Published in final edited form as:

Am J Hosp Palliat Care. 2015 May ; 32(3): 262–268. doi:10.1177/1049909113517163.

Communication About Advance Directives and End-of-Life Care Options Among Internal Medicine Residents

Ramona L. Rhodes, MD, MPH, MSCS¹, Kate Tindall, MD², Lei Xuan, PhD³, M. Elizabeth Paulk, MD⁴, and Ethan A. Halm, MD, MPH^{3,4}

¹Division of Geriatrics, UT Southwestern Medical Center, Dallas, TX, USA

²Department of Internal Medicine, UT Southwestern Medical Center, Dallas, TX, USA

³Division of Outcomes and Health Services Research, Department of Clinical Sciences, UT Southwestern Medical Center, Dallas, TX, USA

⁴Division of General Internal Medicine, UT Southwestern Medical Center, Dallas, TX, USA

Abstract

Background—Despite increasing awareness about the importance of discussing end-of-life (EOL) care options with terminally ill patients and families, many physicians remain uncomfortable with these discussions.

Objective—The objective of the study was to examine perceptions of and comfort with EOL care discussions among a group of internal medicine residents and the extent to which comfort with these discussions has improved over time.

Methods—In 2013, internal medicine residents at a large academic medical center were asked to participate in an on-line survey that assessed their attitudes and experiences with discussing EOL care with terminally-ill patients. These results were compared to data from a similar survey residents in the same program completed in 2006.

Results—Eighty-three (50%) residents completed the 2013 survey. About half (52%) felt strongly that they were able to have open, honest discussions with patients and families, while 71% felt conflicted about whether CPR was in the patient's best interest. About half (53%) felt strongly that it was okay for them to tell a patient/family member whether or not CPR was a good idea for them. Compared to 2006 respondents, the 2013 cohort felt they had more lectures about EOL communication, and had watched an attending have an EOL discussion more often.

© The Author(s) 2014

Corresponding Author: Ramona L. Rhodes, MD, MPH, MSCS, Division of Geriatrics, UT Southwestern Medical Center, 5323 Harry Hines Blvd, Dallas, TX 75390, USA. ramona.rhodes@UTSouthwestern.edu.

Authors' Note

The content is solely the responsibility of the authors and does not necessarily represent the official views of UT-STAR, UT Southwestern Medical Center and its affiliated academic and health care centers, the National Center for Advancing Translational Sciences, or the National Institutes of Health.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Conclusions—Modest improvements were made over time in trainees' exposure to EOL discussions; however, many residents remain uncomfortable and conflicted with having EOL care discussions with their patients. More effective training approaches in EOL communication are needed to train the next generation of internists.

Keywords

advance directives; hospice; palliative care; patient–physician communication; internal medicine residents; medical education

Introduction

Physicians of many disciplines often have the task of discussing advance directives and end-of-life (EOL) care options with their patients. These discussions may take place in the outpatient setting or during an acute care hospitalization and may consist of discussing advance care planning, introducing a patient to palliative care, or discussing the initiation of hospice services in persons who have a poor prognosis. Although some medical education programs include EOL care training in their curriculums,^{1–9} some physicians—including those in training still feel unprepared to have these discussions.^{10–12}

Patients and caregivers often rely heavily on health care providers as they or their loved ones approach the EOL. The decision to authorize a do not resuscitate (DNR) order, to withdraw life support, or to initiate hospice services is often difficult, and the quality of communication had with a physician is extremely important. Although physicians play an important role in the care of chronically ill patients, patients have sometimes had concerns about their communication with physicians about their care.¹³ Furthermore, although early EOL discussions have been associated with less aggressive care and greater use of hospice at the EOL,¹⁴ research has shown that many patients diagnosed with advanced illnesses, such as metastatic cancer, had not discussed EOL care options such as hospice with a provider within 4 to 7 months after diagnosis.¹⁵

National guidelines recommend that advance care planning in patients with cancer with years to months to live should include an open discussion about palliative care options including hospice; personal values and preferences for EOL care; the congruence between the patient's wishes/expectations and those of the family/health care team; and information about advance directives.¹⁶ Despite these recommendations, many discussions occur during acute hospital care, with providers other than oncologists and late in the course of illness.¹⁷ House officers are often involved in these very challenging EOL care discussions with seriously ill patients and their families—particularly in the inpatient setting and express some discomfort in doing so.¹⁸ Physicians and residents have also cited barriers to these discussions including personal discomfort with confronting mortality, fear of damaging the doctor–patient relationship, limited time to establish trust, and difficulty in managing complex family dynamics.¹⁹ The goal of this study is to examine perceptions and barriers to high-quality EOL care communication with terminally ill patients among a group of internal medicine residents at a large, urban academic medical center.

Methods

All internal medicine house officers (postgraduate year 1–3) in a large academic medical center were asked to participate in an online survey. The survey assessed their experiences with providing care to inpatients they considered to be terminally ill. The 2013 survey was administered in March 2013 so that all residents had a minimum of 7 months of experience as house officers. Additionally, all residents had rotated on the general inpatient medicine ward and intensive care unit (medical intensive care or cardiac care unit) within that time frame. The survey assessed residents' perceptions along the following domains: experience with advance directives and EOL care (i.e., performing cardiopulmonary resuscitation [CPR], discussing code status with patients and families, feeling conflicted, or pressured about performing CPR), attitudes about performing CPR on terminally ill patients, knowledge about EOL care and how that knowledge was obtained, and perceived barriers to effective communication with patients and families about EOL care. Demographic information including current postgraduate year, race/ethnicity, age, gender, and subspecialty of interest was also collected. Participation in the survey was completely voluntary, and residents who chose not to participate were not penalized in any way. Participants were entered in a drawing to win 1 of the 5 \$20 gift cards. The study was approved by the university's institutional review board. The 2013 results were compared to findings from a similar survey of residents in the same program in 2006. Of note, the 2006 survey was administered in March of that year, and no demographic information or information on subspecialty of interest was collected.

Data Analysis

Descriptive analyses were done to examine the baseline characteristics of the internal medicine residents. The chi-square test was used for analysis of ordinal or dichotomous variables and the 2-tailed *t*-test was used for continuous variables. Question by-question analysis was conducted to compare the results of the 2006 and the 2013 surveys using the Wilcoxon rank-sum test. We used SAS 9.2 (Cary, North Carolina) and Stata 11.0 (College Station, Texas) software and significance levels of $P < .05$ for all statistical comparisons.

Results

Demographic Information

Of the 166 residents, 83 completed the 2013 survey (50% response rate). In all, 61% of the respondents were male; the mean age for respondents was 28.3 years; and 44% self-identified as non-Hispanic white. The most common subspecialties of interest were cardiology (21.3%), gastroenterology (18.7%), and pulmonary/critical care (13.3%), while 14.7% were undecided. Although 81 of the 150 residents responded to the 2006 survey (54% response rate), other demographic information (i.e., age, race/ethnicity, and subspecialty of interest) was not captured. There was no statistically significant difference in participants by year of postgraduate training and interns responded most often to both surveys (35% in 2006; 39% in 2013, $P = 1/4 .41$). There was also no statistically significant difference in residents' estimates of the number of times they performed CPR by year. More

than half of all residents from both years (65% in 2006; 57.3% in 2013) had participated in at least 11 episodes of care requiring CPR (see Table 1).

2013 Cohort Survey Results

The majority (71.1%) of the 2013 cohort felt strongly about being conflicted about whether CPR was in a terminally ill patient's best interest, although the patient or family wanted CPR performed. They also felt strongly that they were able to be open and honest about the likely outcome of CPR when discussing code status with patients and families (52.4%) and felt that it was okay for them to tell a patient and/or family member that they did not feel that CPR was a good idea for them (53.1%). They sometimes worried about the physical pain being caused to the patient (42.2%) during CPR, the emotional suffering being caused to the family (33.7%), and the expense of the intervention given the likely outcome (33.7%). They often felt pressured into performing CPR by the patient (34.9%) or the family (41%), and sometimes felt legally obligated to perform CPR (33.7%). About one-third of the residents surveyed sometimes felt frustrated when terminally ill patients elected to remain full code (38.3%) and sometimes felt powerless to do the right thing when terminally ill patients elected to remain full code (32.1%).

With regard to educational opportunities in EOL care communication, about half of the residents said they had lectures on EOL care communication occasionally (48.2%) and that these lectures were somewhat helpful (66.7%). They occasionally watched an upper level resident have an EOL care discussion with a patient and/or family (42%) and found those instances to be somewhat helpful (51.9%). They sometimes (30%) watched an attending have a discussion about EOL care and often found those interactions to be helpful (46.9%). About half of the residents had been observed or received feedback from an attending (50.6%) or upper level resident (40%) during an advance directive or EOL care discussion they conducted.

Change in Attitudes About and Training in Discussions About Advance Directives and EOL Care Options Over Time

There were statistically significant findings noted when comparing results for each survey question by question. For instance, residents from the 2013 cohort more often strongly felt conflicted about performing CPR on a patient they deemed to be terminally ill, although the patient or family wanted CPR performed (50%, 2006; 71.1%, 2013, $P = .009$), and more often felt angry or frustrated when a terminally ill patient elected to remain full code ($P = .005$). Residents from the 2013 cohort had lectures about EOL care communication by medical staff more often than the 2006 cohort ($P = .006$). More of the 2006 resident group had often watched their senior residents have discussions about EOL care with patients and/or their families (41.3%, 2006; 21%, 2013, $P = .001$), while fewer of the 2013 cohort had never watched their attending have a discussion about EOL care with a patient and/or family (27.9%, 2006; 3.8%, 2013, $P = .004$). More of the 2013 cohort of residents said that watching an attending have an EOL care discussion was helpful (21.4%, 2006; 48.8%, 2013, $P = .03$). Although statistically significant, few residents from either cohort had been observed and given feedback on an advance directive or EOL discussion from an attending. Residents from the 2013 cohort more often felt that observation and feedback from an

attending physician would be extremely helpful (3.6%, 2006; 35.9%, 2013, $P = .02$) (See Table 2).

Barriers to EOL Communication

Respondents to the 2013 survey were asked about what they perceived to be barriers to communication about advance directives and EOL care with terminally ill patients and their families. Most respondents felt that their own lack of knowledge about the patients' prognosis (42.9%) and diagnosis (33.8%) and having a lack of a therapeutic relationship with the patient and/or family (25%) *occasionally* created barriers to these discussions. They sometimes felt that the patient and/or family's cultural beliefs (31.2%) or language was a barrier (29.9%). They *rarely* felt that the patient or family's religious beliefs (29.9%) or their own lack of knowledge about EOL care options (31.1%) were barriers to these discussions; however, they often felt that the patient or family's limited knowledge about the patient's illness was a barrier to effective communication about EOL care (37.7%; see Table 3).

Discussion

Patient–physician communication about advance directives and EOL care is an important and sometimes challenging aspect of patient care. The final locus of care is often the acute care hospital with nearly 50% of deaths due to chronic illness occurring in an acute care facility.²⁰ There are more than 350 accredited internal medicine residency programs and over 22 000 active residents and fellows.²¹ These residents receive their training in inpatient medicine, including the general medicine ward, the emergency department, and the intensive care unit, and often have discussions about code status and EOL care preferences with patients and their families. Research suggests that despite the emergence of palliative care as a specialty, physicians—including those in training—have discomfort with having EOL care discussions. Our study examined the perceptions of EOL care communication from the perspectives of internal medicine house officers in an academic internal medicine training program with a well-developed inpatient and outpatient palliative care service.

We found that internal medicine residents strongly felt that they were able to have open and honest communication with patients and their families about the likely outcome of CPR if it was to be performed and felt comfortable in telling patients and families if they did not feel that CPR was a good idea for them. These findings may not correlate with perceptions of EOL communication had by patients and families; however, as research has shown that trainee self-evaluations of their EOL communication skills do not predict assessments by their patients, patients' families, or their clinician–evaluators regarding the quality of EOL communication.²² Furthermore, other research has shown discrepant interpretations of a DNR discussion in up to 21% of cases in which resident physicians have these discussions with their hospitalized patients.²³

Modest improvements were noted over time in trainees' exposure to EOL discussions when comparing the 2006 cohort to the 2013 cohort of respondents, despite both groups having had a similar distribution across years of postgraduate training and experience with performing CPR. More residents in the 2013 group had watched an attending have a discussion about EOL care with a patient and/or family than in the 2006 group, and residents

in the 2013 cohort more often felt that watching an attending have a discussion was helpful. This may be because of the growth of the palliative care program in this academic medical center and increasing resident exposure to inpatient palliative care consultation and care for patients in the outpatient palliative care clinic. During this elective palliative care rotation, medical students, residents, and fellows play an active role in the inpatient palliative care consult service that is staffed by palliative care faculty. They are involved in consultations that address pain and symptom management, advance care planning, and EOL care discussions. Learners are involved in the outpatient palliative care clinic and are a part of the interdisciplinary team. A palliative medicine fellowship program was established in 2010, which allows learners to take part in palliative care evidence-based conference, palliative care journal club, and patient safety conference during the palliative care elective; however, this formal curriculum was not in place in 2006. In addition to this exposure, a special inpatient internal medicine teaching service was created in 2008 that is staffed by geriatrics and palliative care faculty with the specific goal of increasing learners' knowledge of geriatric core principles in the approach and treatment of the vulnerable older adult. Some of the learning objectives of this service include to be able to recognize specific geriatric syndromes frequently seen in the acute setting (falls, delirium, polypharmacy, etc), demonstrate effective pain management skills and management of the associated side effects, and to observe or demonstrate effective communication skills on breaking bad news, goal setting, or EOL conversations. The residents also continue to get exposure to EOL care discussion during their rotations on the general medicine ward, the emergency department, and in the medical and coronary intensive care units. These findings should also serve as impetus for attending-level physicians to actively involve trainees in these discussions and assist them in having these discussions as well.

The 2013 cohort felt that the patient and/or family's limited knowledge about the patient's illness was often a barrier to discussion about EOL care, while patients' religious beliefs and the residents' own lack of knowledge about EOL care options were rarely considered barriers to these discussions. Furthermore, respondents to the 2013 survey more often felt angry or frustrated when a terminally ill patient elected to remain full code than respondents to the 2006 survey. Research has shown that patients sometimes do not understand the severity of their illnesses. Patients receiving palliative chemotherapy for incurable cancers may not understand that chemotherapy is unlikely to be curative.²⁴ This can be further complicated by misunderstandings and discrepancies between patients and caregivers about treatment goals that may hinder discussions about options for care.²⁵ Although the residents in this cohort felt that religion rarely served as a barrier to EOL care communication, conflict with patient and families spirituality or religious beliefs is often-cited reasons for preferences of aggressive therapies at the EOL and barriers to acceptance of hospice care—particularly among underrepresented minorities.²⁶ These findings reinforce the fact that there are continued opportunities to examine barriers to EOL care communication, to expand education among providers about those barriers, and to enhance physician–patient communication across all levels of training and stages of the disease trajectory.

Our study has certain limitations that should be taken into account. First, this study was conducted in 1 residency program, and some would argue that generalizability to other settings may be limited in that regard. The residents in this training program, however,

receive exposure to inpatient medicine in a variety of settings—including a county hospital that serves a large safety net population, a regional Veterans Affairs hospital, and a University-based hospital. This gives them exposure to a diverse patient population. Furthermore, our study examines how these perceptions may change over time and with the continued emergence of palliative medicine as a specialty. Second, our findings are based solely on resident self-report, and recall bias may also play a role. Perceptions of patients and families may have been helpful to determine whether there was congruence in perceptions of EOL care communication and will be considered in future research in this area. Finally, our study had a modest response rate of 50%, which would not allow us to examine changes in perception of EOL communication by PGY. Half of the residents in this large, academic residency program did respond to our survey, and on comparing the 2006 and 2013 cohorts on available demographic findings, they were comparable. Furthermore, response rates for similar studies of residents' perceptions have ranged from 47% to as high as 90%.^{23,27,28} Despite these limitations, our findings have shown how internal medicine residents view communication about advance directives and EOL care during an acute care hospitalization at this institution. Comparisons of survey results collected 7 years apart reveal modest improvements; however, there is a need for continued EOL care education and curriculum development.

Conclusions

In our study, we found that internal medicine residents felt comfortable in being open and honest with terminally ill patients and families about code status determination although they felt conflicted about performing CPR on those patients. They felt that watching an attending have a discussion about EOL care was helpful although many were never observed or received feedback from an attending physician on EOL discussions they conducted themselves. There was modest improvement in EOL care education and training, but opportunities for improvement in that area remain. These findings can and should be used in creating an EOL care curriculum for medical students and physicians in training so that barriers to advance care planning and EOL care options such as palliative care and hospice can be surmounted. The ultimate goal should be to insure that the next generation of physicians will be well equipped to participate in shared decision making with patients and their families and facilitate discussions about advance care planning and EOL care options, including palliative care and hospice services.

Acknowledgments

The authors would like to thank the internal medicine residents, faculty, and staff who participated in this project for their hard work and dedication to patient care. The authors also thank John R. Pittman, Jr., MD for his work on earlier versions of this project.

Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was conducted with support from UT-STAR, NIH/NCATS Grant Number KL2TR000453.

References

1. Liao S, Amin A, Rucker L. An innovative, longitudinal program to teach residents about end-of-life care. *Acad Med*. 2004; 79(8):752–757. [PubMed: 15277130]
2. Mullan PB, Weissman DE, Ambuel B, von Gunten C. End-of-life care education in internal medicine residency programs: an inter-institutional study. *J Palliat Med*. 2002; 5(4):487–496. [PubMed: 12353495]
3. Stanton RN. Ambulatory hospice training in family medicine residency. *J Palliat Med*. 2003; 6(5): 782–785. [PubMed: 14622464]
4. Von Gunten CF, Von Roenn JH, Gradishar W, Weitzman S. A hospice/palliative medicine rotation for fellows training in hematology–oncology. *J Cancer Educ*. 1995; 10(4):200–202. [PubMed: 8924394]
5. Von Gunten CF, Von Roenn JH, Johnson-Neely K, Martinez J, Weitzman S. Hospice and palliative care: attitudes and practices of the physician faculty of an academic hospital. *Am J Hosp Palliat Care*. 1995; 12(4):38–42. [PubMed: 7543273]
6. Weissman DE, Ambuel B, von Gunten CF, et al. Outcomes from a national multispecialty palliative care curriculum development project. *J Palliat Med*. 2007; 10(2):408–419. [PubMed: 17472513]
7. Weissman DE, Block SD. ACGME requirements for end-of-life training in selected residency and fellowship programs: a status report. *Acad Med*. 2002; 77(4):299–304. [PubMed: 11953294]
8. Weissman DE, Mullan PB, Ambuel B, von Gunten C. End-of-life curriculum reform: outcomes and impact in a follow-up study of internal medicine residency programs. *J Palliat Med*. 2002; 5(4):497–506. [PubMed: 12353496]
9. Yacht AC, Suglia SF, Orlander JD. Evaluating an end-of-life curriculum in a medical residency program. *Am J Hosp Palliat Care*. 2006; 23(6):439–446. [PubMed: 17210997]
10. Sulmasy DP, He MK, McAuley R, Ury WA. Beliefs and attitudes of nurses and physicians about do not resuscitate orders and who should speak to patients and families about them. *Crit Care Med*. 2008; 36(6):1817–1822. [PubMed: 18496357]
11. Sulmasy DP, Sood JR, Ury WA. Physicians' confidence in discussing do not resuscitate orders with patients and surrogates. *J Med Ethics*. 2008; 34(2):96–101. [PubMed: 18234947]
12. Ury WA, Berkman CS, Weber CM, Pignotti MG, Leipzig RM. Assessing medical students' training in end-of-life communication: a survey of interns at one urban teaching hospital. *Acad Med*. 2003; 78(5):530–537. [PubMed: 12742792]
13. Kimberlin C, Brushwood D, Allen W, Radson E, Wilson D. Cancer patient and caregiver experiences: communication and pain management issues. *J Pain Symptom Manage*. 2004; 28(6): 566–578. [PubMed: 15589081]
14. Mack JW, Cronin A, Keating NL, et al. Associations between end-of-life discussion characteristics and care received near death: a prospective cohort study. *J Clin Oncol*. 2012; 30(35):4387–4395. [PubMed: 23150700]
15. Huskamp HA, Keating NL, Malin JL, et al. Discussions with physicians about hospice among patients with metastatic lung cancer. *Arch Intern Med*. 2009; 169(10):954–962. [PubMed: 19468089]
16. NCCN Clinical Practice Guidelines in Oncology—Palliative Care National Comprehensive Cancer Network. 2011 <http://oralcancerfoundation.org/treatment/pdf/palliative.pdf>.
17. Mack JW, Cronin A, Taback N, et al. End-of-life care discussions among patients with advanced cancer: a cohort study. *Ann Intern Med*. 2012; 156(3):204–210. [PubMed: 22312140]
18. Gorman TE, Ahern SP, Wiseman J, Skrobik Y. Residents' end-of-life decision making with adult hospitalized patients: a review of the literature. *Acad Med*. 2005; 80(7):622–633. [PubMed: 15980078]
19. Calam B, Far S, Andrew R. Discussions of “code status” on a family practice teaching ward: what barriers do family physicians face? *CMAJ*. 2000; 163(10):1255–1259. [PubMed: 11107460]
20. Gruneir A, Mor V, Weitzen S, Truchil R, Teno J, Roy J. Where people die: a multilevel approach to understanding influences on site of death in America. *Med Care Res Rev*. 2007; 64(4):351–378. [PubMed: 17684107]

21. FREIDA Online Specialty Training Search—Internal Medicine. Chicago, IL: American Medical Association; 2011. <https://freida.ama-assn.org/Freida/user/specStatisticsSearchdo?method=viewDetail&spcCd=140&pageNumber=2>. [Accessed August 22, 2013]
22. Dickson RP, Engelberg RA, Back AL, Ford DW, Curtis JR. Internal medicine trainee self-assessments of end-of-life communication skills do not predict assessments of patients, families, or clinician-evaluators. *J Palliat Med*. 2012; 15(4):418–426. [PubMed: 22475195]
23. Deep KS, Green SF, Griffith CH, Wilson JF. Medical residents' perspectives on discussions of advanced directives: can prior experience affect how they approach patients? *J Palliat Med*. 2007; 10(3):712–720. [PubMed: 17592983]
24. Weeks JC, Catalano PJ, Cronin A, et al. Patients' expectations about effects of chemotherapy for advanced cancer. *N Engl J Med*. 2012; 367(17):1616–1625. [PubMed: 23094723]
25. Burns CM, Broom DH, Smith WT, Dear K, Craft PS. Fluctuating awareness of treatment goals among patients and their caregivers: a longitudinal study of a dynamic process. *Support Care Cancer*. 2007; 15(2):187–196. [PubMed: 16953423]
26. Johnson KS, Elbert-Avila KI, Tulsy JA. The influence of spiritual beliefs and practices on the treatment preferences of African Americans: a review of the literature. *J Am Geriatr Soc*. 2005; 53(4):711–719. [PubMed: 15817022]
27. Billings ME, Curtis JR, Engelberg RA. Medicine residents' self-perceived competence in end-of-life care. *Acad Med*. 2009; 84(11):1533–1539. [PubMed: 19858811]
28. Schroder C, Heyland D, Jiang X, Rocker G, Dodek P. Educating medical residents in end-of-life care: insights from a multicenter survey. *J Palliat Med*. 2009; 12(5):459–470. [PubMed: 19416043]

Table 1Baseline Characteristics of the Sample.^a

Baseline characteristics	2006 sample, N = 81	2013 sample, N = 83	P value
Male, %	NA	47 (61)	
Mean age, years	NA	28.3	
Race			
American Indian	NA	1 (1.3)	
Asian		30 (39.5)	
Black/African American		1 (1.3)	
Multiracial		10 (13.2)	
White		34 (44.7)	
Hispanic	NA	8 (10.4)	
Specialty of interest			
Allergy/immunology	NA	3 (4)	
Cardiology		16 (21.3)	
Gastroenterology		14 (18.7)	
General internal medicine/primary care		5 (6.7)	
Hematology/oncology		6 (8)	
Hospitalist medicine		6 (8)	
Infectious diseases		1 (1.3)	
Nephrology		2 (2.7)	
Other/undecided		11 (14.7)	
Pulmonary/critical care		10 (13.3)	
Rheumatology		1 (1.3)	
Year of training			.41
PGY-1	21 (35)	30 (39)	
PGY-2	19 (31.7)	22 (28.6)	
PGY-3	18 (30)	25 (32.4)	
PGY-4	2 (3.3)	0	
Number of times CPR performed			.52
1–5	12 (15)	11 (14.7)	
6–10	16 (20)	21 (28)	
11–20	22 (27.5)	23 (30.7)	
21–30	16 (20)	13 (17.3)	
>30	14 (17.5)	7 (9.3)	

Abbreviations: CPR, cardiopulmonary resuscitation; NA, not available; PGY, postgraduate year.

^aThere is missing data.

Table 2Change in Attitudes About and Training in Discussions About Advance Directives and EOL Care Options.^a

Survey questions	2006 sample, N = 81 (%)	2013 sample, N = 83 (%)	P value
There have been times when a patient or family wanted CPR, but I felt conflicted about whether it was in the patient's best interest.			.009
Strongly disagree	1 (1.3)	0	
Somewhat disagree	2 (2.5)	1 (1.2)	
Neither agree or disagree	5 (6.2)	5 (6.0)	
Somewhat agree	32 (40)	18 (21.7)	
Strongly agree	40 (50)	59 (71.1)	
When I am discussing code status with a patient or family, I am able to be open and honest about what the outcome is likely to be.			.71
Strongly disagree	0	0	
Somewhat disagree	3 (3.7)	1 (1.3)	
Neither agree or disagree	4 (4.9)	2 (2.4)	
Somewhat agree	32 (39.5)	36 (43.9)	
Strongly agree	42 (51.9)	43 (52.4)	
It is ok for me to tell a patient and/or family member whether or not I think CPR is a good idea for them.			.30
Strongly disagree	4 (5)	0	
Somewhat disagree	3 (3.8)	5 (6.2)	
Neither agree or disagree	4 (5)	4 (4.9)	
Somewhat agree	34 (42.4)	29 (35.8)	
Strongly agree	35 (43.8)	43 (53.1)	
When a terminally ill patient elects to remain full code, it makes me angry or frustrated.			.005
Strongly disagree	15 (18.7)	11 (13.5)	
Somewhat disagree	14 (17.5)	14 (17.3)	
Neither agree or disagree	30 (37.5)	14 (17.3)	
Somewhat agree	18 (22.5)	31 (38.3)	
Strongly agree	3 (3.8)	11 (13.6)	
How often have you had lectures about EOL care communication by medical staff?			.006
Never	6 (7.4)	0	
Rarely	33 (40.7)	19 (23.4)	
Occasionally	22 (27.2)	39 (48.2)	
Sometimes	20 (24.7)	19 (23.5)	
Often	0	4 (4.9)	
How often have you watched your senior resident have a discussion about EOL care with a patient/family?			.001
Never	2 (2.6)	0	
Rarely	2 (2.6)	7 (8.6)	
Occasionally	19 (24.4)	34 (42)	
Sometimes	22 (28.2)	23 (28.4)	
Often	33 (42.2)	17 (21)	

Survey questions	2006 sample, N = 81 (%)	2013 sample, N = 83 (%)	P value
How often have you watched an attending have a discussion about EOL care with a patient/family?			.004
Never	22 (27.8)	3 (3.7)	
Rarely	16 (20.3)	20 (25)	
Occasionally	17 (21.5)	24 (30)	
Sometimes	18 (22.8)	24 (30)	
Often	6 (7.6)	9 (11.3)	
If you've ever watched an attending, how helpful was this to you?	2 (3.6)	0	.03
Never	1 (1.8)	6 (7.6)	
Rarely	8 (14.3)	10 (12.8)	
Occasionally	33 (58.9)	24 (30.8)	
Sometimes	12 (21.4)	38 (48.8)	
Often			
How often has an attending observed and given you feedback on an EOL discussion you've had with a patient and/or family member?			.03
Never	52 (67.5)	41 (50.6)	
Rarely	17 (22.1)	27 (33.3)	
Occasionally	6 (7.8)	8 (9.9)	
Sometimes	2 (2.6)	5 (6.2)	
Often	0	0	
If you've been observed by and received feedback from an attending, how helpful was this to you?			.02
Extremely unhelpful	1 (3.6)	1 (2.6)	
Somewhat unhelpful	5 (17.8)	2 (5.1)	
Neither helpful or unhelpful	7 (25)	10 (25.6)	
Somewhat helpful	14 (50)	12 (30.8)	
Extremely helpful	1 (3.6)	14 (35.9)	

Abbreviations: CPR, cardiopulmonary resuscitation; EOL, end of life.

^aMissing Data.

Table 3

Possible Barriers to Effective Advance Directive and EOL Care Discussions Among Internal Medicine Residents.^a

Barriers	2013 cohort, N = 83 (%)
Being Unsure of the patient's prognosis	
Never	2 (2.6)
Rarely	6 (7.8)
Occasionally	33 (42.9)
Sometimes	27 (35.1)
Often	9 (11.7)
Being unsure of the patient's diagnosis	
Never	3 (3.9)
Rarely	24 (31.2)
Occasionally	26 (33.8)
Sometimes	19 (24.7)
Often	5 (6.5)
A lack of a therapeutic relationship with the patient/family	
Never	7 (9.2)
Rarely	15 (19.7)
Occasionally	19 (25)
Sometimes	19 (25)
Often	16 (21.1)
The patient's/family's religious beliefs	
Never	10 (13.0)
Rarely	23 (29.9)
Occasionally	17 (22.1)
Sometimes	22 (28.6)
Often	5 (6.5)
The patient's/family's cultural beliefs	
Never	7 (9.1)
Rarely	22 (28.6)
Occasionally	15 (19.5)
Sometimes	24 (31.2)
Often	9 (11.7)
Language barriers	
Never	5 (6.5)
Rarely	20 (26.0)
Occasionally	10 (13.0)
Sometimes	23 (29.9)
Often	19 (24.7)
The patient's/family's limited knowledge about the patient's illness	
Never	3 (3.9)

Barriers	2013 cohort, N = 83 (%)
Rarely	7 (9.1)
Occasionally	13 (16.9)
Sometimes	25 (32.5)
Often	29 (37.7)
My own lack of knowledge about EOL care options (advance directives, hospice, and palliative care)	
Never	10 (13)
Rarely	24 (31.2)
Occasionally	15 (19.5)
ometimes	20 (26)
Often	8 (10.4)

Abbreviation: EOL, end of life.

^aMissing Data.