

Stability of Attitudes Regarding Physician-Assisted Suicide and Euthanasia Among Oncology Patients, Physicians, and the General Public

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Purpose: Attitudes regarding the ethics of physician-assisted suicide (PAS) and euthanasia have been examined in many cross-sectional studies. Stability of these attitudes has not been studied, and this is important in informing the dialog on PAS in this country. We evaluated the stability of attitudes regarding euthanasia and PAS among three cohorts.

Methods: Subjects included 593 respondents: 111 oncology patients, 324 oncologists, and 158 members of the general public. We conducted initial and follow-up interviews separated by 6 to 12 months by telephone, regarding acceptance of PAS and euthanasia in four different clinical vignettes.

Results: The proportion of respondents with stable responses to vignettes ranged from 69.2% to 94.8%. In comparison to patients and the general public, physicians had less stable responses concerning the PAS pain vignette (69.1% v 80.8%; $P = .001$) and more stable responses for all euthanasia vignettes ($P < .001$) except

for pain. Over time, physicians were significantly more likely to change toward opposing PAS and euthanasia in all vignettes ($P < .05$). Characteristics previously associated with attitudes regarding PAS and euthanasia, such as Roman Catholic religion, were not predictive of stability.

Conclusion: Up to one third of participants changed their attitudes regarding the ethical acceptability of PAS and euthanasia in their follow-up interview. This lack of consistency mandates careful interpretation of referendums and requests for physician-assisted suicide. Furthermore, in this study, we found that physicians are becoming increasingly opposed to PAS and euthanasia. The growing disparity between physicians and patients regarding the role of these practices is large enough to suggest possible conflicts in the delivery of end-of-life care.

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EUTHANASIA AND physician-assisted suicide (PAS) continue to be controversial public issues. The state of Oregon voted to legalize PAS and in the Northern Territory, Australia, euthanasia and PAS were legalized and then revoked. The United States Supreme Court rejected the idea that there is a constitutional right to either PAS or euthanasia.^{1,2} This decision has left legalization of euthanasia and/or PAS to be determined on a state-by-state basis. Cross-sectional attitudes of physicians, patients, and the general public toward euthanasia and PAS have been examined in a variety of empiric studies.³⁻¹⁶ These studies have shown that over 60% of the general public and patients find euthanasia and PAS ethical in certain circumstances.^{8,16} In contrast, the

majority of physicians do not find these practices ethical.^{3,6,8,9,15-17}

Legalization of PAS and euthanasia through referendums will have major clinical implications. It is imperative to evaluate whether attitudes are stable over time and whether they are dependent on changes in medical status. To date, we know of no study that has examined the stability of these attitudes over time. Prior studies have demonstrated that views regarding advanced directives are moderately stable.^{18,19} It might be hypothesized that because of their close relation to religious attitudes that do not easily change, attitudes about euthanasia and PAS may be even more stable.^{8,16} Consequently, we sought to evaluate the stability of attitudes regarding PAS and euthanasia over time. The specific questions we sought to answer include: (1) How stable are attitudes regarding PAS and euthanasia among oncology patients, the general public, and oncology physicians? and (2) What are the factors associated with a tendency to change attitudes?

METHODS

Participants, Eligibility Requirements, and Response Rates

As previously described,⁸ the initial study assessed the attitudes of 701 oncologists, oncology patients, and the general public regarding PAS and euthanasia. All subjects who participated in the original survey were eligible to participate in the follow-up survey. Participants were divided into three cohorts.

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Cohort 1: Oncology Patients. For the initial survey, comprehensive lists of patients discharged from hospitals who had diagnoses of cancer or who had been seen at least twice in outpatient oncology clinics between September 15, 1993, and December 15, 1993, were obtained from three teaching hospitals in Boston, MA. Patients with basal or squamous cell skin cancers were excluded, and 10% of the patients were randomly selected. We wrote to the responsible oncologist, requesting an interview with the patient. When the oncologist agreed to the contact, the patient was sent a letter containing a postage-paid opt-out card, explaining the purpose of the study. Patients who did not return the opt-out card were contacted for an interview. At the end of the initial interview, participants were informed that they would be contacted for a follow-up telephone interview. Of the 155 patients who completed the initial interview, 18 patients died before the follow-up interview, and 26 refused to participate, could not be traced, began but did not complete the follow-up interview, or could not be interviewed before the study ended. We completed 111 follow-up patient interviews, for a response rate of 81.0% (111 of 137 subjects).

Cohort 2: Oncologists. In the initial survey, all specialists in adult medical, gynecologic, and surgical oncology from Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont were selected, and 10% of specialists in adult medical oncology from all 44 other states of the United States and the District of Columbia (listed in the 1993 American Society of Clinical Oncology Directory) were randomly selected. Retired oncologists were not eligible. The oncologists were sent a letter explaining the study and containing a postage-paid opt-out card. Oncologists who did not return a card were contacted by telephone. At the end of the initial interview, participants were informed that they would be contacted for a follow-up interview. Of the 355 physicians who completed the initial interview, three oncologists retired, and 28 refused to participate in the follow-up interview, could not be traced, or could not be interviewed before the study ended. We completed 324 follow-up interviews, for a response rate of 92%.

Cohort 3: General Public. A random-digit-dialing telephone sample was taken for the geographic area covering eastern Massachusetts 617 and 508 area codes; 294 telephone numbers were confirmed to be residential. When we spoke to someone at the residential telephone number, a random adult was selected through the use of a Kish table and was interviewed.⁸ At the end of the initial interview, participants were informed that they would be sent a letter to ask for their participation in a follow-up telephone survey. Of the 193 participants who completed the initial interview, 35 refused to participate in the follow-up interview, could not be traced, or could not be interviewed before the study ended. We completed 158 interviews, for a response rate of 81.9%.

Survey Development

Survey development was previously described in detail.⁸ In brief, development occurred in six steps: literature search, focus groups, instrument creation, cognitive pretesting, behavioral pretesting, and reliability assessment. Extensive pretesting was conducted to ensure that respondents understood the question as intended and did not confuse active euthanasia or PAS with normal medical procedures, such as increasing morphine for pain control, and that the order of the questions did not affect the responses.

Because the terms euthanasia and PAS can be ambiguous and emotionally charged, they were replaced throughout the survey by descriptive phrases. Follow-up attitudes regarding PAS and euthanasia were elicited using the same four original vignettes involving an adult patient with terminal cancer who was either (1) in unremitting pain, (2) debilitated and unable to provide self-care, (3) concerned with being a burden on his or her family, or (4) finding life meaningless and

purposeless. For each vignette, subjects were asked whether it would be all right to increase the morphine even if premature death was a likely consequence, whether it would be all right for the doctor to prescribe drugs so the patient could end his or her life by overdose, and whether it would be all right for the doctor, upon request from the patient, to administer intravenous drugs, such as potassium, to intentionally end the patient's life.

The questions about pain were taken from the validated Wisconsin brief pain inventory for telephone administration²⁰; questions related to health status, physical functioning, depression and psychologic distress, and social functioning came from the validated Southwest Oncology Group's adaptation of the SF-36 for oncology patients.²¹ These scales are known to be reliable and valid.²⁰⁻²³ A score of < 52 was used as the cutoff point for the depression and psychologic distress scales because this score is well correlated with scores on other depression scales, clinical depression, use of mental health services, and distinction of clinically diagnosed depressed patients from nondepressed patients.^{22,23}

Interview Process

Trained interviewers from the Center for Survey Research, University of Massachusetts, Boston, MA, conducted all of the telephone interviews. Follow-up interviews were conducted 6 to 12 months after the initial interview. Completed surveys contained only coded numeric identifiers. To protect respondent confidentiality, all files with participants' names, telephone numbers, and survey identification numbers have been destroyed.

Statistical Analysis

Differences in respondent characteristics were tested using Fisher's exact test for unordered categorical variables, the Cochran-Mantel-Haenszel χ^2 test for ordered categorical variables, and the Wilcoxon rank-sum test for continuous variables. Respondents who did not respond to a specific vignette or responded "don't know" were excluded from the analysis of that question. The response categories were dichotomized into "yes" and "probably yes" versus "no," "probably no," and "uncertain."

Stability for each vignette was defined as an absolute change of one or more points (1 = yes, 2 = probably yes, 3 = uncertain, 4 = probably no, 5 = no) between responses during the initial and follow-up interviews (Figs 1 and 2). For example, an individual changing from "yes" to "uncertain" would be classified as having an unstable attitude toward a particular vignette. Among those individuals with unstable attitudes, within-individual comparisons of the direction of change from the initial to follow-up interview were tested using McNemar's test (Figs 3 and 4).

To determine which respondent characteristics may be associated with a tendency to change attitudes, we subtracted the average response (1 = definitely yes, 2 = probably yes, 3 = uncertain, 4 = probably no, 5 = definitely no) for all 12 vignettes (four each concerning morphine administration, PAS, and euthanasia) on the initial interview from that on the follow-up interview. Stability was defined as an absolute change of less than one point. Using Kendall tau-b correlation coefficients, subject characteristics were correlated with the scale to determine whether they might be associated with unstable attitudes or with a tendency to change toward acceptance or opposition. Factors considered for patients and the general public included change in health status from the initial survey to the follow-up survey, including overall health, limitations of health on work and social activities, physical function, mental function, fatigue, ability to concentrate, and pain. Other considered factors included the presence of an advance directive,

Table 1. Characteristics of the Cohorts

	Oncology Patients (n = 111)		General Public (n = 158)		Oncologists (n = 324)	
	No.	%	No.	%	No.	%
Response rate		81.0		81.9		91.3
Age, years						
Mean		51.2		43.8		48.1
Range		22-84		20-89		31-75
Sex						
Female	46	41.1	90	57.3	41	12.7
Male	65	58.6	67	42.7	283	87.3
Ethnic origin						
White	104	94.6	135	87.1	282	87.6
Black	4	3.6	8	5.2	1	0.3
Other	2	1.8	12	7.8	39	12.1
Religion						
Protestant	19	17.3	26	17.1	93	28.9
Roman Catholic	59	53.6	84	55.2	71	22.1
Jewish	19	17.3	10	6.6	113	35.1
Other	8	11.8	32	21.1	42	13.0
Education						
Primary school	5	4.6	8	5.1	0	
Secondary school	27	24.6	33	21.3	0	
Some college	26	23.6	38	24.5	0	
College degree	26	23.6	44	28.4	0	
Higher degree	26	23.6	32	20.7	355	100
Income (× \$1,000)						
< 20	14	12.7	23	14.9	—*	
20-40	23	20.9	32	20.8	—*	
40-60	25	22.7	36	23.4	—*	
> 60	48	43.7	51	33.2	—*	
100-200	—*		—*		140	43.3
> 200	—*		—*		132	40.9

*Not asked.

confidence that wishes would be respected by family, doctor, or the courts, personal consideration of PAS or euthanasia, having ever hoarded medications or discussed ending life with others, understanding of prognosis, time between interviews, and sociodemographic variables including age, religion, and religiousness. Factors considered for physicians included having read or recommended *Final Exit* within the past 6 months, having created or changed a "living will," ability to imagine an illness in oneself bad enough to lead to requesting PAS or euthanasia, having experienced a request for PAS or euthanasia, and having participated in PAS or euthanasia. Finally, age, Roman Catholic religion, religiousness, overall health, and admission to a hospital in the last 6 months were also considered.

Human Subjects Approval

This study was approved by the institutional review boards of the three participating hospitals and the University of Massachusetts, Boston. No participant was paid to take part in the study.

RESULTS

Table 1 lists the characteristics of the participants who completed follow-up interviews. Sex, race, religion, education, and income did not differ significantly between subjects who participated in the follow-up interview and those

who did not. When formally assessed, patients who participated in the follow-up survey were no less stressed by the initial interview than were patients who did not participate. Patients who did not participate in the follow-up interview were significantly older than those who did ($P = .044$). In the follow-up survey, 23.4% of oncology patients reported their health as fair or poor; 21.6% had a recurrence or only partial response of their tumors to treatment; 35.2% felt that they had only a fair or poor chance of a cure of their cancer; 25.7% had experienced significant pain within the previous 24 hours; and 11% were depressed and psychologically distressed. These characteristics did not change significantly from those reported in the initial survey.⁸ However, patients reported significantly less fatigue in the follow-up survey ($P < .001$). General-public participants who participated in the follow-up telephone survey were significantly older ($P = .03$). Physicians who reported participating in PAS on the initial survey were not less likely to participate in the follow-up interview.

Stability of Attitudes

Table 2 summarizes the proportion of respondents in each cohort who found PAS or euthanasia acceptable in the initial and follow-up survey. Oncologists were significantly less likely to find the actions described in each vignette acceptable than were patients and the general public ($P < .001$).

Figures 1 and 2 depict the stability of attitudes among individual respondents in all three cohorts. The proportions

Table 2. Percentage of Respondents Who Found PAS or Euthanasia Acceptable

Cohort and Vignette	Physician-Assisted Suicide		Euthanasia	
	Initial Survey	Follow-Up Survey	Initial Survey	Follow-Up Survey
Oncology patients				
Unremitting pain	70.9	70.9	70.0	64.4
Functional debility	49.0	47.2	49.1	46.4
Burden on family	36.9	36.0	35.4	36.3
View life as meaningless	31.5	33.3	31.5	32.4
General public				
Unremitting pain	69.4	70.0	66.3	61.2
Functional debility	48.7	53.8	48.7	48.1
Burden on family	36.0	43.0	36.7	35.5
View life as meaningless	34.0	42.3	30.6	32.5
Oncologists				
Unremitting pain	46.0	30.8*	23.2	5.0*
Functional debility	36.3	23*	15.4	5.8*
Burden on family	23.5	15.1*	5.8	1.8*
View life as meaningless	18.2	12.9*	4.9	2.1*

NOTE. The initial survey included 155 oncology patients, 193 members of the general public, and 355 oncologists; the follow-up survey included 111 oncology patients, 158 members of the general public, and 324 oncologists.

* $P < .0001$, representing proportion of oncologists accepting vignette in follow-up compared with pooled oncology patients and general public.

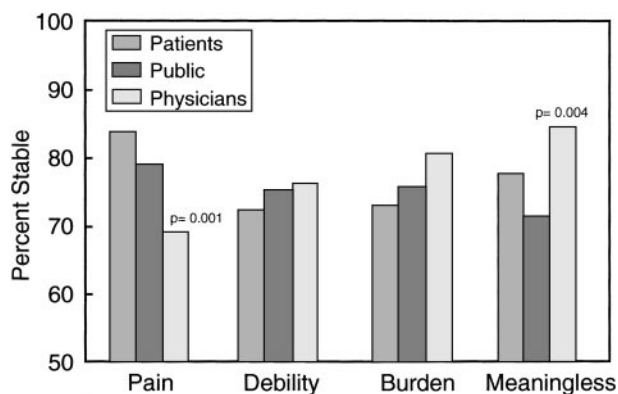


Fig 1. Percentage of individuals in each group with stable attitudes regarding PAS vignettes. P values compare physicians with pooled patients and general public.

of respondents with stable responses to the vignettes ranged from 69.2% to 94.8%. There were no significant differences between patients and the general public in the stability of responses to vignettes concerning PAS ($P = .53$) or euthanasia ($P = .19$). Therefore, patient and general-public responses were pooled and compared with physician responses. There were significant differences between physicians and nonphysicians in the stability of their responses for both PAS and euthanasia. Although the average stability across the PAS vignettes was similar for physicians (78.9%) and nonphysicians (77.7%), physicians were more stable regarding the vignette concerning viewing life as meaningless (86.5% v 77.1%; $P = .004$) and less stable regarding the vignette concerning pain (69.1% v 80.8%; $P = .001$). In contrast, the average stability across the euthanasia vignettes was higher in physicians (89.2%) than nonphysicians (77.8%; $P < .001$), with significant differences ($P < .001$) for all situations except pain ($P = .55$).

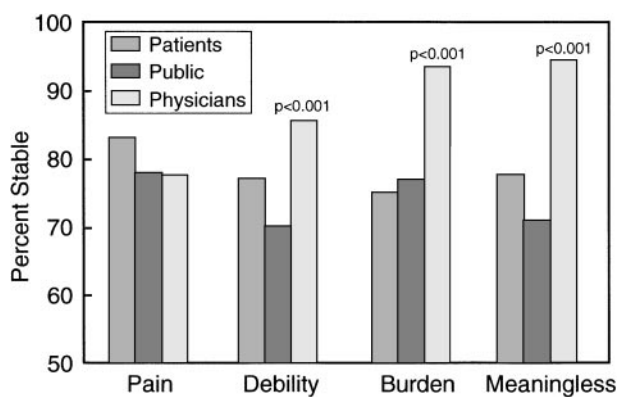


Fig 2. Percentage of individuals in each group with stable attitudes regarding euthanasia vignettes. P values compare physicians with pooled patients and general public.

Direction of Change

Figures 3 and 4 depict the percentage of patients, the general public, and oncologists who changed from acceptance to opposition and from opposition to acceptance of PAS and euthanasia for the given vignette. For all of the vignettes, physicians were significantly more likely to change from acceptance to opposition of euthanasia and PAS (McNemar's test; $P < .05$). Among those who changed their attitudes, patients were no more likely to change from acceptance to opposition than from opposition to acceptance of PAS or euthanasia. General-public participants were significantly more likely to change from opposition to acceptance of the burden-on-family (8.2% changed to opposition, 15.2% to acceptance; $P = .024$) and view-life-as-meaningless PAS vignettes (9% changed to opposition, 17.3% changed to acceptance; $P = .022$).

Predictors of Changes in Attitudes

An exploratory analysis of associations between patient characteristics and stability-of-attitudes scale revealed that having had thoughts about requesting euthanasia in the past was associated with both unstable attitudes ($r = -0.27$; $P = .005$) and changing toward acceptance of PAS and euthanasia ($r = -0.33$; $P < .001$). Having a written proxy correlated with a change in attitudes toward acceptance of these actions ($r = 0.20$; $P = .042$). There were no significant correlations between change in health status measures and change in attitudes. For the general public, improving health status correlated with a change toward opposing PAS and euthanasia ($r = 0.16$; $P = .041$). Having confidence that one's wishes that life-sustaining treatment would be followed by family members or physicians was also associated with changing attitudes toward opposing PAS and euthana-

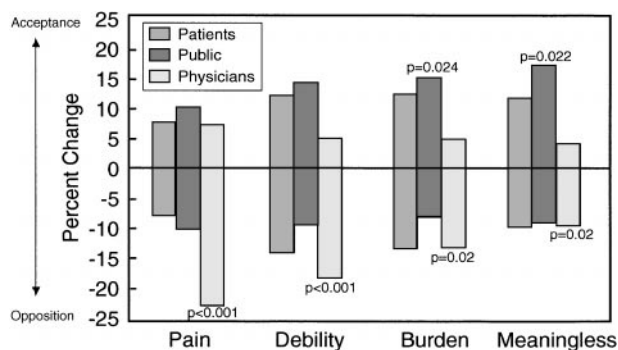


Fig 3. Percentage of individuals in each group who changed attitudes from opposition to acceptance (positive numbers) and from acceptance to opposition (negative numbers) regarding physician-assisted suicide vignettes. The difference between 100 and the sum of the positive and negative bars is the percentage of subjects in the group who did not change. P values compare direction of change within each group.

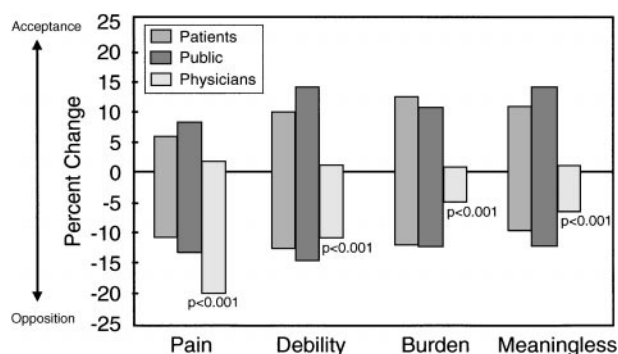


Fig 4. Percentage of individuals in each group who changed attitudes from opposition to acceptance (positive numbers) and from acceptance to opposition (negative numbers) regarding euthanasia vignettes. The difference between 100 and the sum of the positive and negative bars is the percentage of subjects in the group who did not change. *P* values compare direction of change within each group.

sia ($r = -0.13$; $P = .04$ for family members; $r = -0.13$; $P = .048$ for physicians). Finally, general-public participants who on the initial survey could imagine an illness bad enough that he/she might commit suicide tended to change toward opposition of the ethics of these actions on the follow-up interview ($r = -0.16$; $P = .047$). For patients and the general public, there were no correlations between age, religion, or strength of religious beliefs and stability of attitudes regarding PAS and euthanasia.

For physicians, being able to imagine an illness severe enough that he/she might request euthanasia or PAS was associated with having unstable attitudes ($r = -0.11$; $P = .046$). Having participated in PAS was predictive of changing attitudes toward acceptance of PAS and euthanasia ($r = 0.3$; $P = .046$). Finally, physicians whose religious beliefs were less important had unstable views ($r = 0.2$; $P < .001$) and changed toward opposition of these practices ($r = 0.16$; $P < .001$).

DISCUSSION

To our knowledge, this is the first study to evaluate the stability of attitudes about euthanasia and PAS. There are several important findings. First, up to one third of participants changed their attitudes regarding PAS and euthanasia over a 6- to 12-month period. This level of instability is greater than that demonstrated for advanced directives.¹⁸ Euthanasia and PAS are currently under active debate, and this lesser degree of stability may reflect the evolution of opinions as individuals become more cognizant of the issues. Awareness of this instability is crucial to formulating policy in this area.

A second important finding is that physician opposition to PAS and euthanasia is on the increase. Such change indi-

cates a growing disparity between practitioners and the general public regarding end-of-life care. Legalizing PAS and euthanasia would place the majority of physicians in a position of potentially having to perform these interventions, and that might lead to greater opposition. Furthermore, as the debate has progressed, physicians may have come to appreciate that other interventions can improve end-of-life care and may not view euthanasia or PAS as a "good death." This trend is strikingly dissimilar to that seen following the United States Supreme Court's 1973 ruling in favor of abortion, after which the majority of physicians and general public continue to favor the availability of this procedure.²⁴⁻²⁹ Performing abortion requires subspecialty training. Thus, a view in favor of abortion does not necessarily require willingness to perform this procedure.^{27,28}

Physicians' greatest instability was a marked shift toward opposing PAS for patients with unremitting pain. This change in physician attitudes suggests an increasing appreciation for aggressive symptom management during the terminal-care period.³⁰ In contrast, oncology patients demonstrated the most stable attitudes regarding the ethics of PAS for unremitting pain, with nearly 85% stable. Patients' attitudes may reflect a pervasive fear of dying in pain, without an understanding that most pain can be alleviated with appropriate therapy.³¹ Public opinion favoring the legalization of PAS might be lessened by a greater commitment on the part of physicians to provide more consistent control of symptoms.

The minority of patients who had considered euthanasia or PAS for themselves tended to change toward further acceptance of these practices. Although they had not acted on these thoughts, they may have been comforted by considering PAS or euthanasia an option, "just in case." Indeed, many patients became opposed to PAS and euthanasia. A change in health status and understanding of the prognosis were not predictive of this change. Without clear indicators of unstable attitudes, this study reinforces the need to assess commitment to this course of action over time. This has not been an explicit part of our practice.⁴

Our study has several limitations. Previous studies have demonstrated associations between religiosity and opposition to PAS and euthanasia.^{8,16} We did not find a correlation between religion, or strength of religious beliefs, and stability of attitudes among nonphysicians. However, our sample size may have led weak predictors of unstable or changing attitudes to be of marginal or no significance.

This study relied on the use of vignettes to elucidate attitudes about euthanasia and PAS. This methodology has been demonstrated to be an effective method of ascertaining views regarding emotionally charged issues.^{32,33} Nonethe-

less, it is possible that responses might differ if more direct questions were asked, especially of patients specifically requesting PAS. Further research needs to directly examine the stability of patient requests for PAS and euthanasia.

In conclusion, this study indicates that for up to one third of participants, attitudes regarding PAS and euthanasia change over time. Furthermore, there is growing discordance between physicians and the general public regarding the ethics of these practices. Physicians who would be asked to perform PAS and euthanasia are becoming increasingly opposed to these practices. Finally, there are no typical

predictors of who might change views. Although additional studies are needed, these findings should be considered carefully in light of evolving legislation regarding PAS, and they suggest the need for rigorous guidelines requiring patients to be evaluated over time before granting a request for PAS or euthanasia.

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