

ORIGINAL CONTRIBUTION

A Report of Physicians' Beliefs about Physician-Assisted Suicide: A National Study

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The goal of this work is to assess the beliefs of US physicians about the national legalization of physician-assisted suicide (PAS†). We sent a survey to 1000 randomly chosen physicians from around the US. Our survey indicates that 60% of physicians thought PAS should be legal, and of that 60%, 13% answered “yes” when asked if they would perform the practice if it were legal. Next, 49% of physicians agreed that most patients who seek PAS do so because of pain, and 58% agreed that the current safeguards in place for PAS, in general, are adequate to protect patients. With respect to specific safeguards, 60% disagreed with the statement that physicians who are not psychiatrists are adequately trained to screen for depression in patients seeking PAS, and 60% disagreed with the idea that physicians can predict with certainty whether a patient seeking PAS has 6 months or less to live. Finally, about one-third (30%) of physicians thought that the legalization of PAS would lead to the legalization of euthanasia, and 46% agreed that insurance companies would preferentially cover PAS over possible life-saving treatments if PAS was legalized nationally. Our survey results suggest several conclusions about physicians' beliefs about PAS. The first is that there is a discrepancy between willingness to endorse and willingness to practice PAS. Second, physicians are generally misinformed with regard to why patients seek PAS, and they are uncertain about the adequacy of safeguards. Third, physicians are still wary of the slippery slope with respect to the legalization of PAS nationwide.

INTRODUCTION

Physician-assisted suicide (PAS), also known as physician aid-in-dying (AID), is one of the most contentious ethical issues facing medicine today. The American Medical Association (AMA) states that, “Physician-assisted suicide occurs when a physician facilitates a patient’s

death by providing the necessary means and/or information to enable the patient to perform the life-ending act [1].” This practice was first legalized by Oregon through the Death with Dignity Act in 1997 [2]. Since then, eight other jurisdictions have legalized the practice, and Montana has decriminalized it [3]. As a comparison, internationally, physician-assisted suicide *and* euthanasia are

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†Abbreviations: PAS, Physician-assisted suicide; AID, aid-in-dying.

Keywords: bioethics, end-of-life care, physician-assisted suicide, aid-in-dying

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legal in Canada, Netherlands, Belgium, Colombia, and Luxembourg [4]. A recent Gallup poll indicates that 67% of the American public support legalization of PAS [5]. Support for the practice among physicians has also risen from 46% in 2010 and 54% in 2014 to 57% in 2016 [6]. As the availability of this practice for patients and physicians increases, it is important to understand the beliefs of physicians concerning PAS.

A recent review of attitudes and practices of PAS in the US, Canada, and Europe found that PAS is increasingly becoming legalized, is performed relatively rarely, and is primarily utilized by patients with cancer [7]. A national survey study in 2008 about physicians' attitudes toward PAS also revealed that highly religious physicians are more likely to oppose PAS than those with low religiosity [8]. These data are consistent with previous findings of national surveys of allopathic physicians and osteopathic physicians, which found that religion was associated with objections to PAS [9,10]. The 2008 study also found that being of Asian ethnicity, of Hindu religious affiliation, and having more experience with end-of-life care were also associated with objecting to the practice of PAS [8].

Although those are the only national survey studies looking at physician attitudes toward PAS, there have been several institutional and regional studies examining views of physicians, which have shown that physicians' views toward PAS are affected by religion, religiosity, ethnicity, medical specialty, and age. Cohen *et al.* showed that in the state of Washington in 1994, oncologists and hematologists were least likely to support PAS, while psychiatrists were most likely [11]. A 1995 study of Michigan oncologists revealed five factors that were important to physicians when considering the approval or disapproval of PAS: global attitudes toward PAS (including ideas like "Does a patient have a right to end his or her life if he or she has an incurable disease," and "Oncologists should have the right to help a patient commit suicide by medical means"), attitudes toward the acceptability of withholding/withdrawing life-sustaining therapies, philosophical prohibitions toward PAS, concerns of legal consequences of PAS, and beliefs that PAS could be avoided with better end-of-life care [12]. A study of Oregon emergency medicine physicians in 1996 showed that support of legalization of PAS was not influenced by gender, age, or practice location. It did show, however, that those without religious affiliations were more likely to support PAS legalization, and Catholic respondents were least likely to support it [13].

A survey of Connecticut physicians in 2000 showed that views on PAS were strongly associated with religious affiliation, religiosity, ethnicity, and medical specialty [14]. A survey given to Tennessee physicians in 2003 found that factors that influenced beliefs about PAS were ethics, religion, and the role of the physician to relieve

pain and suffering [15]. Connecticut internists' attitudes toward PAS in 2004 were significantly influenced by frequency of attendance of religious services and experience providing primary care to terminally ill patients [16]. Another study in Connecticut in 2004 showed that medical house officers from three different internal medicine residency programs were possibly influenced by religious commitments and pressures of training when thinking about the acceptability of performing PAS [17].

Most recently, a study at a large academic institution found that 63% percent of physicians thought PAS should be legal, but only 22% of that percentage would be willing to participate in the practice [18]. This trend was also observed among Tennessee physicians in 2003—of the physicians who supported PAS, only 25% indicated that they would perform it [15]. This is an important finding that requires further study. If the practice of PAS is to be continually expanded to more states without understanding why physicians are generally supportive of PAS but actually opposed to performing it, it could lead to numerous problems including feelings of dissatisfaction with or mistrust of the profession of medicine by both physicians and patients, poor outcomes surrounding PAS, and a lack of appropriate and effective end-of-life care.

Thus, the aims of this study were threefold. The first was to investigate whether the discrepancy between attitudes about legalization versus willingness to practice PAS holds true nationally. Our hypothesis is that it does. Next, we assessed why this discrepancy between belief and willingness to practice exists. Finally, we aimed to update and expand the understanding of physicians' attitudes toward PAS since the last national study in 2008. We have included questions regarding the beliefs of physicians on possible economic and social ramifications of PAS legalization and the efficacy of safeguards in place, which to our knowledge have not been previously studied by a national survey.

METHODS

Survey Design and Administration

The survey tool was designed following methods previously described [19]. In 2018, we mailed a confidential, self-administered, 7-page questionnaire to a stratified random sample of 1000 practicing US physicians (age 25-79), chosen from the American Medical Association Physician Masterfile, a database intended to include all US physicians. Five hundred physicians were chosen at random from all specialties, excluding pathology and radiology, and 500 were chosen from specialties more likely to involve end-of-life care (geriatrics, pediatric critical care, pulmonary and critical care, oncology, physical medicine and rehabilitation, and hospice and palliative

medicine). We excluded radiology and pathology based on feedback from our pilot study, in which radiologists and pathologists indicated that they did not feel equipped to address PAS concerns since they do not routinely care directly for patients. Physicians received three separate mailings, the last of which contained a US \$2 incentive. This study was approved by the Yale University Institutional Review Board.

Survey Content

We first defined the terms “physician-assisted suicide (PAS),” “physician aid in dying (AID),” and euthanasia (a physician directly administers a drug or drugs with the intention of ending the patient’s life) in a preamble to eliminate possible confusion in terminology. The survey contained six sections. The first was Legality of PAS/AID and included the questions “Should PAS be legal in your state?” and “Should PAS/AID be decriminalized in your state?” which could be answered yes or no. The third question asked, “If legal or decriminalized, would you participate in PAS/AID?” which could be answered with yes, possibly, unlikely, or never.

The second section concerned Current Practices of PAS/AID, which asked participants to what extent they agreed on a five-point Likert scale (strongly agree, agree, neutral, disagree, strongly disagree) with statements about reasons for patients seeking PAS/AID and safety and efficacy of current safeguards in states where the practice is legal. This section also included a brief explanation of the major safeguards currently employed.

Section three, entitled Implications of PAS/AID, included statements concerning the social, professional, and economic implications of national legalization of PAS/AID. Again, participants were asked to what extent they agree, based on the same Likert scale.

The next section, Other Considerations Regarding PAS/AID, included questions concerning ethical and moral statements about PAS/AID answered on the same Likert scale.

The fifth section, Physician Perspectives on Death, contained statements about physicians’ own experiences with mortality using the same Likert scale. One question asked, “How often are you faced with end-of-life issues in your daily practice?” and a final, free-response question asked, “If you think PAS/AID should be legal or decriminalized but would be unwilling or unlikely to perform it yourself, please explain why.”

The final section included demographic questions including age, preferred gender identity, race, percentage of practice involving patients who are underinsured or on Medicaid, and medical specialty. A copy of the survey may be requested from the authors.

Data Analysis

Data from hard copy surveys were entered into Excel files by two different researchers to reduce input error. Answers using the Likert Scale were condensed into “agree” (agree, strongly agree), “neutral,” and “disagree” (disagree, strongly disagree). Answers to how often physicians provided end-of-life care were condensed into “often” (several times a week, every week, nearly every week), “sometimes” (two to three times a month, about once a month, several times a year), and “rarely” (about once or twice a year, less than once a year, never). Answers to the free response question were analyzed to identify common themes. In an attempt to make our results more generalizable to the general population of physicians, case weights were assigned and used to account for our over-sampling strategy of specialties that routinely deal with death and dying [20]. Italicized percentages indicate that they are case weighted.

RESULTS

Survey Response

Of the 1000 physicians who were mailed the survey, 61 came back as undeliverable by the postal service. At the closure of data collection, we used a method described by Curlin *et al.* to determine the approximate number of ineligible non-respondents [21]. We determined that 90% of those who did not respond (751) were eligible. Our estimated response rate of eligible physicians is therefore 22% ($188/[188 + 0.90*751]$; $n = 188$). The demographics of the respondents are listed in Table 1.

Legality of PAS

Table 2 shows the number of physicians who thought PAS should be legalized or decriminalized. One-hundred-and-seven (57, 60%) physicians thought PAS should be legal [78 (41, 38 %) illegal], and 125 (66, 69%) thought it should be decriminalized [60 (32, 30%) not decriminalized] in their respective states (Table 2). When respondents were asked to indicate how likely they would be to perform PAS if it were legal in their state, 15 (8, 9%) indicated “yes,” 42 (22, 25%) replied “possibly,” 62 (33, 32%) were “unlikely” to, and 67 (36, 33%) would “never.”

Table 3 lists free responses to the question regarding why respondents who thought PAS should be legal would be unlikely or unwilling to perform it. The single most common reason was lack of training/expertise (47%) (Table 3). Other less common themes included: religious/spiritual teachings (11%); supporting patient choice (8%), legal implications/hurdles (7%), ethical/moral opposition (5%), its inappropriateness (relative lack of indication) (5%), and its inherent severity (4%) (Table 3).

Table 1. Characteristics of the 188 physicians who responded to the survey.

	n (%)^A
Age	
≤54	83 (44)
≥55	91 (48)
Gender Identity	
Female	60 (32)
Male	99 (53)
Do not wish to specify	29 (15)
Hispanic or Latino	
Yes	7 (4)
No	164 (87)
Race	
Asian	1 (1)
East Asian/Pacific Islander	8 (4)
South Asian	6 (3)
Other Asian	2 (1)
Black/African American	8 (4)
American Indian/Alaskan Native	1 (1)
White/Caucasian	133 (70)
Other	7 (4)
Do not wish to specify	6 (3)
Specialty	
Internal Medicine	28 (15)
Family Medicine/Practice	30 (16)
Surgery	24 (13)
Psychiatry	12 (6)
Obstetrics/Gynecology	11 (6)
Neurology	3 (2)
Emergency Medicine	20 (11)
Anesthesia	8 (4)
Pediatrics	30 (16)
Other	8 (4)
Practice at Veteran Affairs facility	
Yes	3 (2)
No	171 (91)
Percentage of patients in practice that are on Medicaid or underinsured	
< 30	92 (49)
30-74	62 (33)
≥75	13 (7)
Region of practice	
Northeast	40 (21)
Southeast	52 (28)
Midwest	46 (24)
Southwest	15 (8)

West	34 (18)
How often physicians provide end-of-life care^B	
Often	33 (18)
Sometimes	78 (41)
Rarely	73 (39)

^APercentages do not add up to 100 due to incomplete survey data. ^BData condensed from 9 to 3 categories.

Current Practices of PAS and Social, Economic, and Ethical Considerations of PAS Legalization

Table 4 shows the number of participants who agreed, disagreed, or were neutral when asked questions about the current practices of PAS in states where it is legal and questions about social, economic, and ethical considerations of PAS. In response to the statement, “Most patients who seek PAS/AID do so because of physical pain,” 81 (43, 49%) physicians agreed, 40 (21, 24%) disagreed, and 63 (34, 26%) were neutral (Table 4). Regarding, “Current PAS/AID laws provide adequate safeguards,” 99 (53, 58%) agreed, 54 (29, 29%) disagreed, and 30 (16, 13%) were neutral (Table 4). Regarding, “Physicians who are not psychiatrists are sufficiently trained to screen for depression in patients who are seeking PAS/AID,” 40 (21, 23%) agreed, 104 (55, 60%) disagreed, and 39 (21, 16%) were neutral (Table 4). Regarding, “Most physicians can predict with certainty whether a patient seeking PAS/AID has 6 months or less to live,” 31 (16, 18%) agreed, 114 (61, 60%) disagreed, and 38 (20, 22%) were neutral (Table 4).

Regarding, “Racial and ethnic minorities would feel pressure to end their lives,” 20 (11, 9%) physicians agreed, 121 (64, 69%) disagreed, and 43 (23, 23%) were neutral (Table 4). Regarding, “Patients with lower socioeconomic status would feel pressure to end their lives,” 32 (17, 15%) physicians agreed, 106 (56, 58%) disagreed, and 46 (24, 25%) were neutral (Table 4). Regarding, “Patients with mental or physical disabilities would feel pressure to end their lives,” 50 (27, 24%) physicians agreed, 89 (47, 49%) disagreed, and 45 (24, 26%) were neutral (Table 4).

Regarding, “PAS/AID would save money for the health care system,” 107 (57, 62%) physicians agreed, 29 (15, 18%) disagreed, and 48 (26, 19%) were neutral (Table 4). Regarding, “Health insurance companies would cover PAS/AID over more expensive, possibly life-saving treatments, like chemotherapy,” 93 (49, 46%) physicians agreed, 35 (19, 20%) disagreed, and 55 (29, 34%) were neutral (Table 4).

Regarding, “PAS/AID would lead to the legalization of euthanasia,” 61 (32, 30%) physicians agreed, 71 (38, 43%) disagreed, and 52 (28, 26%) were neutral (Table 4). Regarding, “PAS/AID would be unnecessary if all patients had access to excellent palliative care,” 64 (34, 38%) agreed, 80 (43, 45%) disagreed, and 38 (20, 18%)

were neutral (Table 4). Regarding, “The medical profession should endorse PAS/AID as a morally valid medical option,” 89 (47, 49%) physicians agreed, 66 (35, 32%) disagreed, and 29 (15, 17%) were neutral (Table 4). Regarding, “Medical professionals should never intentionally hasten a patient’s death at the end of life,” 74 (39, 43%) physicians agreed, 80 (43, 41 %) disagreed, and 30 (16, 15 %) were neutral (Table 4).

Crosstabulations

Of those who thought PAS should be legal, 16 (15%) would, 40 (37%) “possibly” would, 38 (36%) were “unlikely” to, and 13 (12%) would “never” perform it. Of those who thought PAS should be decriminalized, 16 (13%) would, 40 (32%) “possibly” would, 47 (37%) were “unlikely” to, and 23 (18%) would “never” perform it. Of those who thought PAS should be legal, 84 (81%) agreed, 4 (4%) disagreed, and 16 (15%) were unsure when asked, “The medical profession should endorse PAS/AID as a morally valid medical option.” Of those who thought PAS should be legal, 28 (27%) agreed, 66 (63%) disagreed, and 11 (10%) were unsure when asked, “Medical professionals should never intentionally hasten a patient’s death at the end of life.”

DISCUSSION

Legality, Beliefs, and Practices of PAS

This study shows that 60% of US physicians believe that PAS should be legalized, which is consistent with previous Gallup poll results (57%) (Table 2) [6]. We also found that 69% of US physicians think the practice should be decriminalized, which is a new finding (Table 2). With legalization, there would not be any penalties attributed to the act of PAS. By contrast, decriminalization of PAS means that there would be no *criminal* penalties for performing the act.

This study also reveals that only 9% of respondents indicated that they would unequivocally perform PAS if it were legal. Of those who thought PAS should be legalized or decriminalized, only 15 and 13% indicated that they would unequivocally be willing to perform the practice if it were legal or decriminalized, respectively. Furthermore, of those who thought PAS should be legalized or decriminalized, 12% and 15% would “never”

Table 2. The number of physicians who thought PAS should be legalized or decriminalized. "PAS" is an abbreviation for physician-assisted suicide. Italicized percentages are case weighted.

	Yes n (%,%) ^A	No n (%,%) ^A
Should PAS be legalized in your state?	107 (57,60)	78 (41,38)
Should PAS be decriminalized in your state?	125 (66,69)	60 (32,30)

^APercentages do not add up to 100 due to incomplete survey data.

Table 3. Free responses answers of physicians who were asked to explain why they thought PAS should be legal or decriminalized but would be unwilling or unlikely to perform the practice. "PAS" is an abbreviation for physician-assisted suicide. "AID" is an abbreviation for aid-in-dying.

	%
Lack of training/expertise	47
Spiritual/religious teachings	11
Supporting patient choice	8
Legal implications/hurdles	7
Ethical/moral opposition to the practice of PAS	5
Inappropriateness (relative lack of indication)	5
Inherent severity of PAS	4
Inadequate safeguards ^A	1
"Great subtleties and greater responsibility involved in performing PAS/AID" ^A	1
"I am afraid patient may have scary face when dying" ^A	1
"[I] would favor small [number of] physicians involved to endure expertise in assessing appropriateness of PAS rather than general medical practitioners uniformly authorized to do so." ^A	1

^AAnswer given by only one physician

perform PAS, respectively. This discrepancy between the percentage of physicians that believe PAS should be legalized and the percentage that would actually be willing to practice it if it were legal is consistent with findings in the literature and our previous survey data from a large academic institution [15,18].

In order to assess why this discrepancy persists, we asked those physicians who thought PAS should be legal but would be unwilling to perform it to explain why in a free response text box. The single most common response (47%) was lack of training or expertise with respect to PAS since it was outside the scope of their practice (Table 3). The next most common themes were religious/spiritual teachings (11%), supporting patient choice (8%), legal implications/hurdles (7%), ethical/moral opposition to the practice of PAS (5%), its inappropriateness (relative lack of indication) (5%), and its inherent severity (4%) (Table 3).

Several conclusions can be inferred from these responses. First, religion/spiritual teachings play a role in

physicians' decisions about performing PAS, which has been consistently shown to be the case in the literature [10,21]. Second, ethics and morals are important in physicians' decisions. Several respondents invoked the Hippocratic oath and "do no harm" to explain why they would not perform PAS. This is hardly a surprising argument, since the physician credo of "do no harm" is one of the oldest and most consistently used arguments of those opposed to PAS [22]. Third, some physicians are unlikely to perform PAS due to fear of legal action taken against them should they perform the practice.

The fourth and arguably most interesting conclusion can be drawn from the answers indicating that PAS is outside the scope of physicians' practices, is inherently severe or final, and that it should be an option for patients. It is clear from these responses that physicians think that patients should have the option to choose PAS; however, doctors would be unwilling to perform it because it is outside the scope of their practice. On the one hand, this unwillingness could be due to a lack of training or expertise

Table 4. Physicians' responses to questions about the current practices of PAS in states where it is legal and social, economic, and ethical consideration of PAS. "PAS" is an abbreviation for physician-assisted suicide. "AID" is an abbreviation for aid-in-dying. Italicized percentages are case weighted.

	Agree n (%,%) ^A	Neutral n (%,%) ^A	Disagree n (%,%) ^A
Most patients who seek PAS do so because of physical pain.	81 (43,49)	63 (34,26)	40 (21,24)
Current PAS laws provide adequate safeguards.	99 (53,58)	30 (16,13)	54 (29,29)
Physicians who are not psychiatrists are sufficiently trained to screen for depression in patients who are seeking PAS.	40 (21,23)	39 (21,16)	104 (55,60)
Most physicians can predict with certainty whether a patient seeking PAS/AID has 6 months or less to live.	31 (16,18)	38 (20,22)	114 (61,60)
Racial and ethnic minorities would feel pressure to end their lives.	20 (11,9)	43 (23,23)	121 (64,69)
Patients with lower socioeconomic status would feel pressure to end their lives.	32 (17,15)	46 (24,25)	106 (56,58)
Patients with mental or physical disabilities would feel pressure to end their lives.	50 (27,24)	45 (24,26)	89 (47,49)
PAS would save money for the health care system.	107 (57,62)	48 (26,19)	29 (15,18)
Health insurance companies would cover PAS over more expensive, possibly life-saving treatments, like chemotherapy.	93 (49,46)	55 (29,34)	35 (19,20)
PAS would lead to the legalization of euthanasia.	61 (32,31)	52 (28,26)	71 (38,43)
The medical profession should endorse PAS/AID as a morally valid medical option.	89 (47,49)	29 (15,17)	66 (35,32)
Medical professionals should never intentionally hasten a patient's death at the end of life.	74 (39,43)	30 (16,15)	80 (43,41)
PAS/AID would be unnecessary if all patients had access to excellent palliative care.	64 (34,38)	38 (20,18)	80 (43,45)

^APercentages do not add up to 100 due to incomplete survey data.

with respect to PAS. Perhaps if some of these physicians had specific training in performing PAS, they would be more willing to perform it, which some respondents did explicitly state. Our sample also had a large percentage of pediatricians, which likely increases the possibility that doctors report it is outside their scope since PAS is never a consideration for their practice in the US. On the other hand, this unwillingness to perform PAS could be a manifestation of physicians simply thinking that patients should have the option to choose PAS without any real internal exploration as to why they think this should be the case. It is easier simply to say that it is outside their scope of practice than it would be to address a potential internal discrepancy between belief and willingness to practice.

Underlying many of these "outside of specialty" responses is likely a feeling toward the inherent severity

of PAS, which 5% of respondents explicitly identified. This feeling is explained quite well by Robert Burt when he writes about "ambivalence" toward death. He argues that although it is conceivable that death can be a moral good or at least morally neutral in some cases, there exists a pervasive sense that death is wrong or a "moral error [23]." Burt writes, "We cannot readily erase a persistent contrapuntal conviction that death...is inherently wrong [23]." Our data seem to suggest that physicians today generally want their patients to have control over their deaths through lethal ingestion, but doctors remain uncertain about their own participation [18]. This ambivalence is further supported by the finding that of those who thought PAS should be legal, 27% agreed that, "Medical professionals should never intentionally hasten death at the end of life".

Current Practices of PAS

When asked about current practices of PAS in states where it is legal, only 24% of physicians disagreed (49% agree; 26% neutral) that the most common reason for patients seeking PAS is physical pain (Table 4). The data about the practice of PAS in Oregon indicate that most patients who seek PAS do so because of loss of autonomy and being less able to engage in activities that make life enjoyable and *not* because of physical pain [24]. In fact, physical pain is not even in the top five reasons why patients seek PAS. This finding suggests that physicians in general are misinformed as to why patients seek PAS at the end of life.

When asked about current safeguards, most physicians (59%) agreed that they are adequate (Table 4). This is a larger percentage than previously reported in the literature. A study from Oregon found that only 37% of emergency medicine physicians thought that the Oregon initiative had adequate safeguards [13]. When asked about specific safeguards, however, physicians were less sure. Sixty percent of respondents disagreed that a physician other than a psychiatrist could effectively screen a patient seeking PAS for depression (Table 4). Furthermore, 60% disagreed that most physicians can adequately predict if a patient seeking PAS has 6 months or less to live (Table 4).

These results have important implications. First, physicians in general doubt that doctors who are not psychiatrists can adequately screen patients seeking PAS for depression. Most patients who ask for PAS have a diagnosis of terminal cancer [24]. A study of cancer patients showed that of those who had a desire to die, 59% had depressive syndromes. Of those patients who did not have a desire to die, only 8% had depressive syndromes [25]. Thus, there is evidence to suggest that many patients with terminal cancer who seek death have depression. The data from Oregon, however, indicate that less than five percent of patients seeking PAS are evaluated by a psychiatrist [24]. If the majority of patients seeking PAS have terminal cancer, and most terminal cancer patients desiring death have signs of depressive syndromes, then more than five percent of patients seeking PAS should be evaluated by psychiatrists. It seems that physicians who responded to this survey are right to doubt the effectiveness of this specific safeguard. Indeed, a study from Oregon has found that of terminally-ill patients who received a lethal prescription, 1 in 6 had clinical depression [26].

The second implication of these findings is that prognosis as a safeguard is fraught with inadequacies. Respondents in general disagree that most physicians can accurately predict if a patient seeking PAS has 6 months or less to live. These opinions are supported by the literature. Physicians are generally hesitant to provide life-expectancies to patients because they think they are challenging to predict and because proving this infor-

mation is “difficult” and “stressful” [27]. Furthermore, a recent study found that only 57% of physicians could accurately predict when a patient had six months or less to live [28]. Taken together, it is clear that doctors’ opinions as well as the medical literature support the ineffectiveness of current safeguards of PAS laws in place to protect patients with mental illness. Furthermore, the safeguard addressing prognosis (only those with a prognosis of 6 months or less to live may ask for PAS) is also questionable and problematic due to the uneasiness and inability of physicians to prognosticate accurately.

It should be noted as well that prognosis is dependent on the willingness of a patient to accept treatment. A patient with insulin-dependent diabetes mellitus who refuses insulin will be dead in less than six months. Although this patient is not “terminal” in the classic sense, she would qualify for PAS under current law. This is a large loophole in arguably the most important safeguard of current PAS laws.

Social, Economic, and Ethical Considerations of PAS Legalization

Most physicians disagreed that patients of lower socioeconomic status, racial or ethnic minorities, and those with mental or physical disabilities would feel pressure to end their lives through PAS (58, 69, 49%, respectively) (Table 4). These opinions are supported by at least one study, which found that there was no heightened risk for abuse of PAS in populations based on race/ethnicity, income, and disabilities [29]. Although there is evidence supporting the unbiased nature of the practices of PAS, it is still important to continue monitoring for bias in states where it is newly legalized. The data for the aforementioned article comes from Oregon, which is a predominately white state. Patients have historically been discriminated against based on race throughout the history of the practice of medicine, and there is no reason to assume that PAS would be any different than other practices in medicine [30]. Furthermore, those in the disability community have consistently been vocal about their fears of abuse with respect to PAS [31]. These communities are concerned that medical professionals may deem the lives of those living with disabilities as not worth living. These concerns must be heard and routinely evaluated to ensure safe practices of PAS.

With respect to economic ramifications of legalization of PAS, most physicians (62%) thought it would save the healthcare system money (Table 4). This is consistent with findings from a recent article published in Canada that suggested that the Canadian healthcare system could save as much as 140 million dollars through the use of PAS [32]. Additionally, nearly half of physicians (46%) thought that legalization would lead to health insurance companies preferentially covering the cost of PAS over

more expensive, life-saving treatments like chemotherapy (Table 4). Indeed, this has already happened to at least one person in California. An insurance company denied a woman's claim for chemotherapy but did approve the cost of a prescription for life-ending drugs—with a co-payment of \$1.20 [33]. The US desperately needs to control its healthcare spending. In 2010, one quarter of all Medicare spending was attributed to the last year of life [34]. It is apparent that any practice that effectively shortens the length of end-of-life care will likely decrease the cost of healthcare nationwide.

The question, however, is how medicine as a profession wants to cut spending. As in the example above, death-inducing medications clearly cost less than chemotherapy or even palliative care, with its social workers, chaplains, and clinicians providing support. Given the economic pressures on health care today, we should expect to hear of more such cases. But as we have argued elsewhere, "It is far easier for physicians to help patients 'jump' to their deaths [through PAS] than it is to sit with them, listen, and coordinate the help of ancillary staff like social workers and chaplains to address patients' concerns—existential, spiritual, familial, personal—at the end of life [35]."

With respect to the "slippery slope" argument, a slight majority (43%) disagreed that the legalization of PAS would lead to the legalization of euthanasia, while about a third (30%) agreed (26% neutral) (Table 4). The respondents seem to be relatively split on this topic, which is similar to the climate in the US in general. There are many who proclaim that the slippery slope will never happen in America, while others use it as strong justification against the legalization of PAS [36]. Indeed, many physicians refer to countries like Belgium and the Netherlands, where both PAS and euthanasia have been legalized, as realization of the slippery slope argument [37]. There was a motion recently brought up in the Oregon Senate to allow individuals identified by a power of attorney to administer the lethal drugs to the terminally ill patient if that patient no longer had the capacity to administer it themselves [38]. Furthermore, on January 15, 2019, a bill was introduced in the New Mexico house entitled the "Elizabeth Whitefield End of Life Option Act." This would make PAS legal in New Mexico and expand the inclusion criteria. The bill does not require a patient to "self-administer" and allows patients with mental illnesses to request PAS [39]. This is certainly evidence that the slippery slope argument does have merit in the US and must be considered.

Finally, physicians were more undecided than expected when asked if the medical profession should endorse PAS as a morally valid medical option. Forty-nine percent agreed, 32% disagreed, and 17% were unsure (Table 4). Once again, a discrepancy is present—although

60% think PAS should be decriminalized, only 49% think it is a morally valid medical option (Table 2, Table 4). Furthermore, of those who thought PAS should be legal, 81% agreed that PAS should be endorsed by the medical profession as a morally valid option. Nineteen percent disagreed or were unsure if the medical profession should endorse PAS, but they still think it should be legal.

Future Directions

Our study has generated questions that need further examination concerning physicians' beliefs and practices about PAS. First, the need to assess more thoroughly the "lack of training" response about physicians' participation in PAS will be necessary. Due to the qualitative nature of this question, it should be addressed by focus groups or other qualitative methods. Such a study would be invaluable in uncovering more information about why this discrepancy between belief and practice.

Additionally, a closer examination of the relationship between palliative care and the need for PAS is crucial. This would help identify if physicians believe PAS would be unnecessary if excellent palliative care existed, and what this appropriate, effective system of palliative care should look like. We found that 38% of physicians agreed that PAS would be unnecessary if excellent palliative care were available to all patients at the end of life, and 45% of physicians disagreed (Table 4). We, however, asked only one question concerning the connection between palliative care and PAS; thus a more comprehensive examination of this relationship is justified.

Strengths and Limitations

The strength in our study lies in the breadth and novelty of the questions in our survey tool. We also sent the survey to a generous sample (1000) of random physicians from around the US.

Our analysis is limited by the survey tool used, low response rate, and small n. Although the specific questions were vetted for clarity and simplicity, it is likely that some of the questions could have been interpreted in more than one way decreasing the accuracy of our analysis. This has indeed been shown to be the case in the literature specifically with surveys based on physicians' attitudes surrounding assisted suicide [40]. Our response rate is lower than the average for surveys of physicians (54%); thus, it is likely that there is a degree of non-respondent bias [41]. Although non-respondent bias is likely less important than other sources of bias, 22% is a low response rate, which will inevitably engender some non-respondent bias.

Furthermore, reporting sample percentages by strata (random physicians vs. those who routinely deal with death and dying) would have helped account for possible

response bias. This was unfortunately impossible due to the lack of output data from the database Masterfile indicating which physicians were from which strata. It is unclear why our response rate was this low as we used a validated survey administration technique that routinely produced response rates of around 60% [8,21,42]. Possible explanations could be the length of this survey and the use of a \$2 incentive instead of the reported \$20 in the final survey mailing. Our small n decreases the overall generalizability of our study, although randomization and case weights were used to counter this.

CONCLUSION

Our results suggest that there are several important findings with respect to physicians' perspectives on the national legalization of PAS. The first is that there is a discrepancy between belief and willingness to practice PAS. Although the majority of physicians agreed that it should be legalized, only a small portion of those would unequivocally perform the practice if it were legal. Furthermore, our data indicate that this incongruity between belief and practice could be attributed to 1) a general misunderstanding on the part of physicians as to why patients seek PAS, 2) a lack of training or expertise with PAS, and 3) an inherent discomfort with the practice due to its intimate relationship with death. A second finding is that physicians believe the current safeguards protect patients, but when asked about the specific aspects of these safeguards, they question their adequacy. Most notably, 60% of respondents thought that physicians could not adequately determine if a patient seeking PAS had 6 months or less to live, which is arguably the most important safeguard in place. Third, physicians are still wary of the proverbial "slippery slope." Not only do about a third of the physicians think that PAS legalization would lead to euthanasia, but nearly half believe that health insurance companies would preferentially cover PAS over more expensive, potentially life-saving treatments like chemotherapy.

Acknowledgments: Peter Hetzler would like to thank the Office of Student Research and the Program for Biomedical Ethics at the Yale School of Medicine for funding this project.

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