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Surgical palliative care training in general surgery residency: An educational needs assessment

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ABSTRACT

Introduction: There is increasing recognition that Surgical Palliative Care is an essential component of the holistic care of surgical patients and involves more than end-of-life care in the intensive care unit. General surgery residents are clinically exposed to patients with palliative care needs during each year of training, but few have a dedicated surgical palliative care curriculum. We undertook this educational needs assessment as the first step towards a longitudinal curriculum.

Methods: We conducted an anonymous survey of 94 general surgery residents and 115 faculty at community and university hospitals to assess their experience and comfort with surgical palliative care delivery. Residents and faculty were asked multiple choice and open-ended questions.

Results: There was a 55% response rate from residents and 33% response rate from faculty. The majority (77%) of respondents were junior residents (PGY1-3) and university-based faculty (66%). Approximately half of residents felt comfortable leading conversations in goals of care (58%), comfort-focused care (52%) and delivering bad news (57%), while greater than 90% of faculty agreed that chief residents needed additional training. All residents agreed they needed additional training and 85% wanted a formal curriculum. Analysis of open-ended questions suggests a deficiency in the pre-operative setting as no residents had participated in these conversations in an outpatient setting.

Conclusion: Residents and faculty believe trainees would benefit from further education in surgical palliative care with a dedicated curriculum. The outpatient, pre-operative counseling of patients was identified as a key learning need. These data support our ongoing work to develop a surgically pertinent palliative care curriculum.

Introduction

Critically and terminally ill surgical patients are a growing population and there is increasing recognition of the need for early palliative care involvement.[1] Conversations, however, may be delayed and concerns not addressed at initial presentation for a variety of reasons.[2] With our aging population, surgical palliative care can, and should, extend beyond the intensive care unit and is becoming an increasingly important part of the conversation in the preoperative period.[1–4] However, many surgeons who are involved in decision making for these terminally ill patients have little exposure and education to related topics in palliative care.[5]

Emphasis on palliative care in surgical training has been increasing, especially since the American College of Surgeons and American Board of Surgery have created expectations for knowledge in this field.[6,7] There are multiple aspects of surgical palliative care that are important for surgeons to be comfortable discussing. These include but not are not limited to: discussing prognosis, especially when the patient presents with a poor prognosis, discussing surgical errors, conversations about death, and symptom management for critically and terminally ill patients.[8] These topics, however, are rarely within a structured curriculum in surgical residencies.[5,9]

Many residents apply certain aspects of palliative care during their training, despite uncertain competence.[10] However, it is unknown where the deficiencies may lie for surgical trainees. This study aims to describe the palliative care educational needs of general surgery trainees.

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Methods

Following Institutional Review Board approval, we designed and pre-tested an anonymous electronic survey (Supplement 1). We distributed the survey via Survey Monkey to 94 general surgery residents at Oregon Health and Science University and a separate, similarly constructed, anonymous survey to 115 surgical faculty at both community and university hospitals located in Portland, OR in May 2018. All residents and faculty were provided with an informational email and an opt-out sheet prior to beginning the survey.

Residents and faculty were asked multiple choice questions and open ended questions to assess their experience and comfort with palliative care delivery to surgical patients. There were 19 multiple choice questions and 4 open ended questions for the resident survey. The faculty were asked 13 multiple choice questions and 3 open ended questions.

Both faculty and residents were asked questions regarding delivering bad news, goals of care, and transitioning to comfort care. Residents and faculty were asked how comfortable they felt on a 4-point Likert scale in certain situations involving care conferences in these separate topics. Following this, open ended questions were asked about perceived deficiencies within resident education and barriers to consulting palliative care.

Statistical analysis was performed by paired *t*-test when appropriate. A p value of <0.05 was considered significant.

Results

Fifty-two of 94 residents responded to the survey (55% response rate) and 38/115 faculty from both community and university hospital settings responded to the survey (33% response rate). The majority of resident respondents (77% or 40/52) were junior residents (PGY1-3). Attending respondents were primarily located at the university hospital (66% or 25/38). Approximately 80% of all residents had rotated in an ICU prior to completion of this survey (Table 1).

When asked about their experiences with delivering bad news to a patient (Table 2), approximately 56% of residents were primarily an observer during these conversations, 34% primarily led the meeting, and 7% had supervised a junior resident running the meeting. The majority (79%) had delivered bad news in an ICU setting. This was significantly different from attendings, who had more experience in the outpatient setting, $p = 0.02$. Fifty-seven percent of residents felt comfortable leading conferences delivering bad news, however, 100% of residents wanted to learn more about options for delivering news to patients. In agreement with this, 94% of faculty members agreed that residents would benefit from additional training in delivering bad news, $p = 0.1$.

Conferences that focused on understanding a patient's goals of care in the face of a life limiting injury or illness were performed primarily in an ICU setting for residents, differing from attendings who had more exposure to ward and clinic experiences, $p = 0.02$ (Table 3). Approximately 60% of residents felt comfortable leading a discussion in goals of care and again, 100% of residents wanted additional training in this subject. The majority (90%) of faculty also agreed that chief residents would benefit from additional training in this subject, $p = 0.15$.

When discussing comfort focused care with patients (Table 4), 52% of residents felt comfortable leading the conference and 100% of residents agreed that they would like additional training in this subject. Ninety percent of faculty, as well, thought that residents should receive additional training. Again, the overwhelming majority of residents had experience in the ICU setting, with deficiency in outpatient clinic exposure.

Many residents felt they had appropriate clinical exposure in palliative care principles, however, over half of the residents (56%) felt that their education had not been appropriate for their level of training. The majority of residents (85%) wanted to participate in a formal palliative care curriculum within their residency curriculum.

Similarly, when analyzing the open-ended questions, a deficiency in palliative care education in the elective pre-operative setting was commented on, as no residents had participated in these conversations in an outpatient setting. The majority of residents also found that their training in palliative care came mostly from direct observation during care conferences and only minimally from didactic sessions. Finally, when asking residents about barriers to consultation with palliative care, the majority found that this was due to attending preference. Faculty appeared to be in agreement with this opinion.

Table 1
Resident and attending demographics.

	N	Column %
Resident Year		
PGY 1	16	30.77%
PGY 2	9	17.31%
PGY 3	8	15.38%
PGY 4	6	11.54%
PGY 5	4	7.69%
PGY >5	2	3.85%
Research Resident	7	13.46%
Resident Rotated in ICU		
No	10	19.23%
Yes	42	80.77%
Attending Hospital Setting		
Community	13	34.21%
University	25	65.79%

Discussion

The aim of surgical palliative care is to relieve pain and suffering for patients and their families, particularly near the end of life, demonstrating positive effects on both quality and length of life.[11,12] It is important to note that surgical palliative care does not necessarily mean comfort-focused measures only, but rather is an adjunct focused on patient centered priorities, shared decision making and symptom relief in complex and high risk surgical patients that can be completely congruous with curative treatment. Dedicated surgical palliative care curricula are scarce. These data demonstrate the need for and importance of an established didactic program in this area. This study showed that many residents, although comfortable with holding care conferences, want additional training in palliative care topics and techniques, as observation of practice in clinical settings may not be sufficient. There was a particular need identified for the appropriate way to incorporate surgical palliative care into the pre-operative setting. While curriculum development is currently ongoing, one can imagine that advanced simulation environments and targeted small group didactics might also provide a baseline in order to provide basic skills that could be brought into clinical training.

As demonstrated in a study by Olmsted et al., surgical patients were found to have significantly less hospice or palliative care in the year prior to death in comparison to medical patients.[13] This decreased involvement may occur due to the hope of surgery providing a cure or decreasing symptoms when it goes as planned. However, unplanned outcomes for some patients may actually lead to reduced quality of life or suffering at the end of life.[14–16] Even at the faculty level, some surgeons do not feel comfortable holding these conversations with patients, which may be a contributing factor to this discordance of palliative care involvement. However,

Table 2
Delivering bad news to patients.

I feel comfortable leading conferences focused on delivering bad news				
Resident Response				
Strongly Disagree	4			8.5%
Disagree	16			34.0%
Agree	22			46.8%
Strongly Agree	5			10.6%
	Residents			Attendings
Most common setting for delivering bad news				p = 0.0174*
Inpatient Ward	10	21.3%	4	12.9%
Intensive Care Unit	37	78.7%	22	71.0%
Outpatient Clinic	0	0.0%	2	6.5%
Other	0	0.0%	3	9.7%
More training for delivering bad news is needed/desired				p = 0.0978
Strongly Disagree	0	0.0%	0	0.0%
Disagree	0	0.0%	2	6.5%
Agree	31	66.0%	16	51.6%
Strongly Agree	16	34.0%	13	41.9%

Note. * demonstrates significance ($p < 0.05$).

we cannot know for sure if this discomfort is due to a lack of practice in their specific clinical setting that may not encounter these types of patients, or if this is due to a lack of training in palliative care topics during residency.

Outpatient conversations regarding palliative care topics was a perceived deficiency for general surgery residency training in this program with a desire from trainees for additional didactics in this setting. The majority of these conversations occur with the attendings preoperatively and residents are generally neither observing nor participating in these conversations. Not only is it necessary to discuss symptom management, establish goals of care and outline potential adverse events, but informed consent for a patient undergoing a high-risk procedure is also an important learning point for trainees. Patients that have postoperative expectations that were not described to them preoperatively may suffer when they do not understand what went wrong, may feel a loss of control or even assume self-blame.[14,17] A curriculum that includes techniques for preoperative counseling and conversations about goals of care in difficult situations may be a reasonable solution to avoid misconceptions or unwanted treatment that may occur postoperatively.

Concurrent with this, there appear to be many barriers that go along with having these difficult conversations early on with patients or even delays in consulting the palliative care team. Symptom relief, preoperative counseling and goal setting primarily can be handled by the surgeon, but specialists can help provide assistance with complex family situations, decision making, and management of intractable symptoms.[2] However, our qualitative analysis demonstrated that some residents do not seek palliative care consultation due to attending preference. A few faculty responses felt that this barrier occurred due to a sense of "giving up" on their patient or the feeling that the term palliative care means hospice or death.

While not definitive, our results may reflect a belief that surgical palliative care is primarily focused on comfort care at the end of life and, concordantly, is not consistent with therapy focused on cure or prolongation of life. While speculative, we suggest that an integrated surgical palliative care curriculum that helps to socialize the broader understanding of palliative care in a supportive role may reduce the barriers to consultation. Emphasizing that surgical palliative care providers are focused on patient centered decision making, symptom palliative and quality of life and, most importantly, that these conversations can be completely consistent with curative intent care may be an avenue to reducing the sense that involving palliative care is tantamount to surrender. Even if the patient is not amenable to a consult with palliative care, further training and education in common management of symptoms, discussion of goals of care, and further support for the patient may

Table 3
Discussing goals of care with patients.

I feel comfortable leading conferences focused on goals of care.				
Resident Response				
Strongly Disagree	5			10.4%
Disagree	15			31.3%
Agree	24			50.0%
Strongly Agree	4			8.3%
	Residents			Attendings
Most common setting for goals of care				p = 0.0157*
Inpatient Ward	10	20.8%	6	19.4%
Intensive Care Unit	36	75.0%	18	58.1%
Outpatient Clinic	0	0.0%	5	16.1%
Other	2	4.2%	2	6.5%
More training about goals of care is needed/desired				p = 0.1464
Strongly Disagree	0	0.0%	0	0.0%
Disagree	0	0.0%	2	6.5%
Agree	29	60.4%	18	58.1%
Strongly Agree	19	39.6%	11	35.5%

Note. *demonstrates significance ($p < 0.05$).

Table 4
Discussing comfort focused care with patients.

I feel comfortable with leading conferences focused on comfort focused care				
Resident Response				
Strongly Disagree	6			12.5%
Disagree	17			35.4%
Agree	21			43.8%
Strongly Agree	4			8.3%
Most common setting for comfort focused care				p = 0.0970
Inpatient Ward	10	20.8%	4	12.9%
Intensive Care Unit	35	72.9%	22	71.0%
Other	3	6.3%	2	6.5%
Outpatient Clinic	0	0.0%	3	9.7%
More training about comfort focused care is needed/desired.				p = 0.0531
Strongly Disagree	0	0.0%	0	0.0%
Disagree	0	0.0%	3	9.7%
Agree	29	61.7%	16	51.6%
Strongly Agree	18	38.3%	12	38.7%

help alleviate this if the trainee or surgeon can adequately hold these discussions.

Given the recent emphasis on surgical palliative care education during residency has been increasing since the ACS involvement, there has been a resultant increase in the expectation that trainees will be knowledgeable and familiar with techniques and these topics.[6] The ACS committee on surgical palliative care created a set of principles in 2005, which has created further driving force for the development of residency curriculums.[7] This study further emphasizes that there is a need for a dedicated surgical palliative care curriculum within surgery residency programs to incorporate these evolving expectations of trainees.

There are a series of limitations to this study, and these data must be interpreted with those limitations in mind. This was a single center survey study, however, this particular program envelops both community and university hospital settings which may be more analogous to multiple surgical practices. Another limitation is the large proportion of junior residents and less chief residents that responded to the survey may contribute to an increase in discomfort holding certain care conferences. Despite this, all residents appeared to be interested in further training in palliative care practices and their supervising faculty agreed. In future studies, we hope to get an increased response from each PGY year. Lastly, there may be many residents who are not proponents for further teaching that did not fill out this survey. However, there is still a large proportion of trainees that would like a dedicated curriculum.

In conclusion, general surgery residents and faculty believe that trainees would benefit from further training in multiple aspects of palliative care practices. A dedicated curriculum that focuses on details of these difficult conversations would be beneficial during training to not only educate on the principals of surgical palliative care, but also to break boundaries that exist in formal palliative care consults. This may also help in giving general surgery residents the opportunity to become more involved in outpatient/pre-operative counseling. Ultimately, these data support ongoing work to develop a surgically pertinent palliative care curriculum aimed at developing skills which may lead to improvement in comfort care practices and patient education in difficult decisions.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.amjsurg.2019.01.008.

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