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Investigating Future Physician Preparedness for Providing Humanistic Care to Dying Patients

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Abstract

Palliative medicine has gained more recognition in recent years due to challenges regarding delivery of end-of-life (EOL) care. Specifically, the training provided to medical students in palliative medicine is often inadequate. Communication between patients and providers is essential when making important health care decisions and for facilitating quality of care. Thus, it is critical that future medical practitioners have the ability to effectively communicate EOL issues with patients and families. This research project aimed to investigate the quality of palliative medicine education provided to medical students. A cross-sectional, anonymous survey was created and distributed to current medical students (N = 113) to gauge perceptions of the adequacy of training provided, as well as self-assessed competence in providing EOL care to patients. Data collected was then analyzed and integrated to examine overall perceptions of current medical students regarding preparedness for providing quality care to dying patients. The results of this study assist in demonstrating how adequate training for future physicians is critical to improving the quality of care provided to patients at the end of life.

Keywords: end-of-life, preparedness, training

1. Introduction

Hospice and palliative medicine has received increased recognition in recent years, due to a heightened public and professional awareness of existing deficiencies in care provided to individuals at the end of life. The end of life is a trying time for individuals and families, who frequently face the burden of having to make difficult care-related decisions. Nearly 80% of deaths occur in health care institutions (e.g. hospitals and nursing homes), with family practitioners overseeing the majority of these patients' care.[10] With an increased number of palliative care options becoming available, there is a higher expectation that patients' care providers (or, more specifically, family practitioners) are able to effectively communicate end-of-life (EOL) care information, as well as expertly deliver quality palliative care.[5] However, due to inadequate training in palliative medicine, many physicians report feeling ill-prepared in this arena of care.[1] This challenge has left many terminally ill patients receiving care that may contradict their actual preferences.[4] These negative occurrences have led to further analysis of the undergraduate medical curriculum, particularly during the clinical training years (year three of medical school, or MS3; and year four of medical school, or MS4). There is potential for the successful inclusion of skillful and compassionate EOL care training for MS3 and MS4 students, but several challenges may impede this goal.

1.1 Purpose

Despite an increasing amount of evidence indicating the need for further training, there is still not enough data on MS3 and MS4 students to generalize that graduating medical students are unprepared to deliver EOL care. Existing research has primarily investigated EOL care training provided during the pre-clinical years (year one of medical school, or MS1; and year two of medical school, or MS2) and during residency programs.[9] Therefore, the goal of this study was to determine MS3 and MS4 students' level of preparedness to deliver EOL care based on the quality and quantity of their medical education. Examining the self-perceived competence of MS3 and MS4 students provides a better understanding of current gaps in EOL preparedness during the clinical training years of medical school, and why enhanced EOL care training is necessary to ensure that patients are well cared for at the end of life.

2. Systematic Review Of Literature

2.1 Search Method

Research articles were identified by conducting searches using PubMed, Medline via PubMed, Scopus, PsycINFO and CINAHL databases. Iterative searches were performed to promote comprehensiveness of the results. Search strings included: ("quality of medical education, end of life care"), ("medical student preparation, end of life care"), and ("medical student education, dying patients, end of life"). From December 2014 through January 2015 articles were screened by their titles and abstracts for topic relevance. Included articles were then retrieved, and their reference sections were cross-referenced for additional articles. Articles were continually cross-referenced until no new articles were found. Articles were then eliminated if inclusion criteria were not met or there was apparent overlap with other studies.

Inclusion criteria included: (1) the article was published in English, (2) the article was focused on medical school training in palliative medicine and EOL care, and (3) the participants in the study were current medical students in their third or fourth year of undergraduate curriculum. All articles retrieved were cross-referenced to ensure they met these inclusion criteria. Articles were excluded if: (1) the study was conducted outside of the United States, due to variations in medical education systems, (2) the study participants did not specifically address the undergraduate medical curriculum in relation to EOL care, and (3) the study was not original research (meta-analyses and other literature reviews were excluded, but were still utilized for cross-referencing purposes).

A total of 2,834 titles and abstracts were screened for topic relevance, leaving 492 pertinent articles. Articles were then eliminated if inclusion criteria were not met, or if there was overlap between articles, which left ten articles for analysis in this review.

2.2 Current Medical School Curriculum And Training

The medical model of care has traditionally emphasized caring for those in harm's way, which involves treating otherwise healthy individuals and curing disease in order to sustain life.[11] Given this type of training that is focused on preserving life and curative medical intervention, physicians are often unprepared to deliver care when treatments are no longer viable or even available. Medical students' training generally consists of a variety of modalities, including 'formal' and 'informal' curricula. Formal training is completed through didactics and other assignments, but experiences observing or performing care are considered more 'informal' training.[3]

It has become apparent that the types of curricula medical students are exposed to as well as the level of training received vary greatly by institution. Once the Liaison Committee on Medical Education (LCME) mandated EOL care training be a curricular requirement, data from the 1997-1998 school year showed that a mere four institutions (of 126 altogether) actually dedicated an entire course to palliative medicine alone.[7] Such courses are usually offered during the first two years of medical school in the form of a 12-hour course split over the course of three or four weeks. These brief courses can include visits to hospice facilities, didactic lessons and attendance at team meetings.[7] Due to stringent curricular requirements to emphasize other topics; most programs integrate palliative medicine into preexisting courses. This format does not offer students an opportunity to apply key principles during their clinical years where they are more likely to encounter terminally ill patients.[8]

2.3 Importance Of Improving Medical School Curriculum And Training

Individuals at the end of life, along with their families, deserve peace of mind knowing that their providers are delivering the highest quality care. However, bereaved families frequently note inadequate pain management and report discomfort when communicating with their providers.[6] Therefore, it is imperative that medical students are taught the knowledge and skills necessary to eventually provide the care that patients and families need. To ensure that all physicians are receiving the same training, more standardization across U.S. medical institutions is necessary, but determining the best way to accomplish this objective has been difficult.[8] Eventually integrating core competencies for EOL care into every medical student's training could help better ensure that future providers are well-versed when providing this type of care. More specifically, providing students with opportunities to experience palliative care during their clinical years could help improve their confidence, making them more likely to utilize palliative care and hospice referrals in the future.[6]

2.4 Overall Themes

Undergraduate medical training is comprised of a variety of teaching styles and curricula, all of which students respond to in different ways. Of the ten studies examined in the current literature review, results indicated that students exposed to formal curricula in EOL care demonstrated higher ratings of preparation to care for the dying. One study found that 90% of survey respondents held positive views about the physician's role in assisting the dying, yet less than 18% of students had received formal EOL care education.[9] However, the majority of students indicate that informal experiences (or informal curricula) are the best way to gain competence in EOL care. This seems appropriate, as increased patient contact generally results in greater comfort when providing care over time in more complex medical situations.[5] Medical students nevertheless are also exposed to 'hidden' curricula, or mixed signals, exhibited by faculty and residents which presents a significant barrier when it comes to helping students prepare to care for the dying. Students absorb all types of information, so negative attitudes and experiences on the part of faculty and residents can negatively impact students' overall attitudes towards EOL care, and also how they rate the overall 'quality' of their education.[3]

2.5 Summary

Overall, the review of the current literature appears to indicate that MS3 and MS4 students' training in palliative medicine and EOL care is lacking. Due to the limitations of each study, it remains difficult to generalize these results. However, across the ten studies included in this review, three main domains were identified for improvement moving forward: the adoption of standardized objectives and requirements, continued education for residents and faculty, and exposing MS3 and MS4 students to dying patients more frequently in order to improve their level of preparedness to provide EOL care. Perhaps most importantly, researchers noted that an increased level of institutional commitment to EOL care education is imperative moving forward.[3] This would likely involve a greater inclusion of formal EOL care curricula as well as faculty support for students, so students are able to feel comfortable developing their skills in providing this type of care.

3. Survey Method

To supplement the systematic review of the literature, a descriptive, cross-sectional survey was conducted with third and fourth year medical students to gauge their level of preparedness for providing care to dying patients in their future careers as medical practitioners.

3.1 Procedure And Participants

Participants were recruited from 22 medical institutions, including Big 10 institutions, and peer medical schools of the University of Minnesota. Four institutions agreed to distribute surveys to current MS3 and MS4 students. A cross-sectional, anonymous survey was then distributed electronically to third and fourth year students; their participation in this study was voluntary. Informed consent information was provided at the beginning of the survey. This study was determined safe for subjects and approved by the Institutional Review Board of the University of Minnesota

(IRB#1411E56361). One-hundred and thirteen medical students from four different institutions participated in this study. As the number of MS3 and MS4 students the survey was distributed to was not available, a refusal rate or analysis of refusal bias was not possible.

3.2 Measures

The survey was developed using adapted instrument items from previous research related to undergraduate medical training in EOL care.[2,3,9] Five question domains were assessed using four-point Likert scales; attitudes, perceptions of formal training, mixed messages, self-perceived competence and overall perception of medical education.

The following measures correlate with corresponding tables below: Extent of Formal Training Received for Handling Specific Circumstances[9] (1=No Formal Training, 4=Formal Training All Years) (Table 2), Perceptions of Formal Training on Specific End-of-Life Care Topics Taught[9] (1=Good, 4=Poor) (Table 3), and Self-Perceived Competence in EOL Care[2] (1=Very Competent, 4=Not At All Competent) (Table 4). Students also responded to one open-ended question related to their overall preparedness for EOL care based on their education (Table 5).

Other measures that are not shown below included: Attitudes about EOL Care[9] (1=Strongly Agree, 4=Strongly Disagree), Mixed Messages Portrayed by Residents and Faculty[9] (1=A lot, 4=Not At All), and Student Views of How Well Their Medical Education Has Prepared Them to Provide EOL Care[9] (1=Very Well Prepared, 4=Not At All Prepared).

As an example, participants rated their self-assessed competence to "conduct family meetings" on a scale from one (Very Competent) to four (Not At All Competent) (Table 4).

4. Results

4.1 Data Analysis

SPSS Statistics software was used to analyze the data. Percentages (N%) were used to summarize the frequency of item responses within each measure for the entire sample. Bivariate associations between student background and item responses were then summarized using chi-square tests and analyses of variance (ANOVAs).

4.2 Participant Characteristics

The participants in this study did not represent a sociodemographically diverse sample, but students did report varied levels of experience and training in EOL care. The sample was 61.9% female, 74.3% Caucasian, and 62.8% of respondents were fourth year students. Socio-demographic characteristics are shown in Table 1 below.

Table 1. Socio-demographic Characteristics

Variable	All Respondents, %
Gender (Female)	61.9
Race (Caucasian)	74.3
Training Year (4th year)	62.8
Experienced death of loved one	77.9
Taken course in end-of-life care	33.6
Completed rotation in end-of-life care	16.8
Preparedness for future end-of-life care (not at all/not very prepared)	35.4

4.3 Descriptive Analysis Of Item Responses

Select data are shown below highlighting formal training received, self-perceived competence in EOL care, and open-ended student responses regarding EOL care preparedness. Survey results indicate that many students are receiving formal training throughout the entirety of their medical training (Table 2). Though, it seems students are better trained in how to treat patients' pain than help families with things such as reconciliation and saying goodbye (Table 3). A similar trend can be observed in how students rated their self-perceived competence in various components of EOL care (Table 4). The open-ended responses reflect that medical students have had exposure to EOL care in some capacity, but welcome additional learning opportunities to further develop their confidence to provide this type of care (Table 5).

Table 2. Extent of Formal Training Received for Handling Specific Circumstances.

Experience	All Respondents, %
Discussion of prognosis with patient.	
No formal training	**12.4**
Pre-clinical years only	**15.0**
Clinical years only	**19.5**
Formal training all years	**53.1**
Giving bad news to a patient.	
No formal training	**6.2**
Pre-clinical years only	**25.7**
Clinical years only	**11.5**
Formal training all years	**56.6**
Discussions with a patient's family.	
No formal training	**24.8**
Pre-clinical years only	**10.6**
Clinical years only	**31.0**
Formal training all years	**33.6**
Advance directive discussions with patients.	
No formal training	**15.0**
Pre-clinical years only	**13.3**
Clinical years only	**32.7**
Formal training all years	**38.9**

Table 3. Perceptions of Formal Training on Specific End-of-Life Care Topics Taught. Results Indicate Respondents who Rated Statements as "Good" or "Moderately Good".

Statement	All Respondents, %
Treating neuropathic vs. somatic pain.	**61.1**
Determining when to refer patients to hospice.	**65.5**
Recognizing patient tolerance to opioids.	**61.9**
Assessing and managing depression for patients at the end of life.	**65.5**
Discussing treatment withdrawal.	**61.0**
Telling a patient he/she is dying.	**46.9**
Helping patients and families with reconciliation and saying goodbye to a relative at the end of life.	**36.3**
Responding to patient requests for physician-assisted suicide.	**16.8**
Teaching families to provide home care for a dying relative.	**28.3**

Table 4. Self-Perceived Competence in End-of-Life Care. Results Indicate Respondents who selected "Very Competent" or "Moderately Competent".

Survey Item	All Respondents, %
Giving bad news about an illness.	46.9
Conducting family meetings.	30.1
Expressing empathy.	91.2
Discussing treatment options.	68.2
Discussing how a patient can maintain hope.	41.6
Discussing code status with patients and families.	59.3
Discussing a hospice referral.	43.4
Determining a patient's goals/fears at the end of life.	52.2
Effectively managing pain.	33.6
Communicating with other care providers.	76.1
Eliciting a patient's emotional reaction to his/her illness.	63.7
Responding to "Why did this happen to me?"	38.9
Responding to patients who deny the seriousness of their illness.	23.9
Responding to patients/families wanting treatments not indicated.	31.9
Discussing religious/spiritual issues with patients/families.	47.8

Table 5. Open-Ended Student Responses on Adequacy of Medical Training in End-of-Life Care.

Responses
"I think there is a general hesitancy to discuss EOL issues in the medical community, which makes it difficult to incorporate this into the medical curriculum despite its importance."
"So much of our training focuses on care of patients who are going to recover or who we are helping to minimize complications of chronic illness or avoid dying. I've had a number of sessions discussing EOL issues from theoretical perspective, but precious little real experience with real dying patients, which I think would be necessary to achieve true competence."
"I have witnessed many family discussions but never had the opportunity to lead (with supervision) family discussions. I think this should be more integrated in the curriculum."
"We were immersed in settings attending codes, trauma, etc. but most of the time the resident and attending did not discuss EOL issues afterwards with us. We did not have assigned groups or mentors to bring these experiences to if we had questions."
"This is an especially challenging aspect of good care, and I would welcome additional opportunities to practice and improve my competency in delivering that care."

4.4 Bivariate Associations

Bivariate associations were calculated to assess correlations between students' backgrounds and their responses to survey items. Several bivariate associations were statistically significant. Women were more likely to dread dealing with the emotional stress of family members than men ($M = 2.79$ vs. 3.14; $p < .05$). Overall, women felt less competent than men in EOL care for a number of survey items ($p < .05$). Non-Caucasian students, and those who did not complete any rotation in EOL care, were more likely to feel that caring for dying patients is depressing ($M = 2.45$ vs. 2.85; $M = 2.67$ vs. 3.11, respectively; $p < .05$). Students who took a course in addition to completing a rotation in EOL care had enhanced perceptions of EOL competence ($p < .05$). Similarly, fourth year students felt more competent in EOL care than third year students for a number of items ($p < .001$ to $p < .05$).

5. Discussion

5.1 Summary Of Findings

The goal of this study was to gauge medical students' preparedness to provide EOL care based on the quality and quantity of their training. Overall, the results demonstrated that greater exposure to formal and informal palliative medicine training correlated with a higher self-assessed preparedness to care for the dying. Students recognized that physicians have a responsibility to provide EOL care, yet some educational deficiencies still exist.

Previous research has shown that students exposed to formal EOL curricula report higher ratings of preparation to care for the dying. Four questions were dedicated to gauging the extent of formal training received by students who participated in this survey. Nearly 25% of respondents had not received any training in how to hold a discussion with a patient's family, which is a basic responsibility that is not unique specifically to EOL care (Table 2). Respondents were also asked to rate perceptions of their formal training for completing specific tasks, such as treating pain, discussing treatment withdrawal, and helping patients and families with reconciliation at the end of life. Existing EOL care curricula has historically emphasized physical domains of EOL care rather than psychosocial domains (e.g. discussing patients' feelings, providing bereavement, etc.). Results aligned with this trend, in that more respondents felt comfortable treating pain and recognizing tolerance to opioids, but fewer students felt they received adequate training in how to assist families in saying goodbye to their loved ones (Table 3).

Given formal and informal exposure to EOL care, respondents were then asked to rate their self-perceived competence to carry out various responsibilities. Pain management is a critical piece of quality palliative care, but the psychosocial aspects are equally important; components such as gauging a patient's reaction to their diagnosis/illness, holding family meetings, and discussing a patient's fears about the end of life. Less than 50% of respondents selected "Very Competent" or "Moderately Competent" in response to these items (Table 4). Despite receiving more formal training in basic skills like pain management, only 33.6% of respondents reported feeling very or moderately competent at managing pain (Table 4).

These results demonstrated that the majority of students require a greater amount of exposure, whether formal or informal, to EOL care in order to feel confident in the quality of care being provided to patients. Students were able to respond to one open-ended question, highlighting the adequacy of their training (Table 5). Many of the responses emphasized the notion that there is a general hesitancy among medical practitioners to acknowledge death, meaning it is likely left out of medical training altogether. However, students recognized challenges associated with providing quality EOL care, and would undoubtedly welcome additional learning opportunities in this area of medicine.

5.2 Clinical Implications

Data obtained from this study demonstrate that educational deficiencies exist in current training in palliative medicine and EOL care. It seems there is a general hesitancy to acknowledge death and patients' needs at the end of life, given modern medicine and technological advancements which are intended to extend life.[9] The reality is that at some point all individuals die, so there is an expectation among patients and their family members that medical practitioners are able to provide high-quality EOL care. Research has demonstrated that medical students require more exposure to dying patients in order to develop skills and competency in this domain of medical care. To ensure that future medical practitioners are adequately prepared to provide EOL care, implementing standardized requirements across all medical institutions will be important.[2]

5.3 Limitations & Future Research

There are some study limitations that must be noted, as they impact generalizability. There was a high institutional refusal rate for this study, as students were recruited from 22 institutions but only four participated. This led to a smaller sample size, making it difficult to generalize findings obtained from the survey. Likewise, the survey involved self-reporting, meaning students could have potentially reported the quality of their training and education inaccurately. Presently, curricula and training standards vary across medical institutions. Therefore, it is difficult to generalize these results as students from different schools had different levels of exposure to EOL care throughout their medical training.

6. Conclusion

Despite its limitations, this research contributes to growing sentiment in the medical education literature that there is a need for more extensive training in EOL care. Such efforts will ensure that future medical practitioners are better prepared to provide high-quality care to patients at the end of life.

7. Acknowledgements

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