Palliative Care Training during Fellowship: A National Survey of U.S. Hematology and Oncology Fellows

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Abstract

Background: Despite requirements for palliative care training during fellowship, there is a paucity of recent data regarding the attitudes, knowledge, and skills of hematology/ oncology fellows in palliative care.

Objective: Our aim was to assess fellows' attitudes toward and quality of training in palliative care during fellowship and perceived preparedness to care for patients at the end of life (EOL).

Methods: In May 2013 a cross-sectional survey of hematology/oncology fellows was conducted.

Results: Fellows from 93 of 138 fellowship programs responded (67.4%). Of the 347 fellows e-mailed, 176 participated. Nearly all fellows (99%) indicated that physicians have a responsibility to help patients at EOL. Fellows felt their overall training in fellowship was superior to training in EOL care (4.24 ± 0.78 versus 3.53 ± 0.99 on a 5-5 scale where 1 = poor and 5 = excellent, $p < 0.0001$). Fellows who had a rotation in palliative care during fellowship (44.9%) reported better teaching on managing a patient at EOL than those who did not (3.91 ± 1.0 versus 3.21 ± 0.87 , $p < 0.0001$). Fellows reporting better teaching in EOL care felt better prepared to care for patients at EOL ($r = 0.52$, $p < 0.0001$). More than 25% reported not being explicitly taught how to assess prognosis, when to refer a patient to hospice, or how to conduct a family meeting to discuss treatment options.

Conclusion: Many recent oncology fellows are still inadequately prepared to provide palliative care to their patients. There is significant room for improvement with regards to the quality of palliative care training in U.S. hematology/oncology fellowship programs.

Introduction

THE ACCREDITATION COUNCIL for Graduate Medical Education (ACGME) has new requirements for hematology/oncology fellowships that highlight the importance of palliative care,¹ and hematology/oncology clinicians frequently care for patients at the end of life (EOL). Major oncology professional societies such as the American Society of Clinical Oncology (ASCO) have recommended the integration of palliative care services into standard oncology practice at the time a person is diagnosed with metastatic or advanced cancer.² There is a paucity of published research assessing hematology/oncology fellows' perception of quality of training in palliative care.

Although the oncological community has begun to address the incorporation of palliative care into oncological care,

hematology/oncology fellows' knowledge, attitudes, and skills in palliative care have not been reported since the publication of the ASCO position statement except for one paper published in 2013 on burnout in oncology fellows, which was based on a comprehensive 2004–2005 survey of fellows' training in palliative care.^{3,4} The 2004–2005 survey of 254 second-year oncology fellows enrolled in ACGME fellowships by Buss and colleagues found that oncology fellows rated the overall quality of their training in oncology better than their palliative care education.³ This study was limited by not knowing how many fellowship programs responded or whether there was clustering of responses from programs whose directors were invested in palliative care. Also since 2004–2005 there may have been some advancement in palliative care training during hematology/oncology fellowships.

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To follow-up on the 2004–2005 survey with more recent data and especially in light of the emphasis placed on palliative care training for oncology fellows by ASCO and the ACGME, among other professional institutions of medicine,^{1,2,5–6} we conducted a nationwide survey of oncology fellows to assess hematology/oncology fellows' attitudes toward quality of palliative care training during fellowship and preparedness to care for patients at EOL. Despite recommendations in the literature and by ASCO, we hypothesized that little had been done to improve the palliative care training current oncology fellows receive.

Methods

Subjects

This research constituted a cross-sectional study. At the time of our survey in 2013, the American Medical Association (AMA) no longer maintained a complete database of hematology/oncology fellows. Therefore, for the purposes of this study, we had to utilize a more indirect method to contact potential subjects than the methods utilized in the 2004–2005 Buss study. The AMA's Fellowship and Residency Electronic Interactive Database (FREIDA), however, did indicate that there were 1432 oncology fellows in 2013. We tried to obtain these fellows' e-mail addresses by the following two ways: 1) letters were sent via e-mail to program directors and coordinators from each of the hematology/oncology programs listed by the ACGME requesting e-mail addresses of all fellows from their respective programs resulting in the obtaining of 114 e-mail addresses; and 2) publicly available e-mail addresses were obtained from programs by searching combined hematology/oncology programs' websites online bringing the total number of fellows with e-mail contacts to 347.

Fellow participation in the survey was facilitated in two ways: fellows were e-mailed directly, and 114 of a total of 138 program coordinators were contacted via telephone and were asked to talk to the program directors to encourage their fellows to participate in the study. In a multiphase process beginning with outreach to program directors, program coordinators, and individual fellows, fellows were encouraged to submit their survey responses through REDCap (Research Electronic Data Capture, Vanderbilt University, Nashville, TN), which was hosted by the Clinical and Translational Research Institute at West Virginia University.⁷ From May to June of 2013 we surveyed current U.S. hematology/oncology fellows about palliative care training during fellowship and their perceived preparedness to care for patients at EOL. This time frame was specifically chosen to attempt to get a diverse range of answers, with fellows who were close to completing one year of fellowship to those nearing the end of their training.

Data were then collected into an Oracle database where it was de-identified after ascertaining which fellowship programs had responded and the data were analyzed anonymously. Data points such as religion, postgraduate year (PGY), and program name were de-identified to further enhance anonymity.

The survey was approved by the West Virginia University Institutional Review Board.

Survey

The survey was modified from a 2003 survey of nephrology fellows' attitudes on EOL care training.⁸ Additional

survey questions were developed from a similar study used to assess medical student, resident, and faculty palliative care training.^{3,9} Thereafter all questions were pilot-tested for face and content validity with oncology fellows and attending oncologists at West Virginia University.

Basic demographic questions on sex, age, race, role of spirituality, and PGY of training were included in the survey. The survey contained questions to assess fellows' attitudes toward, experience with, and knowledge of EOL care. The survey asked fellows what content they had been "explicitly taught" during fellowship with regard to palliative care skills such as assessing and managing pain, assessing prognosis, knowing when it is appropriate to refer a patient to palliative care and hospice, and how to conduct a family meeting to discuss treatment options. Queries included "yes" or "no" responses and Likert scale responses from 1="poor" to 5="excellent" to quantify quality of training and 0="completely unprepared" to 10="as prepared as I can be" to manage a patient at EOL. The full survey is included in the Appendix, which is available online at www.liebertpub.com/jpm.

Statistical analyses

Statistical analysis was performed with the *t* test for numeric variables and the Fisher's exact test for categorical variables. Pearson correlation was used to examine the relationship between fellows' perceived quality of teaching in palliative care and preparedness to care for patients at EOL. To reduce the probability of Type I errors from multiple testing, a more stringent alpha level of <0.01 was set for each test. All analyses were conducted using SAS software version 9.3 (SAS Institute, Cary, NC).

Results

Only 24% of the 1432 hematology/oncology fellows' (*n* = 347) e-mail addresses were identified via our methods. Of the 347 fellows contacted, 176 fellows completed surveys. There were 93 unique identifiers listed under program name of a total 138 hematology/oncology fellowship programs (67.4% of programs with participants).

Respondent characteristics

Table 1 displays respondents' demographic characteristics. There were approximately equal numbers of females and males, with primarily Caucasian and Asian populations responding to the survey. Age distribution was primarily in the 31 to 35 years old range with most respondents in the PGY 4 through PGY 6 years. Religious affiliation of most respondents was Christian. There was no significant difference in fellows' attitudes toward caring for dying patients, the quality of their training, or in their reported preparedness to manage a patient at EOL based on race, spirituality, or religion.

Associations between respondent characteristics and dependent variables

Of the respondents, 98% felt that providing care for dying patients was important, 99% indicated that physicians have a responsibility to help patients at EOL, and 100% felt that it was important to learn about how to provide care for dying patients. Fellows felt their overall training in fellowship was superior to their quality of training in EOL care (4.24 ± 0.78

TABLE 1. RESPONDENT DEMOGRAPHICS

<i>Postgraduate year</i>	<i>Number of respondents</i>	<i>% of total</i>
<4	49	28.0%
5	62	35.4%
6	49	28%
>7	15	8.5%
No answer	1	0.6%
<i>Age</i>		
26–30	25	14.30%
31–35	114	65.10%
36–40	28	16%
Over 40	8	4.60%
No answer	1	0.60%
<i>Sex</i>		
Male	91	52%
Female	84	48%
No answer	1	0.60%
<i>Ethnic background</i>		
Asian	50	28.41%
Black or African American	5	2.84%
Native American	0	0.00%
Native Hawaiian	1	0.57%
White	77	43.75%
Hispanic	7	3.98%
Other	12	6.82%
No answer	24	13.64%
<i>Religion</i>		
Protestant	32	18.18%
Catholic	31	17.61%
Jewish	9	5.11%
Muslim	19	10.80%
Hindu	27	15.34%
Other	15	8.52%
None	36	20.45%
No answer	7	3.98%

versus 3.53 ± 0.99 , ($p < 0.0001$). Fellows who had a rotation in palliative care during fellowship (44.9%) reported they had better teaching on managing a patient at EOL than those who did not (3.91 ± 1.0 versus 3.21 ± 0.87 , $p < 0.0001$). Fellows reporting better teaching in EOL care felt better prepared to care for patients at EOL ($r = 0.52$, $p < 0.0001$).

Despite the Accreditation Council of Graduate Medical Education requirement that oncology fellowship training provide education in palliative care,¹ 25% or more of the fellows reported *not* being explicitly taught how to assess prognosis, when it is appropriate to refer a patient to palliative care or hospice, how to respond to a patient's request to stop chemotherapy, or how to conduct a family meeting to discuss treatment options including conservative management without chemotherapy or radiation therapy (Fig. 1). Most fellows (62.9%) were not familiar with when to use the "surprise" question (i.e., "Would I be surprised if this patient died the next year?"), which has been found to be a simple, feasible, and effective tool to identify patients with cancer who have a greatly increased risk of one-year mortality and would be appropriate for palliative care.¹⁰

Up to 71.0% fellows responded that they did have resources such as counseling services offered to help them manage their own feelings about a patient's death and 21.7%

of respondents felt that the role of spirituality was "not important."

The 111 fellows (63.1%) who had conducted more than 10 EOL care family meetings were more likely to have been observed (27.9% versus 3.2%, $p < 0.001$) and to have received feedback than fellows who conducted fewer meetings (19.8% versus 1.6%, $p < 0.001$). On one or more occasions 89.7% of fellows stated they thought palliative care should have been included in the treatment plan for a patient with a poor prognosis.

Discussion

Almost all hematology/oncology fellows thought that care of the dying was an important physician responsibility. Compared with the 2004–2005 Buss et al. survey, the percentage of fellows completing a palliative care rotation during fellowship had increased from 26% to 44.9%. Also there had been an appreciable increase in certain palliative care topics about which fellows had been explicitly taught in 2013: the percentage of fellows taught to manage pain increased from 62.3% to 86.4%, the percentage taught how to inform a patient of a poor prognosis increased from 57.7% to 76.1%, and the percentage taught when to refer a patient to hospice increased from 63.2% to 72.7%. Unfortunately, as in the 2004–2005 survey the training fellows received about EOL in their programs was not of the same caliber as that of their overall fellowship training despite the widespread and increasing recognition of the benefit of palliative care in oncology and the ACGME requirement that oncology fellowship programs must integrate competence in palliative care into the curriculum. Also, 25% of fellows reported no explicit teaching on key palliative care skills such as assessing prognosis, conducting a family meeting to discuss treatment options, and referral to palliative care. This study underscores the importance in hematology/oncology fellowship programs of introducing educational initiatives to improve training on EOL care. This study also points to one very definite change in the fellowship curriculum that is likely to be beneficial: fellows who had rotated on a palliative care service reported better teaching in EOL care and better preparedness to treat cancer patients at the EOL.

Though palliative care services are becoming more available as inpatient consult services, access to such consultation may not be present in every setting.¹¹ In 2012 only 61% of hospitals with more than 50 beds had palliative care services.¹² Fellows who train at academic programs, which tend to be at larger institutions, may have access to palliative care consultative services; however, if they practice in community settings they will have to be prepared to provide at least generalist palliative care to their patients and possibly manage many of their patients' palliative care needs on their own.¹³ Considering that only 5.4% of the fellows surveyed in our study expressed a wish to pursue a career in academic medicine, it is vital that hematology/oncology fellows receive comprehensive training in EOL care.

Despite ACGME requirements for the inclusion in the fellowship curriculum of palliative care, many oncology fellows still do not feel comfortable with EOL care¹⁴ and oncologists in general do not have adequate training in communication skills and psychosocial care.^{15–18} Cultural differences between older and younger physicians may be

FIG. 1. Palliative care topics hematology/oncology programs do not uniformly teach.

present as societal changes take place through the years. Although we looked for an association between respondents' religion or race and attitudes toward palliative care, we found none.

There are several limitations to this study. Only 176 responses were received, whereas the AMA FREIDA database indicated there were 1432 hematology/oncology fellows in training. The unavailability of a complete database of fellows including e-mail addresses hampered the invitation of a larger number of fellows to participate. However, a 2013 similar survey¹⁹ of nephrology fellows yielded meaningful results with a comparable number of respondents, 204, and it is our opinion that our study may overestimate the degree to which palliative care is included in hematology/oncology fellowship curricula because respondents with more interest in palliative care may have been more likely to participate in our survey.²⁰ It is important to note that this survey was strictly conducted via electronic means. As data were de-identified during the data collection and reporting process, it is not possible to ascertain which programs responded, although it is notable that there were 93 unique identifiers from a total of 138 hematology/oncology programs throughout the United States. Additionally, results from this study are based on subjective data based on respondents' perceptions of their respective training experiences. We also did not assess which components of palliative care teaching (e.g., hospice referral, pain management) fellows found most valuable to their

overall preparedness for practice and in which they would desire more training. Future studies should seek to include a higher number of respondents and use standardized training metrics in palliative care that could facilitate a more objective assessment of fellows' training from one program to the next.

One of the key observations of the 2014 Institute of Medicine (IOM) report, "Dying in America: Improving Quality and Honoring Individual Preferences Near the End of Life," was that widespread adoption of timely referral to palliative care has been slow. To improve the quality of care of patients, the report recommended professional education and development to strengthen the palliative care knowledge and skills of all clinicians who care for individuals with advanced serious illness who are nearing EOL.²¹ The findings from our study demonstrate that oncology fellows value palliative care and want to learn more about it. Although there has been significantly more literature on the implementation of palliative care in oncology practice, the results from our survey continue to suggest that many recent fellows are still inadequately prepared to provide palliative care to their patients and that oncology fellowship programs need to improve their quality of training in palliative care. The results from our study suggest that one particularly effective way to do this is to include a palliative care rotation in the required oncology fellowship curriculum.

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Author Disclosure Statement

No competing financial interests exist.

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