sup>	1998	Mail	61	1902 US physicians	11.1	18.3	4.7	3.3
			71	275 US oncologists	13	25	2	3
Carver et al <sup>45</sup>	1999	Mail	65	370 US neurologists	12	20	NA	NA
			77	114 US amyotrophic lateral sclerosis specialists	10	41	NA	NA
			65	161 US neuro-oncologists	12	25	NA	NA
Willems et al <sup>47</sup>	2000	Telephone	80	152 Oregon oncologists, internists, and family practitioners	48		0	7
Ganzini et al <sup>52</sup>	2000	Mail	65	2649 Oregon physicians	NA	5	NA	NA
American Society of Clinical Oncology <sup>48</sup>	2000	Mail	41.7	3299 US oncologists	38.2#	56.2#	3.7#	10.8#

\*Data are given as percentages unless otherwise indicated. NA indicates not available. Unless otherwise stated, the questions ask about receiving requests for euthanasia or PAS and providing euthanasia or PAS.

†The questions asked whether respondents "had received requests for information that would cause a patient's death," "had provided information that could be used to cause a patient's death," and "had deliberately taken clinical actions that would directly cause a patient's death."

‡The questions stated: "Has a terminally ill patient ever asked you for assistance in committing suicide?" and "Have you ever taken deliberate action that would directly cause a patient's death?"

§The question asked whether patients have requested assistance in dying. Proportions differed significantly among students, house staff, and physicians.

||The question stated: "Have any of your patients ever asked you to intentionally prescribe large amounts of drugs to let them end their own lives by overdose?" "Have you ever actually prescribed drugs to a patient knowing the patient intended to use them to end his or her life?" "Has any patient ever asked you to inject drugs to intentionally end his or her life?" and "Have you ever actually injected drugs to intentionally end a patient's life?"

¶The question stated: How many times have you "granted an AIDS patient's request for assistance in committing suicide?"

#The questions stated: "How many times have you received a request to provide a patient with a prescription so the patient could end his or her life by an overdose?" "How many times have you actually provided a patient with a prescription so the patient could end his or her life by an overdose?" "How many times have you received a request from a patient or patient's family to inject the patient with medication to intentionally end the patient's life?" and "How many times have you actually injected a patient with medication to intentionally end the patient's life?"

was 2 (range, 1-25), and the median number of euthanasia cases also 2 (range, 1-150). A recent survey of oncologists by the American Society of Clinical Oncology reported that, of those who had performed PAS, 37% had done so only once in their careers, while 18% had done so 5 or more times.<sup>48</sup> Similarly, among the US oncologists who had performed euthanasia, more than half had done so only once, and just 12% had done so 5 or more times.<sup>48</sup>

Beyond the rates of requests and performance of euthanasia and PAS, what do physicians do when they receive a request and when they perform euthanasia or PAS? Back et al<sup>34</sup> reported that initially 76% of physicians increased treatment of physical symptoms, 65% treated depression and anxiety, and 24% referred the patient for a psychiatric evaluation. Similarly, Meier et al<sup>43</sup> reported that 71% of physicians responded to requests for euthanasia

or PAS by increasing analgesic treatment, while 30% used fewer life-prolonging therapies and 25% prescribed antidepressants.

Regarding the actual performance of euthanasia and PAS, Meier<sup>43</sup> and Emanuel<sup>49</sup> and their colleagues provide similar data, at least as regards PAS (**Table 5**). They show that, while safeguards are adhered to overall, there are a myriad of problems. For instance, although most patients initiated the request for PAS,

**Table 5. Patients' Attitudes Toward and Experiences With Euthanasia and Physician-Assisted Suicide (PAS)\***

Study	Publication Date	Type of Survey	Response Rate	Types of Patients Surveyed	Personally Considered Euthanasia or PAS	Factors Associated With Considering Euthanasia or PAS	Factors Not Associated With Considering Euthanasia or PAS
Emanuel et al <sup>15</sup>	1996	Telephone	61	155 New England patients with cancer	27.3	Depressive symptoms Poor physical functioning Less religious Higher incomes	Pain
Breitbart et al <sup>50</sup>	1996	Mail	NA	378 New York City patients with human immunodeficiency virus	55‡	Depression Hopelessness Fewer social supports	Pain Pain intensity Pain-related functional impairment
Ganzini et al <sup>51</sup>	1998	In-person interview	71	140 Oregon patients with amyotrophic lateral sclerosis	56§	Male More education Hopelessness Less religious	Depression Pain Perceived effect on family Use of hospice
Emanuel et al <sup>16</sup>	2000	In-person interview	87.4	988 US terminally ill patients	10.5	Lack of appreciation Depressive symptoms Care needs Pain	

\*Data are given as percentages unless otherwise indicated. NA indicates not available.

†Considering euthanasia or PAS-pooled patients who had positive responses to questions about considering euthanasia or PAS for themselves, hoarding drugs for the purpose of suicide, and reading the Hemlock Society's book, *Final Exit*.

‡The question asked: "Would you consider physician-assisted suicide if it were legal?"

§The yes or no question stated: "Under some circumstances I would consider taking a prescription for a medicine whose sole purpose was to end my life."

||The question asked: "Have you seriously thought about taking your life or asking your doctor to end your life?"

almost half of them did not repeat the request. Most important, both studies show that about 5% of patients were unconscious at the time of death and could not, therefore, provide concurrent consent. More than 95% of patients had severe symptoms, but according to Meier et al, only 54% had significant pain, while according to Emanuel et al, 84% of the patients with cancer who received PAS had substantial pain. In 40% to 54% of cases, the patients were getting hospice care, at least one measure of quality end-of-life care. Similarly, in many cases, patients who receive PAS had long-term relationships (>1 year) with their physicians. Finally, there are divergent data, ranging from 20% to 40%, on what proportion of patients provided with medications or a prescription ultimately does not use them. Differences in underlying disease may partially account for differences in the data between these 2 studies; Meier et al provide data on patients with many different terminal illnesses, whereas Emanuel et al interviewed oncologists and provided data on patients dying of cancer.

Two studies have examined the effect on physicians of performing eu-

thanasia or PAS. Meier et al<sup>43</sup> and Emanuel et al<sup>49</sup> reported that most physicians were comfortable with having performed euthanasia or PAS. According to Meier et al, 19% of physicians were uncomfortable after performing PAS, and 12% were uncomfortable after performing euthanasia. (This lower proportion of uncomfortableness after performing euthanasia may reflect that many of these so-called euthanasia cases were actually cases of terminating life-sustaining treatments.) They also found that in similar circumstances only 1% would not comply with PAS and 7% would not comply with euthanasia. Emanuel et al reported that 25% regretted performing euthanasia or PAS and that 15% had adverse emotional reactions to performing euthanasia or PAS. At least in the cases reported by Emanuel et al, these reactions did not seem related to fear of prosecution.

Finally, there is some disagreement about failed PAS attempts. Emanuel et al<sup>49</sup> reported that in 15% of cases PAS failed; that is, patients were given a prescription or attempted suicide, but did not die. Ganzini et al<sup>52</sup> recently reported that there

had been no failed PAS attempts in Oregon since legalization. The reports from the first 2 years' experience by the Oregon Health Division, Portland, also show no failed PAS attempts.<sup>53</sup> As Nuland<sup>54</sup> notes, the lack of problems with PAS in these reports from Oregon contrasts with the recently reported Dutch experience, in which 7% of PAS cases had complications and in 16% it was taking "longer than expected."<sup>55</sup> Ultimately, in 18.4% of PAS cases in the Netherlands, physicians intervened to administer lethal medications, converting PAS cases into euthanasia.<sup>53</sup> The importance of this for the United States relates to the possibility of legalizing PAS without legalizing euthanasia, and what is to be done in the cases of failed PAS. As the data demonstrate, in the Netherlands, the accepted norm is to administer lethal medications—that is, perform euthanasia—in cases of failed PAS. This would not be permitted in the United States if euthanasia remains illegal. If the data from Emanuel et al and the Dutch investigators are correct, there may be serious dilemmas for physicians if PAS is legalized but euthanasia is not.

**Table 6. Attitudes and Experiences of Euthanasia and Physician-Assisted Suicide (PAS) Among American Nonphysician Health Professionals\***

Study	Publication Date	Type of Survey	Response Rate	Type of Health Professionals Surveyed	Support for		Received Requests for		Performed	
					Euthanasia	PAS	Euthanasia	PAS	Euthanasia	PAS
Young et al <sup>56</sup>	1993	Mail	61	1210 Members of Oncology Nursing Society	46†	NA	NA	NA	NA	NA
Anderson and Caddell <sup>57</sup>	1993	Mail	Unspecified	40 Nurses, 13 pharmacists, 10 other	60‡	NA	NA	NA	NA	NA
Rupp and Isenhower <sup>58</sup>	1994	Mail	61	534 US pharmacists	48.6§	NA	NA	NA	NA	NA
Davis et al <sup>59</sup>	1995	In-person interview	Unspecified	80 Cancer and dementia unit nurses	21.2	NA	NA	NA	NA	NA
Asch <sup>60</sup>	1996	Mail	71	852 US critical care nurses	NA	NA	17		15.6	
Matzo and Emanuel <sup>61</sup>	1997	Mail	74	441 New England oncology nurses	NA	NA	25	30	4.5	1
Portenoy et al <sup>38</sup>	1997	Mail	64	276 New York City nurses involved in cancer care	NA	34.0	40	64	NA	NA
			72	71 New York City social workers involved in cancer care	NA	44.6	57	83	NA	NA
Kowalski <sup>62</sup>	1997	Mail	27	538 Nevada nurses	44.3#	52.9#	NA	NA	NA	47#
Beder <sup>63</sup>	1998	In-person interview	Unspecified	100 New York gerontological nurses	NA	46**	NA	43	NA	NA
Leiser et al <sup>64</sup>	1998	Mail	50	215 San Francisco, Calif, nurses caring for patients with human immunodeficiency virus	65††		NA	NA	NA	NA

\*Data are given as percentages unless otherwise indicated. NA indicates not applicable.

†The question stated: "You are the nurse who has been caring for Mr A for the past 2 years. Mr A is terminally ill with cancer and has chosen to have his physician assist him with dying."

‡The question stated whether the respondent agreed with the physician's action described in the article "It's over, Debbie."<sup>1</sup>

§The question stated: "Do you think it is ever appropriate for a physician to actively assist a patient to end his or her life?"

||The questions stated: "Have you ever been asked by a patient, family member, or other surrogate to administer a medication to a patient or perform some other act with the intent of causing that patient's death—other than withholding or withdrawing life-sustaining treatment?" and "While a critical care nurse, have you ever administered a medicine to a patient or performed some other act with the intent of causing or hastening that patient's death—other than the withdrawal of life-sustaining treatment?"

¶The questions stated: "Have any of your patients ever asked you to intentionally provide large amounts of physician-ordered drugs to let them end their own lives by overdose?" and "Have you ever actually provided or prescribed drugs to a patient, knowing the patient intended to use them to end his or her own life?"

#The questions stated: "A mentally competent, terminally ill patient requests the physician to supply him with a prescription so that he may commit suicide. The physician writes a prescription for 60 secobarbital (Seconal) tablets. The patient takes them all at once and dies." and "A mentally competent, terminally ill patient requests the physician to end his life. The suffering patient is physically incapable of assisting with his own suicide. The physician administers 100 mEq of potassium chloride intravenous push. The dose is lethal." and "Would you assist in PAS if it were legalized?"

\*\*The question stated: "Do you support legalization of physician-assisted suicide for all age groups?"

††The yes or no question stated: "In keeping with humane care for the patient, it is sometimes acceptable to hasten a patient's death upon their request."

### ATTITUDES AND PRACTICES OF US NONPHYSICIAN HEALTH PROFESSIONALS

There have been at least 9 surveys of nonphysician health care professionals (mostly nurses) regarding euthanasia and PAS (Table 6).<sup>38,56-64</sup> Overall, these studies are not as rigorous in their methods as the best studies of physicians or patients. They demonstrate that about half of nonphysician health professionals support euthanasia or PAS in some circumstances, and that fewer than one third have received requests for euthanasia or PAS. Again, the type of religion and the strength of religious beliefs are associated with sup-

port for euthanasia and PAS. The data regarding performance of euthanasia or PAS by nurses vary widely, with one study showing that about 16% have participated in euthanasia or PAS, and others showing that fewer than 5% have done so (Table 6).

### ATTITUDES AND PRACTICES OF US PATIENTS

Although some studies have examined patients' wishes to hasten death and suicidal ideation, only a few studies<sup>15,16,52,53,65</sup> have actually examined the attitudes and experiences of US patients regarding euthanasia and PAS (Table 5). Breitbart

et al<sup>50</sup> examined patients with human immunodeficiency virus and acquired immunodeficiency disease syndrome (HIV/AIDS) in New York City; Ganzini et al<sup>51</sup> interviewed patients with amyotrophic lateral sclerosis in Oregon; and Emanuel et al<sup>15</sup> surveyed patients with cancer in Massachusetts. In addition, there are data reporting on the first 2 years' experience of legalized PAS in Oregon, involving some 43 cases.<sup>53,65</sup> There are additional data on the practices of euthanasia and PAS among patients determined to be terminally ill by their physicians.<sup>16</sup> Four major conclusions can be drawn from these data.

First, mainly patients with cancer use euthanasia and PAS. Among the first 43 cases of PAS in Oregon, 72% of the patients had cancer.<sup>53</sup> Meier et al<sup>43</sup> report that among patients receiving PAS, 70% had cancer, while among those receiving euthanasia, only 23% had cancer. These data are comparable to the data from the Netherlands, in which 80% of euthanasia and 78% of PAS cases involved patients with cancer,<sup>66</sup> and from the Northern Territory, Australia, where all 7 patients who received euthanasia when it was briefly legalized had cancer.<sup>67</sup>

Second, it appears that pain is not a major determinant of interest in or use of euthanasia or PAS (Table 5). Almost all of these studies—as well as the interviews with physicians who have administered euthanasia and PAS<sup>34,43</sup>—have shown that pain is not a predictor of patients' interest in euthanasia or PAS. For instance, among the patients receiving PAS in Oregon, only 1 of 15 had uncontrolled pain.<sup>65</sup> Breitbart et al<sup>50</sup> reported that pain, pain intensity, and pain-related functional impairment were not associated with interest in PAS among patients with HIV/AIDS. Emanuel et al<sup>15</sup> reported that for oncology patients, pain was not associated with personal interest in euthanasia or PAS. However, they did find that for terminally ill patients, pain was among the factors associated with personally considering euthanasia or PAS.<sup>16</sup>

Third, depression, hopelessness, and general psychological distress are consistently associated with interest in PAS and euthanasia (Table 5). Breitbart et al<sup>50</sup> reported that depression and hopelessness were strongly related to interest in PAS for patients with HIV/AIDS. Emanuel et al<sup>15</sup> reported that, for oncology patients and terminally ill patients, depressive symptoms were associated with personal interest in euthanasia or PAS, such as discussing these interventions and hoarding drugs for the purpose of PAS. Ganzini et al<sup>51</sup> (p968) reported that hopelessness, but not depression, was associated with “considering taking a prescription for a medicine whose sole purpose was to end my life.”

Fourth, Emanuel et al<sup>16</sup> reported that among terminally ill patients, the extent of caregiving needs was as-

sociated with interest in euthanasia or PAS. Ganzini et al,<sup>51</sup> however, reported that there was not an association between the burden of caring for the patients and whether caregivers supported or opposed a patient's request for PAS.

Although it is known that PAS and euthanasia occur in a small proportion of all deaths, what is not known is the precise frequency these interventions are used. In the Netherlands, 3.4% of all deaths are by euthanasia and PAS, including involuntary euthanasia.<sup>66</sup> In Oregon, the proportion of all deaths by PAS reported to the Oregon Health Division is 0.09%.<sup>53</sup> Such a low rate raises skepticism that not all cases of physician-assisted death are reported.<sup>54</sup> Emanuel et al<sup>16</sup> have reported a rate of 0.4% among competent terminally ill US patients.

#### FUTURE EMPIRICAL RESEARCH REGARDING EUTHANASIA AND PAS

There are 6 major areas related to euthanasia and PAS in need of additional research in the United States. First, there are few data on the relationship between euthanasia or PAS and the provision of optimal end-of-life care. Are euthanasia and PAS used as truly last-ditch interventions for patients refractory to appropriate end-of-life interventions? Or are they used as substitutes for optimal end-of-life care? The American Society of Clinical Oncology survey suggested that there was a relationship between not being able to get dying patients all the care they needed and use of euthanasia and PAS.<sup>46</sup> This result needs confirmation. Furthermore, we need to understand what are the predictors of physicians who come to use euthanasia and PAS only after trying optimal care, vs those who use these interventions as a substitute. Is this the result of structural or financial barriers to optimal end-of-life care, or is it the result of problems on the part of physicians, such as lack of training in end-of-life care?

Second, there are divergent data on how frequently PAS fails and no data on what is done when it does fail. If, in the United States, only PAS

will be legalized, what do physicians do when it fails?

Third, there is no information on the short- and long-term effects of euthanasia and PAS on the surviving family members of the patients.<sup>16</sup> Immediately after the interventions, families may have the psychological need to be supportive of the decision and believe that the right thing was done. However, with the passage of time, they may have different views.

Fourth, there are conflicting data on the actual frequency of euthanasia and PAS. These interventions occur, but how frequently? It may be that conducting a death certificate follow-back study modeled on the Dutch studies<sup>55,66</sup> will be the best way to obtain accurate data on the frequency of these interventions, as well as the reasons for the interventions, the palliative measures taken, and the effects on the family.

Fifth, there are no data on the frequency of nonvoluntary euthanasia in the United States. In the Netherlands, nonvoluntary euthanasia occurs in 0.7% of all deaths.<sup>55</sup> The rate may be higher in the United States, given the expense and financial problems associated with end-of-life care.<sup>68,69</sup> Issues of coercion and of performing euthanasia on patients who are not competent are serious, and there are inadequate data on these events in the United States.

Finally, there are no data on euthanasia and PAS among children. Although death is rare among children, annually there are several thousand deaths among children with cancer and HIV/AIDS. These deaths tend to occur after significant and prolonged illnesses, and symptom management is less than optimal.<sup>70</sup> The American Society of Clinical Oncology survey of US oncologists suggests that there are instances of pediatric euthanasia or PAS.<sup>48</sup> Why these occur and how they are handled are also important and controversial issues.

Unfortunately, each of these issues is difficult to study because euthanasia and PAS are rare events, requiring screening of many physicians to identify just a few cases. Therefore, such studies will be large and expensive.

## CONCLUSIONS

During the last decade, there has been a substantial amount of empirical research conducted on euthanasia and PAS in the United States. This empirical research has revealed many unexpected findings that have significantly affected the public debate. Such findings include: (1) Public support for euthanasia and PAS is closely linked with the reasons patients want these interventions; most of the public support the interventions only for patients in excruciating pain. (2) Yet, pain does not appear to be the primary factor motivating patients to request euthanasia and PAS; depressive symptoms, hopelessness, and other psychological factors appear to motivate patients' requests for euthanasia and PAS. Therefore, public support conflicts with the actual facts about patient interest in euthanasia and PAS. (3) Euthanasia and PAS occur, albeit at a low rate. Indeed, more than 99% of all dying Americans do not have these interventions, and even in the Netherlands, more than 96% of all decedents do not have these interventions.

Accepted for publication May 1, 2001.

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