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The surgical resident experience in serious illness communication: A qualitative needs assessment with proposed solutions

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Abstract

Background: Serious illness communication skills are important tools for surgeons, but training in residency is limited.

Methods: Thirteen senior surgical residents at an academic center were interviewed about their experiences with serious illness communication. Conventional content analysis was performed using established communication frameworks and inductive development of themes.

Results: Residents had frequent conversations and employed known communication strategies. Three themes highlighted challenges they face. Illness severity included factors attributed to the illness that made serious illness communication more challenging: symptoms, poor prognosis, and urgency. Knowledge and feelings included the factual understanding and emotional experience of residents, patients, and families. Academic structure included hierarchy and the residents' dual role as learners and teachers. On reflection, residents identified needing greater experiential practice, analogous to learning procedural skills.

Conclusions: Surgical residents regularly face serious illness conversations with little training beyond observation of role models. Dedicated training may help meet this need.

Keywords

Serious illness communication; Resident education; Breaking bad news; Shared decision-making

1. Introduction

A common surgeon experience is serious illness communication – breaking the news of a difficult diagnoses, discussing high-risk procedures, making shared decisions, or disclosing

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complications. While these challenges occur most frequently in high acuity specialties, such as surgical critical care, trauma, surgical oncology, cardiothoracic surgery, or vascular surgery, the need for skills in quality communication are required of all surgeons.¹⁻³ Higher quality of serious illness communication results in improved patient satisfaction and perceptions of quality of care.⁴ An expanding evidence base in the broader medical literature illustrates numerous strategies to improve serious illness communication training.⁵ However, training surgeons in this essential skillset remains nascent.⁶

Surgical palliative care experts have described communication competencies for residents, with an aim to improve the quality of trainee serious illness communication skills and foster lifelong development.⁷ However, surgery residents frequently encounter communication challenges for which they feel unprepared.⁸ While educators have developed didactic curricula to improve resident preparation for serious illness communication,⁹ implementation remains limited, as both residents and faculty continue to identify serious illness communication as a training need.¹⁰ A lack of intentional experiential education, in contrast to the constant practical reinforcement of other aspects of surgical training, likely contributes to this ongoing deficit. In academic surgical settings, residents serve a significant role as educators for other residents, supplementing the faculty and formal didactic curricula.¹¹ In this study, we aimed to explore the surgical resident experience in serious illness communication to identify residents' needs, skills, and potential to teach other residents.

2. Methods

This was a qualitative thematic study of interviews with surgical residents about their experiences with serious illness communication. This study was approved by our institutional review board (protocol #19-29571). Individual interviews were chosen over group interviews to allow residents to share specific patient cases and discuss potentially distressing or challenging topics.¹² We recruited participants by email from the roster of surgery residents at PGY-4 level or higher at a single academic residency program. Interviews took place primarily by teleconference with some in-person interviews utilizing social distancing; no compensation was offered. At this program, surgery residents rotate on general and subspecialty surgical services at a tertiary medical center, a public safety net hospital, a Veterans Affairs medical center, a private hospital practice, and an integrated managed care system. Prior to this study, no surgical rotations included surgical faculty with formal palliative care training, and the weekly formal didactic conference curriculum did not include lectures on serious illness communication or other palliative care topics. Residents do not routinely rotate on palliative care services, but through patient care they interact with subspecialty palliative care consultants from our institution's Division of Palliative Medicine, which has a Hospice and Palliative Medicine Fellowship with experience training surgeons in this subspecialty.

We developed an interview guide based on a review of the literature and authors' prior experiences with training in and practicing general surgery, surgical oncology, palliative care, and critical care. One author (JL) used the guide to conduct semi-structured interviews. The interviewing author was a surgical trainee in the same program as the participants.

Several steps were taken to mitigate potential bias due to existing relationships: the interview guide was piloted with a non-participating resident from a different program and refined prior to proceeding with study participants; interviews were attended by an unrelated medical student (CI) who provided feedback and monitored progress through the interview guide; and analysis was performed anonymously.

Each interview had an exploratory component and a reflective component, both of which will help to identify needs. In the exploratory component, we asked about residents' prior experiences with serious illness conversations, how they handled the conversations, how they learned how to handle those conversations, and how they might teach their skills to junior residents. In the reflective component, the interviewer synthesized the resident's responses to the exploratory questions, named and described the resident's existing skills using established frameworks for serious illness communication,^{1,2,13} provided reinforcement of those skills, and offered an analogy for teaching communication skills as procedural skills. The named and reinforced skills in the reflective component were tabulated using these established frameworks in a deductive manner (Table 1).

We performed conventional content analysis of the interviews, with inductive development of codes from discrete excerpts, followed by categories of codes and themes.¹⁵ Interviews were audio recorded and anonymously transcribed by speech-recognition software (Rev.ai, San Francisco, USA) with review and editing by authors to correct transcription errors. Transcripts were read and coded by two authors (JL & CI), one a surgical trainee who had completed a fellowship in palliative medicine, and one a medical student. JL & CI discussed and developed preliminary codes after reading the first three interviews, finalized codes by the fifth interview, completed coding independently, and reconciled through consensus. Authors reviewed coded excerpts to develop categories and themes. Reviewing authors were faculty in palliative medicine, critical care, surgical oncology, general surgery, and surgical education. Two authors (JL and PO'S) had prior training and experience with qualitative research methodology.

3. Results

Thirteen senior residents (seven female, 54%) completed interviews, at which point thematic sufficiency was reached.¹⁶ Mean interview duration was 35 min (range 21–47 min). Residents estimated that serious illness conversations occurred on average once or twice per week on services with higher rates of serious illness and increased urgency, such as trauma, emergency general surgery, surgical oncology, and vascular surgery. Residents who reported previous exposure to formal education in serious illness communication experienced it primarily during medical school, while noting experiential education through observation of senior residents and faculty during residency. Table 1 shows established frameworks of serious illness communication skills, with quotations demonstrating skills discussed in the reflective component of the interviews. Analysis of the exploratory component of interviews for factors contributing to residents' challenges faced in serious illness communication revealed three themes: 1) illness severity, 2) knowledge and feelings, and 3) academic structure (Table 2).

3.1. Illness severity

The theme of illness severity included aspects attributed to the surgical disease – severe symptoms, poor prognosis, and urgency or time pressure – that complicated serious illness communication (Table 2). When asked about specific serious illness conversations, most residents recalled cases in which patients’ illnesses had poor prognoses, high morbidity or mortality, or limited options, such as metastatic cancer, end stage liver disease without transplant candidacy, traumatic brain injuries, severe necrotizing infections, and major cardiovascular complications. Illness in younger patients compounded the difficulty. Residents also found noted challenges when patients were suffering from severe symptoms.

Urgency was frequently cited as a hindrance to quality communication. In one example, a resident recounted a telephone consent with the parents of a critically ill neonate who needed an emergency bedside procedure. The situation was so urgent that the entire conversation, including delivering the bad news and obtaining consent, was forced to take place in less than 1 min. Besides the urgency of the surgical problems at hand, residents were also limited by the acuity of other patients on their service.

3.2. Knowledge and feelings

The theme of knowledge and feelings encompassed the factual understanding and emotional experience of residents, patients, and families (Table 2). Residents noted that serious illness conversations were more difficult when there was diagnostic or prognostic uncertainty. Residents felt that their own gains in knowledge of pathophysiology over time facilitated improved communication, while lack of knowledge as an early trainee was a hindrance: *“I think as I’ve moved along in residency, I have a stronger understanding of the options and [pathophysiology]. In that sense, it’s made the conversations easier because I have more answers and I have more understanding of what the options are for the patients” (Resident 2). “Intern level experiences stand out as being more difficult ... at that point, I was still establishing myself as a doctor. It was completely novel to be leading a conversation of that gravity. [For example], consenting someone for a CABG.” (Resident 6).*

Residents frequently endorsed allowing for clarifying questions and checking for understanding. When residents described challenges to imparting information, they often involved patients or families whom the resident felt had low health literacy or limited prior understanding. Residents considered adequately informing patients and maintaining rapport to be markers of quality in serious illness conversations: *“You go in with a goal in mind ... getting the patient to understand exactly what’s going on and what the next steps are” (Resident 8). “Nobody wants to have a conversation where you deliver bad news, but it feels okay if you did as well as you could have, you didn’t ruin your relationship with a patient ... you did your job as a physician to take care of them and deliver the news” (Resident 12).*

Conversely, mistrust or lack of rapport was noted to be a barrier to quality communication, as was discordance between the patient and provider, or similarly, between patients and family members. Cross-coverage and handoffs sometimes left residents communicating with unfamiliar patients: *“[The patient] hadn’t been under our care for very long ... so there wasn’t a level of established trust” (Resident 6).*

Finally, emotional suffering experienced by patients and families increased the difficulty of communication. Residents described recognizing and responding to emotion: *“[If] they were obviously sad, just telling them that you see that they’re feeling sad, I understand this is very hard news, normalizing [their] response ... allowing for silence and space for them to take in the information, because anything you try to say in that time is not going to be effective”* (Resident 7). Residents’ own emotions also contributed to difficulty. Speaking about having to share the news of an intra-operative death to family immediately afterward, one resident recalled *“being shellshocked and traumatized myself ... everything was really heartbreaking as a human ... you want to be prepared to provide comfort and understanding to the family at that time, which is hard to do when you’re still processing it”* (Resident 3). Countertransference added challenges: *“I saw myself in the patient. I could see myself being their brother or cousin, which resonated with me as such a hard situation”* (Resident 7).

3.3. Academic structure

Academic structure – the resident experience in an academic surgical model with a hierarchy of attending surgeons and trainees of various levels, as well as both formal and informal methods of learning and teaching – arose as a theme that could either foster or inhibit residents’ serious illness communication skills. The academic hierarchy of faculty and trainee surgeons added uncertainty to a resident’s role in serious illness communication: *“One of the things that’s really hard is that there’s always uncertainty about who owns the bad news. Is it the resident? Is it the chief? Is it the intern who often is the first person to encounter the information? Is it the attending who’s ultimately responsible for the care of the patient?”* (Resident 11). Hierarchy also constrained residents’ ability to lead conversations: *“[In a family meeting] with many family members in the room and many providers ... as a resident you’re not going to speak over any attendings, even though you might actually have a better relationship with the family than some of them do”* (Resident 7). Hierarchy could limit how senior residents teach and give autonomy to junior residents in serious illness communication: *“If I’m the senior resident and I’m there, then it falls on my shoulders to have that conversation”* (Resident 1).

When there was mistrust between patients and providers, hierarchy posed an additional challenge. Describing a situation in which an attending surgeon made a blunt recommendation, a resident recalled, *“the patient talked to me independently and told me he didn’t trust [the attending]. I was ... caught in between wanting to [follow] the party line with what your attending said ... but also having to respect what your patients say”* (Resident 6).

Despite the limitations of the academic hierarchy, residents felt they had observed valuable communication skills modeled by chief residents and attending surgeons. Few residents reported having been formally taught serious illness communication skills, but all recalled observing strong role models: *“I’ve seen attendings and senior residents conduct difficult conversations – break a diagnosis or walk someone through a hard decision-making process – and do that really well and really compassionately. I try to take note of the phrasing they use and try to glean as much as I can ... so that I can replicate that when it’s my turn to do those things”* (Resident 3).

3.4. Reflections

Residents, having largely learned their current skill set through observation, reflected on the lack of in-practice training. While formal education was a notable deficit, residents did not feel didactics alone would be sufficient to develop serious illness communication skills, citing the high stakes of real conversations: *“Didactics are a piece of it, but I don’t think that’s where you really learn how to do it because it’s so different to role play in a class or on [videoconference] and then be in the room with all these emotions, with real people and their lives at stake”* (Resident 5). *“I’ve figured out over time, if you’re thinking deeply and trying to be compassionate and trying your best in these conversations, eventually you’ll stumble upon how to do this. But ... it’s hard when the first time you’re ever doing that it’s with a real family where, if you don’t do it very well, that might be doubly hard for them”* (Resident 3).

Residents also reflected on their role as teachers for junior residents and medical students. Several identified existing practices they performed, such as pre-briefing for a conversation, or practices that they could adopt, such as allowing for supervised autonomy, that would serve as teaching opportunities: *“There are still times, even in the time pressure of residency, to focus more on the conversations you’re about to have with patients. And say to your team, this is going to be a hard conversation. This is how I want to approach this ... It probably will make us do a better job, too”* (Resident 12). *“I could see myself ... accompanying one of the [junior residents] to see a consult and there’s a difficult conversation that needs to be held – I could definitely see myself stepping into the background of that situation.”* (Resident 6).

Residents broadly embraced the analogy of teaching communication skills to teaching procedural skills. Residents noted that junior residents were prioritized for procedures despite the additional time and energy required: *“If we’re able to find time to go through the steps for a procedure with a [resident], there’s time in the day to talk about how to have surgical conversations”* (Resident 12). Residents identified opportunities for teaching, including afternoon rounds, phone updates, and routine consents. However, their own lack of formal training was seen as a barrier to teaching serious illness communication skills to others: *“When it comes to a difficult conversation, everything’s been ad hoc, informal acquisition of skill. Even if I am skilled at that, I wouldn’t even know ... Trying to be a teacher when no one necessarily was your teacher can be challenging”* (Resident 3).

4. Discussion

This qualitative study of senior surgical residents’ experiences with serious illness communication illustrated residents’ training needs for this important skill set, their intuitive understanding of and appreciation for key concepts, and the largely ad hoc, informal training that they receive through observation of role models. The Accreditation Council for Graduate Medical Education (ACGME), the American Board of Surgery (ABS), and the Surgical Council on Resident Education (SCORE) all endorse serious illness communication as a key competency for surgical trainees.^{17–19} Despite programmatic guidance and evidence from this and other studies that surgical residents frequently engage in serious illness communication, many feel underprepared.^{1,20} Prior to this study, our formal didactic

curriculum did not include serious illness communication. Our finding that existing learning occurs primarily through observation confirms prior survey-based studies of inadequate resident supervision, coaching, and feedback for serious illness communication.^{6,21} The detailed findings available in this interview-based study allow for greater specificity in identifying opportunities to improve resident training.

Residents frequently emphasized the importance of their own clinical knowledge, noting that unfamiliarity with nuanced details of surgery as an early trainee was a challenge. While increased complexity of understanding was important for themselves, many residents were aware of the need to limit jargon when sharing that knowledge with patients and families. Surgical literature on serious illness communication, such as the Best Case/Worst Case decision aid, emphasizes clearly imparting information to patients but also underscores the importance of gleaned information from patients about their values, hopes, and worries.²² This patient information is distilled into goals and preferences for care, resulting in goal-concordant plans. While serious illness communication involves a two-way flow of information, residents were more cognizant of the flow of information from providers to patients rather than the reverse. This deficit was notable in the framework of skills described by residents in Table 1.

Residents commonly cited health literacy as a barrier to conveying information. Similarly, they judged conversations to have gone well when patients understood the information. However, health literacy is complex and may often be misattributed when communication has been poor. Wynia and Osborn showed in a survey of nearly 6000 patients that those who self-identified as having limited health literacy were significantly more likely to report not receiving patient-centered communication than those who self-identified as having adequate health literacy, after adjusting for demographics and health care system factors.²³

While many residents noted that any uncertainty or lack of information in the face of factual inquiries by patients and families was a challenge, none recognized the emotional valence of certain practical questions.^{2,24} Weissman et al. described a key communication skill as the recognition that certain practical or cognitive questions may have an emotional basis that should be addressed with an empathic statement in addition to a factual response.²⁵ Therefore, the recognition of uncertainty as a driver of emotional responses was a notable deficit in existing resident skills. Dedicated surgical palliative care curricula or established communication training programs such as Vital Talk and the Serious Illness Conversation Guide can address these and other needs.^{13,26} These didactics may be additions to existing curricula, or, since protected learning time is finite, these topics may be integrated into existing didactics, as in the SCORE curriculum. Beyond curricula, residents experienced insufficient supervised clinical practice, despite this being the hallmark of training for other surgical skills.

We propose potential solutions to increase residents' supervised practice of serious illness communication by fostering intentional education for this skillset. Of the specific themes identified through this qualitative analysis, some are directly modifiable, while others must be addressed indirectly. Broadly required is a cultural shift toward treating serious illness conversations as a surgical procedure that can be taught with appropriate supervision

and graduated autonomy, similar to other entrustable activities.^{27,28} Our findings of senior residents' skills, combined with the established culture of residents as teachers of procedural skills, suggests that senior residents, with additional education in serious illness communication and train-the-trainer support, could propagate skills to junior residents. Residents in this study embraced the idea of treating communication as a procedural skill to teach and identified opportunities to teach their juniors in clinical service. This cultural shift may mitigate the effect of the academic hierarchy, in which major communication is deferred to senior team members.

In addition to residents finding opportunities to teach, faculty surgeons and program leaders must find opportunities to teach residents, beyond simply role modeling. For example, finding appropriate low-stakes cases for residents to lead conversations, providing feedback, and then allowing residents to lead higher-stakes conversations. Establishing resident roles in routine consent conversations may be a stepping stone for future, more challenging consent conversations – two of which were cited by participants – as these share similarities with other serious illness conversations: bad news must be delivered, emotions must often be addressed, and difficult choices must often be made. Providing structured debriefing for serious illness conversations can improve future performance and coping with distressing situations.²⁹ Since serious illness communication skills have not been routinely integrated into surgical training, providing faculty development is crucial to equip attending surgeons with the skills to use as role models and teachers for residents. As noted in our interviews, *“Trying to be a teacher when no one necessarily was your teacher can be challenging.”*

Even with development of their own serious illness communication skills, faculty surgeons may not universally feel comfortable consistently entrusting residents to lead conversations. One solution may be to allow surgical residents to rotate on subspecialty palliative care services, in which trainees routinely lead serious illness communication with appropriate supervision.³⁰ Finally, programmatic support and metrics are necessary. The ABS and ACGME specify major case log minimums that must be met for board eligibility. A requirement to log major serious illness communication cases – breaking diagnoses, disclosing complications, discussing goals of care, complex consents, shared decision-making, and leading family meetings – would elevate communication skills to the importance ascribed to operative skills within the competencies of surgery. In addition to case logs, other quantifiable metrics of serious illness communication skills, such as objective feedback forms, would also be useful and could be developed based on the themes uncovered in this study. Future qualitative research may also build on these themes. These recommendations provide a road map for surgical educators to improve resident training in essential serious illness communication skills.

This study had several limitations. This was a single-center study with a population that may not be fully generalizable to other centers, although the conclusions may be useful for many programs. Use of interview rather than survey methodology limited the sample size but allowed for more granular analysis. Participants may have biased their responses for social desirability or based on a prior relationship with the interviewer.³¹ Our analysis may have been biased by authors' experience with serious illness communication. We attempted

to mitigate our biases with independent coding and the breadth of author backgrounds in medicine and education.³²

5. Conclusions

Senior surgical residents frequently engage in challenging serious illness communication with little dedicated training besides observation of role models. Many develop skills in an ad hoc manner, with gaps in training that could be met with dedicated curricular and practice interventions. Treating serious illness communication skills akin to other surgical skills, with supervision, feedback, and graduated autonomy, would improve residents' development of this vital skill set, improving patient care and trainee wellness.

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Declaration of competing interest

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Table 1

Serious illness communication skills frameworks and residents' existing skills.

Framework	Skill	Resident quotes depicting skill usage
Breaking bad news	Establishing an appropriate setting	"I try to make it a formal setting [at a] specific time ... that way it's not like you're blindsiding somebody"
	Asking about patient's prior perceptions	"[I] want to know, what information do they already have?"
	Delivering bad news succinctly and clearly	"Try to explain things in very clear terms. Don't use murky language."
Addressing emotion	Allowing for emotions and questions	"Once you give them the information ... try to get a sense of how much they've taken in, then allow for a lot of emotion, silence, questions."
	Recognizing emotional responses	"Telling them that you see that they're feeling sad, and I understand this is very hard news, and normalizing [their] response"
Shared decision-making	Responding to emotion	"I tend to let them speak, give them time for pauses, and try not to jump in ... I often end up saying, because I sincerely feel this way, 'I can't imagine what you're going through', or 'This must be incredibly difficult to hear', or 'I wish I could do more'."
	Eliciting goals and preferences	"[If] a patient is ... reluctant to follow the recommendations ... I try to elicit those fears or questions, like, 'Tell me what you're worried about?' 'Tell me what's most important to you'."
	Aligning with goals and preferences	<i>None</i>
	Forming a plan based on goals and preferences	<i>None</i>

Table 2

Themes of residents' challenges in serious illness communication.

Theme	Category	Resident quotes
Illness severity	Symptoms	"The patient did not look well at all. She was clearly in a lot of pain. She was clearly scared. I think that's hard. You want to comfort the patient, but you also want to give them information."
	Poor prognosis	"It's really difficult to have the conversation if this is really bad and we can't fix it."
	Urgency	"Something I don't do honestly is ask a lot of open-ended questions because of the time pressure we're under."
Knowledge and feelings	Lack of information	"We didn't understand what was going on at the time; our leading diagnosis was disproven."
	Health literacy	"We had a patient who had poor health literacy ... and the challenge was helping her understand her prognosis and the need for surgery."
	Preconceptions	"It's almost more difficult ... when you come in and say, 'I'm with surgery.' That oftentimes hasn't been fully explained, and that sets a scary tone. Then I often have to backpedal to lessen the blow of 'surgery' being involved."
	Mistrust and discordance	"It probably could have gone better if there'd been more time to establish some sort of trust."
Academic structure	Emotions	"You put yourself in the shoes of the patients, try and understand what they will go through. It makes it easier to navigate these conversations in terms of being comfortable talking about feelings and emotions."
	Hierarchy	"We get very little experience telling a patient that there was a complication during surgery because we always wait for the attending to talk to them ... But then all of a sudden you're an attending one day."
	Learning	"[There are] no specific skills that I've ever been taught ... my ability to have difficult conversations has been modeled by what I've seen, what I perceived to have gone well by [chief residents and attendings]"
	Teaching	"In instances where I let junior residents round and I'm watching, I am quick to jump in and take control ... sometimes I'm probably too quick to take over."