Physicians' in post-graduate training attitudes and support of palliative sedation for existential distress

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Abstract

Introduction: Palliative sedation for refractory existential distress (TS-ED) is ethically troubling but potentially critical to quality end of life (EOL) care. Physicians' in post-graduate training support toward TS-ED is unknown; nor is it known how empathy, hope, optimism, or intrinsic religious motivation (IRM) affect their support. These knowledge gaps hinder preparing physicians to provide EOL care consistent with patients' preferences.

Methods: One hundred thirty four post graduate physicians rated their support of TS for refractory physical pain (TS-PP) or TS-ED, ranked the importance of patient preferences in ethically challenging situations and completed measures of empathy, hope, optimism and IRM. Predictors of TS-ED and TS-PP support were examined using binary and multinomial logistic regression.

Results: Only 22.7% of residents were very supportive of TS-ED; 82.0% were very supportive of TS-PP. Support for TS-PP or TS-ED did not correlate with levels of empathy, hope, optimism or IRM; however, data suggested that among residents with lower IRM, greater optimism was associated with greater TS-ED support. In contrast, among residents with higher IRM, optimism was not associated with TS-ED support.

Conclusions: Comparing current results to published surveys, a similar proportion of residents and practicing physicians supported TS-ED and TS-PP. In contrast to practicing physicians, however, IRM does not directly influence residents' supportiveness. The interaction between optimism and IRM suggests residents' beliefs and attitudes are salient to their EOL decisions. EOL curricula should provide physicians the opportunities to become more self-aware in order to preserve patients' access to care designed to relieve suffering.

Introduction

Excellent end of life (EOL) care requires physicians who respect the preferences of dying patients. Patients' EOL preferences may differ from physicians' and challenge their sense of what is ethically permissible. Palliative sedation for refractory existential distress (TS-ED) is an example of an ethically troubling intervention.

Existential suffering is a subjective response and often involves concerns related to the loss of the joy of living, sense of meaning, important relationships, or freedom of choice. The purpose of TS-ED is to alleviate refractory existential suffering. Very few practicing physicians, however, support TS-ED. In contrast, the majority of practicing physicians support TS for refractory physical pain (TS-PP). Physicians who refuse to provide TS-ED may compromise patient autonomy and adversely affect the quality of EOL care. The identification of potential predictors of support for TS-ED or TS-PP may help clarify the decision making process of physicians and lead to interventions that could increase the likelihood that dying patients receive EOL care consistent with their needs and preferences.

Studying physicians in post-graduate training (hereafter referred to as residents) for TS-ED and the potential predictors of their behavior may be especially revealing given that residents are acquiring attitudes that affect their life-long practice of medicine. To our knowledge residents' support for TS-ED has not been characterized; nor have the effects of residents' attitudes toward patient preferences, empathy in the patient-physician relationship, the influence of religious beliefs on their decisions, and the future (as measured by hope and optimism). The factors were selected for the following reasons. Physician empathy is essential to the effective physician-

patient relationship. Multiple studies have demonstrated associations between higher levels of physician empathy and increased patient satisfaction with care or compliance and, recently, improved health outcomes in patients with diabetes. In addition, both hope and optimism have been linked to clinical decision-making behavior and it seems plausible that these might influence decisions about TS-ED as well. Finally, practicing physicians with higher intrinsic religious motivation (IRM) are less supportive of TS and are less likely to provide patients access to other ethically controversial procedures. In order to identify potential predictors of residents' support for TS-ED and TS-PP, we posed the following research questions:

1. How supportive are residents of TS-ED and TS-PP?
2. What are the predictors of residents' support for or response to a request for palliative sedation for refractory physical pain or existential distress?
3. What are the interactions between IRM and empathy, optimism, and hope in terms of residents' support of TS-PP or TS-ED?

Subjects and methods

The study was approved by the local institutional review board and conducted May – June, 2011. Internal Medicine residents and Hematology – Medical Oncology or Pulmonary – Critical Care Medicine fellows were recruited prior to attending the initial session of a reflection-based curriculum designed to improve communication about EOL care. They were informed that study participation was unrelated to the curriculum, and each participant provided a written consent. Residents completed the survey and measures prior to the start of the workshop.

Survey questions and measures:

The primary criterion variables for the study were respondents' ratings of the degree to which they support a person's right to request TS for either unremitting pain due to widespread skeletal metastases (TS-PP) or unremitting existential distress related to fear of dying from lung cancer (TS-ED). TS was defined as the deliberate pharmacological depression of the level of consciousness in order to alleviate unremitting suffering to a degree that is acceptable to the patient when the suffering was not relieved with optimal palliative care. The response options were very unsupportive, neither supportive or unsupportive, or very supportive. Residents were also asked to assess how they would respond to a request for TS-ED or TS-PP. The response options were refuse, refer to a palliative care team, or administer TS per published guidelines.

The residents' rankings of the importance of patient preferences in ethically complex situations, IRM, and empathy, optimism, and hopefulness were measured as follows: Relative importance of patient preferences: Physicians were asked to assign a total of 100 points to the following factors based upon how strongly the factor influences their decisions when ethically challenged: the patient's expressed preferences, the physician's judgment about what is in the patient's best interest based upon their past experience, guidelines of a professional organization, or moral guidelines from their religious faith; Intrinsic Religious Motivation (IRM): Intrinsic religious motivation measures the degree to which a person's religious faith informs his or her behavior. The measure has 10 items; scores range from 10 – 50. Jefferson Scale of Physician Empathy -- Physician and Health Professional Version (JSPE-HP): The 20 item scale measures 3 components of physician empathy: perspective taking, compassionate care and standing in the patient's shoes. The scores range from 20 to 140. Adult Hope Scale (AHS). The 12-item scale measures two goal-directed components of hope: agency (a sense of successful goal-directed

determination) and pathways (a sense of successful goal-directed planning). The scores range from 8 – 64 since 4 items are fillers. Life Orientation Test-Reevaluation (LOT-R or Optimism Scale): Optimism is conceptualized as remaining engaged in efforts to overcome adversity to reach goals. The 10-item scale has a Likert-style format containing three items reflecting optimism, three reflecting pessimism, and four filler items. Scores range from 0 to 24.

Data analysis

Descriptive analyses (count, mean, standard deviation, and range) were conducted to characterize the sample including resident's postgraduate year (PGY), gender, hope, optimism, empathy, and the importance of patient preferences when making an ethically complex medical decision. The means for the importance of patients' preferences were compared to other factors via paired t-tests. For Research Question 1, support for, and response to, a request for TS-PP and TS-ED were tabulated. Proportions reporting 'very supportive' for support or 'per published guidelines' for response to request for TS-PP and TS-ED were compared using McNemar's tests. For Research Questions 2 and 3, binary or multinomial logistic regression was used. Choice of model depended on the response distribution of the outcome. We used a minimum of 10 observations for each outcome response level to conduct univariate analyses based upon the rule of thumb that there should be at least 10 responses for each predictor, and at least 30 observations per response level of the outcome to assess interactions with IRM using the same rule of thumb and noting that 3 predictors are required in the interaction model (two main effect terms and one interaction term). We deleted one response value due to having only 2 responses. For ease of interpretation, we also collapsed adjacent response values that were both small (less

than 20). In one case (very supportive for response to request for TS-PP), we allowed n=9 since the adjacent category (neutral) was large. Thus, the outcomes were modeled as follows: 1) support for TS-PP (binary logistic regression since there were two adjacent categories with small sample sizes for very unsupportive (n=10) and neutral (n=14)); 2) response to request for TS-PP (binary logistic regression - due to extremely low sample size for refused (n=2) they were deleted from this analysis); 3) support for TS-ED (multinomial logistic regression); and 4) response to request for TS-ED (multinomial logistic regression). For Research Question 2, we examined each predictor separately (empathy, hope, optimism, IRM). For Research Question 3, we fit separate multivariable models that each included IRM, one of the other predictors (empathy, hope or optimism), and the interaction of IRM with that other predictor. Data were analyzed using SAS 9.4 software (SAS, Cary, NC). All tests were conducted at $\alpha = 0.05$ level except for IRM interactions, which were assessed at $\alpha = 0.10$ as we were willing to risk a larger Type I error in order to identify potentially relevant interactions.

Data and any other underlying research materials can be accessed by contacting the author.

Results

Description of Sample

One hundred thirty four residents completed surveys. Table 1 contains the postgraduate year, gender distributions, and the mean and standard deviations of the scores for empathy, hope, optimism, IRM and the five factors influencing complex medical decisions. Forty-seven (35.1%) were PGY1, 59 (44.0%) were PGY2 or 3 and 28 (20.9%) were PGY4 or greater. There were 54 (40.3%) females and 80 (59.7%) males in the sample. When comparing the mean scores for factors influencing complex medical decisions the patient's expressed wishes or preferences

were assigned the most points (p-value < 0.001 in all cases). Forty-eight residents (38.8%), however, assigned 49 or fewer points to patient's expressed wishes or preferences (Figure 1). This indicates factors other than patients' expressed preferences may influence residents when confronted with an ethically challenging decision.

Research Question 1 – Support for and Response to Request for Palliative Sedation

A majority of residents (82.0%) were very supportive of TS-PP (Table 2). Conversely, only a minority of residents (22.7%) was very supportive of TS-ED (p-value < 0.001 compared to TS-PP). When asked to take an action related to a request for TS-PP, 39.1% said they would administer TS per published guidelines while only 6.8% would do so for TS-ED (p-value < .001). For both indications the majority (59.4% for TS-PP and 78.8% for TS-ED) responded that they would refer the patient to a palliative care team. Refusals for TS-PP were rare; 14.3% of residents indicated they would refuse a request for TS-ED.

Research Question 2 - Predictors of support for or response to a request for TS-PP or TS-ED

There were no significant predictors of support for TS-PP or TS-ED (modeled as very supportive vs not, with not indicating neutral or very unsupportive) (Table 3). For response to request (Table 4), TS-PP (modeled as published guidelines vs. refer to palliative care, 2 non-responders excluded) was not associated with empathy, hope, or optimism (Table 3). But as IRM increased, the odds of indicating a response of administer TS per published guidelines vs. refer to a palliative care team for TS-PP decreased (OR = 0.51; 95% CI: 0.33 – 0.79; p = 0.002). There were no predictors associated with response to request for TS-ED.

Post hoc, we used chi-square tests and binary or multinomial logistic regression to examine if either support for TS-PP or TS-ED was related to PGY or the importance of patients' preferences. Residents in PGY2 – 4 were more likely than PGY1 residents to indicate that they were 'very supportive' of TS-ED (87% vs 30.2%, p = .011). Support for TS-PP was not correlated with PGY. The importance of patient's preferences were not related to support for either TS-PP or TS-ED.

Research Question 3 - Interactions with Intrinsic Religious Motivation

No interactions were found between IRM and empathy, hope, or optimism and either the support of or response to a request for TS-PP. In models for TS-ED, we found IRM moderated the association of optimism with support of TS-ED when comparing very supportive to neutral (p-value for interaction = 0.08). Among residents with high IRM (90^{th} percentile), greater optimism was associated with less support of TS-ED (OR = 0.21; 95% CI: 0.05 – 0.89, p = 0.03). However, among residents with low IRM (e.g., 10th percentile), optimism was not associated with support of TS-ED. When comparing unsupportive to neutral, there was no significant interaction for support of TS-ED. Due to the small sample sizes (n less than 20 in each of the refused and administer per published guidelines response categories), interactions were not examined for the response to a request for TS-ED.

Discussion

The majority of residents, like practicing physicians, are supportive of TS-PP and oppose TS-ED. The current results are also consistent with another reported survey of residents. Unlike practicing physicians, however, residents' support for TS-ED or TS-PP was not directly affected

by religiosity as measured by IRM. Higher levels of IRM did correlate with a higher likelihood of referring a patient who requests TS-PP to a palliative care team rather than administering TS per published guidelines. No effect of IRM on response to a request for TS-ED was detected.

The results of our study are consistent with what was known about physician support for TS-PP and TS-ED and they raise a salient question. What factors influence physicians' decisions to support TS-PP or TS-ED? The answer will provide additional insights into the deliberations of physicians who are confronted with an ethically troubling patient EOL care preference.

Like practicing physicians, residents struggle with the choices some patients make. And the existential concerns of dying patients exacerbate the feelings of inadequacy and distress they report after caring for dying patients. In general residents appear to have different expectations and experiences in caring for dying patients than attending staff although one study reported similar experiences. The current results provide a more nuanced view. Although the proportions of residents who rate patient preferences as most influential and who are very supportive of TS-PP and very unsupportive for TS-ED are similar to practicing physicians, their reasoning may differ.

A direct influence of IRM on residents' levels of support for TS-ED or TS-PP was not observed in the current study (although higher IRM correlated with lower odds of administering TS per published guidelines). This is in contrast to the results from practicing physicians. We speculated that attitudes may influence resident's support for TS-ED and that these may explain the observed differences. There were no statistically significant direct relationships, however,

between support for TS-ED and residents' hopefulness, optimism or empathy. We found that residents' IRM moderated the association of optimism with support of TS-ED. Among residents with high IRM, greater optimism was associated with less support for TS-ED. There was a suggestion that the converse was true as well; that is in post-graduate physicians with low IRM, greater optimism was associated with greater support for TS-ED. Given that optimism is the expectation that good outcomes are likely, more religious doctors may believe that relief of suffering will occur in ways independent of TS-ED. In other words, their religiosity may cause them to believe in more improbable routes to alleviating distress (e.g., miracles can happen). In contrast, physicians with lower optimism may have limited expectations and may be more open to pursuing TS-ED. Thus, the interaction seems plausible.

The main potential limitation of the survey is the unknown impact of the conceptual confusion that surrounds TS. The definition of TS provided to the residents did not contain information about the intended level of consciousness, the duration of sedation, or whether the patient would receive hydration or nutrition while sedated. These variables may have modified the residents' support for TS-PP or TS-ED. An additional limitation is that the sample size was not sufficient to perform all the analyses required to determine if there were other potentially relevant interactions. We could not determine if the relationship between PGY and proportion of residents supportive of TS-ED was mediated by other interactions due to the small sample sizes. Finally, the measures utilized may be insensitive to the resident's attitudes most relevant to their support for TS. For example, we anticipated, based upon a focus group study of practicing physicians, more empathic residents would express higher levels of support for TS-ED. The interaction we described between optimism and IRM, however, suggests that further study with a wider range of measures is warranted.

The described interaction between IRM and optimism suggests that support for TS-ED and perhaps other morally controversial procedures are the result of complex interactions between religiosity and attitude. These potential interactions should be more fully characterized to increase the likelihood of physicians respecting patient autonomy at the EOL while minimizing their distress. The observations that PGY2-4 residents were more supportive of TS-ED than PGY1 residents (current study) and younger physicians are more supportive than older physicians suggest the relationships between experience, attitudes, religious motivation, and ethical expectations are dynamic. Thus, a longitudinal study of residents during training and as practicing physicians with an expanded set of measures is required to fully characterize the potential interactions and prepare physicians to provide EOL care consistent with patients' preferences.

Table 1. Attitude and Factors Influencing Complex Medical Decisions (n=134)

Post Graduate Year	n (%)	
PGY 1	47 (35.1%)	
PGY 2 or 3	59 (44.0%)	
PGY 4 or greater	28 (20.9%)	
Gender		
Female	54 (40.3%)	
Male	80 (59.7%)	
Measures	Mean (SD)	Observed Range
Empathy	116.48 (9.92)	81-139
Hope	51.79 (4.81)	32-64
Optimism	16.55 (3.61)	4-24
Intrinsic Religious Motivation	3.21 (0.87)	1.25-5
Factors Influencing Complex Medical Decisions (each respondent's values summed to 100):		
Patient's expressed wishes or preferences	56.17 (21.11)	9-98
Physician's judgment based upon their experience	20.91 (13.77)	0-80
Professional organizations' standards or guidelines	16.74 (13.29)	0-60
Moral guidelines from your religious tradition	5.43 (8.64)	0-65
Other factor*	0.68 (4.23)	0-40

*Other factors included family of patient (n=1); moral guidelines from family and society (n=1); medical condition, expected mortality/morbidity (n=1); moral compass; not all morality is based on religion (n=1); overall moral/ethical beliefs (n=1).

Table 2. Distributions of Outcome Variables

	Response, n (%)		
	Very unsupportive	Neutral	Very supportive
TS-PP for Support	10 (7.5)	14 (10.5)	109 (82.0)
TS-ED for Support	40 (30.3)	62 (47.0)	30 (22.7)
	Refuse	Refer to palliative care team	Per published guidelines
TS-PP for Response to Request	2 (1.5%)	79 (59.4%)	52 (39.1%)
TS-ED for Response to Request	19 (14.3%)	105 (78.9)	9 (6.8%)

There was one missing value for support for TS-PP, response to request for TS-PP, and response to request for TS-ED. There were two missing values for support for TS-ED.

Table 3. Logistic Regression Models for Support

		TS-PP		
Predictor	Response[1]	Odds Ratio	CI95[2]	P
Empathy	Very Supportive	1.75	0.72-4.25	0.219
Hope	Very Supportive	0.98	0.47-2.06	0.957
Optimism	Very Supportive	1.58	0.78-3.21	0.206
Intrinsic Religious Motivation	Very Supportive	0.71	0.42 – 1.19	0.192
		TS-ED		
Empathy	Very Supportive	0.63	0.26 – 1.52	0.305
	Very Unsupportive	1.16	0.51 – 2.61	0.729
Hope	Very Supportive	0.70	0.32 – 1.54	0.378
	Very Unsupportive	1.06	0.52 – 2.17	0.867
Optimism	Very Supportive	0.80	0.39 – 1.64	0.538
	Very Unsupportive	0.79	0.41 – 1.54	0.496
Intrinsic Religious Motivation	Very Supportive	1.37	0.82 – 2.28	0.235
	Very Unsupportive	1.24	0.78 – 1.98	0.389

[1]Modeling odds of very supportive vs not for TS-PP and very supportive vs neutral and very unsupportive vs neutral for TS-ED

[2]95% Confidence Interval

Table 4. Univariate Logistic Regression Models for Response to Request

		TS-PP		
Predictor	Response[1]	Odds Ratio	CI95[2]	P
Empathy	Administer Per Guidelines	1.15	0.57 – 2.33	0.703
Hope	Administer Per Guidelines	1.15	0.61 – 2.15	0.668
Optimism	Administer Per Guidelines	1.11	0.62 – 2.00	0.718
Intrinsic Religious Motivation	Administer Per Guidelines	0.51	0.33 – 0.79	0.002
		TS-ED		
Empathy	Administer Per Guidelines	1.30	0.32 – 5.25	0.711
	Refuse	1.51	0.55 – 4.16	0.421
Hope	Administer Per Guidelines	1.06	0.32 – 3.58	0.922
	Refuse	1.26	0.52 – 3.02	0.609
Optimism	Administer Per Guidelines	1.63	0.46 – 5.72	0.448
	Refuse	0.72	0.33 – 1.59	0.419
Intrinsic Religious Motivation	Administer Per Guidelines	0.87	0.40 – 1.90	0.720
	Refuse	1.12	0.64 – 1.98	0.688

[1]Modeling odds of administer per published guidelines vs. refer to palliative care (2 refusals excluded) for TS-PP and administer per published guidelines vs refer to palliative care and refuse vs. refer to palliative care for TS-ED

[2]95% Confidence Interval

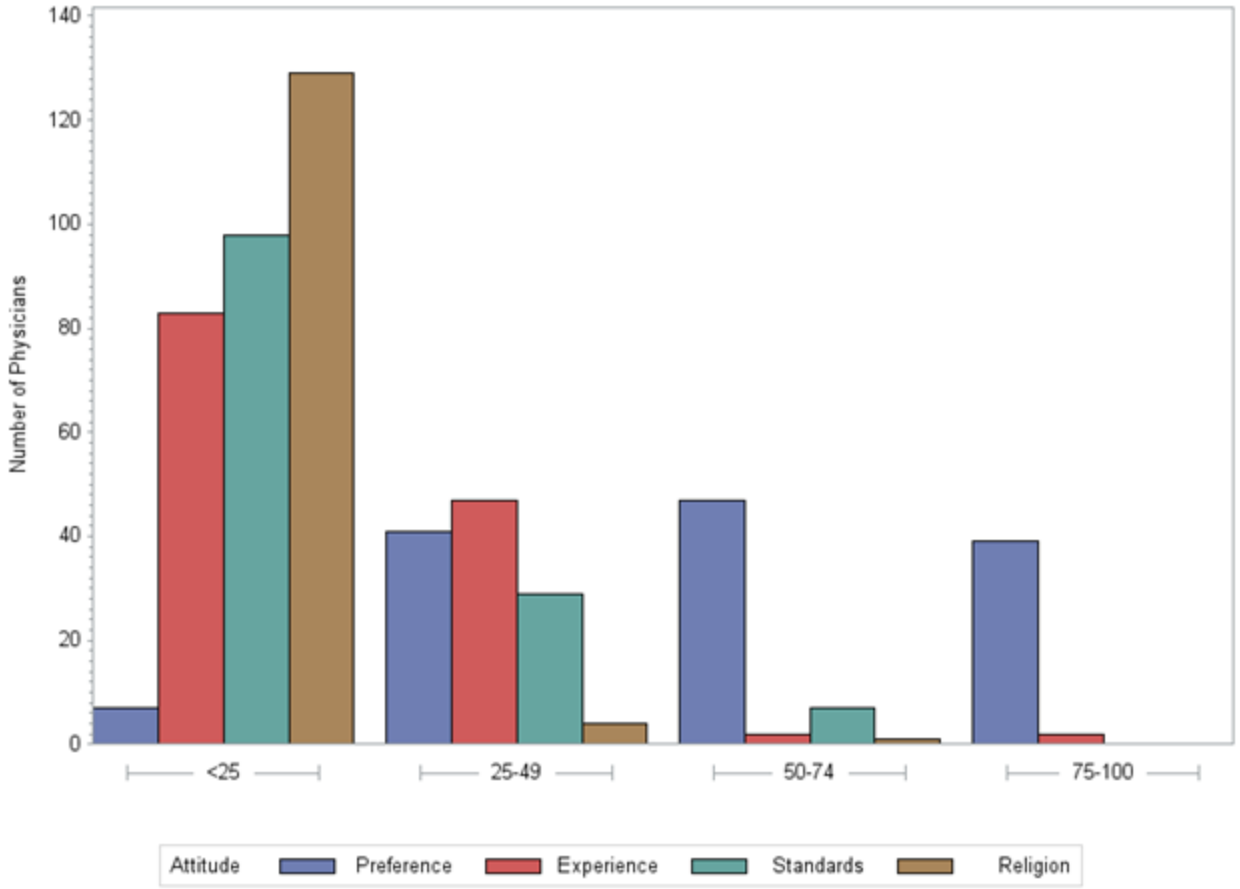

Figure 1: Distribution of points assigned to the listed factors when facing an ethically complex decision.