Teaching Surgery Residents the Skills to Communicate Difficult News to Patient and Family Members: A Literature Review

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Abstract

Background: Trainees and practicing physicians alike find breaking bad, sad, or difficult news to a patient or family member as one of the most challenging communication tasks they perform. Interpersonal and communication skills are core competencies for resident training. However, in disciplines where technical skills have a major emphasis, such as surgery, the teaching of communication skills may not be a priority.

Objective: The objective of our study is to review literature in order to identify best practices and learning modalities used to teach surgery trainees the communication skills regarding delivery of difficult news to patients and family members.

Methods: The criteria for inclusion in this literature review were that the study (1) addresses surgeons’ training (nontechnical skills) in breaking difficult news to patient and/or families, (2) describes a teaching modality or intervention targeted to teach surgery residents how to deliver difficult news to patient/family, and (3) is published in English.

Results: Articles (n = 225) were screened for final eligibility. After discarding duplicates and noneligible studies, and after abstract/full-text review, 18 articles were included in the final analysis. Most studies are single site; address general surgery residents at varying training levels; and include case-specific, outpatient, and intensive care unit (ICU) settings. There is a paucity of studies in the trauma and unexpected death setting. There is a recent trend to use Objective Structured Clinical Examination (OSCE) both to teach and assess communication skills. Variable tools are used to assess this competency as described.

Conclusion: Simulation and OSCE format have emerged as modalities of choice both to teach surgery residents how to deliver difficult news and to assess achievement of this competency. There is a gap in the literature regarding teaching and assessing surgery resident communication skills in delivering difficult news after unexpected events in the trauma and operating room settings.

Introduction

“Interpersonal and communication skills” is one of the six core competencies identified by the Accreditation Council for Graduate Medical Education (ACGME).1 Similar skills-related language can be found in discipline-specific milestones as an essential part of residency training. Delivery of bad, sad, or difficult news to a patient or family member is perhaps the most challenging of communication tasks as identified by trainees, as well as physicians in practice.2–5 They often report feeling ill prepared to handle such conversations, especially when related to patient end of life, prompting the conclusion from Larson et al. that, “The emotional and time demands of such conversations must be acknowledged and addressed in clinical training and practice.”2–6 Though significant literature addresses the teaching and methodology to deliver difficult news to patients and/or families and the family perspective, this training varies greatly by medical discipline, institutional culture, and setting.2–23 Emphasis on teaching communication skills may not be a priority, and this is perhaps more so in procedural and technical skills focused specialties such as surgery and emergency medicine.6–24 This has prompted a recent growth in literature about the challenges and unique barriers of delivering difficult news in the emergent setting.6,18,19,21,22

Surgery trainees routinely encounter and deliver difficult news to patients and family members.14,21,22 They are expected to do this task in a variety of settings: outpatient,
Methods

Trainees the communication skills regarding the delivery of
information has to change from a minority sport to a
mainstream activity.26

The skill to hold difficult conversations with a patient and
family member can be taught, and effectiveness of inter-
ventions has been demonstrated in both pediatric and adult
populations and in varied outpatient and inpatient settings
such as oncology, end-of-life or palliative care, and
ICUs.10,12,14–16,21,23,24 Improved outcomes have been shown
with limited didactics, workshops, and active practice.15,21

The purpose of our study is to review the literature in order to
identify educational gaps, best practices, and learning mo-
dalities, as well as assessment tools used to teach surgery
trainees the communication skills regarding the delivery of
difficult news to patients and family.

Results

The majority of studies in our review were single site.24,28–34

This is not surprising, since with the resident didactic
schedules and clinical obligations, organizing a teaching
event across multiple sites could be a logistical challenge.

Multisite studies usually took advantage of availability and
dedicated time set aside for PGY-1 orientation.35 The resi-
dents targeted for training varied across studies, from junior
to senior. Though geared towards general surgery residents or
mixed surgical specialties, a few studies were specific to a
subspecialty such as urology and plastic surgery.32,34 Single
specialty, single-site studies had fewer than 25 resident par-
ticipants.28,30,32–34,36 Though our initial search identified
studies in orthopedics; ophthalmology; and ear, nose, and
throat disciplines, these were screened out due to a focus on
technical or physical examination skills and for having no
component of delivery of difficult news.

Modality

Delivery of difficult news is occasionally the sole focus of
a communication skills exercise in surgery training,32,37
but is more frequently taught as a component in the larger con-
text of other curricula, such as patient safety,38 palliative
care,28,33,39,40,41 or humanism and professionalism.29 Though
not the topic of this review, it is important to note that mul-
tiple studies address teaching and testing surgery physician-

Table 1. Keywords Used in Electronic Search of Databases

<table>
<thead>
<tr>
<th>Surgery resident</th>
<th>Surgery</th>
<th>Surgical</th>
<th>Trauma</th>
<th>Accident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wound and Injury</td>
<td>Communication</td>
<td>Communication skills</td>
<td>Breaking bad news</td>
<td>Emergency department</td>
</tr>
<tr>
<td>Education, Medical, Graduate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Reasons for Exclusion of Articles after Abstract and Full-Text Review

<table>
<thead>
<tr>
<th>No teaching modality described</th>
<th>Discipline other than surgery (EM, FM, IM, and Pediatrics)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate medical students target learners</td>
<td>Survey only (attitudes, behaviors)</td>
</tr>
<tr>
<td>Review or concept article</td>
<td>Informed consent or medical error disclosure only</td>
</tr>
<tr>
<td>Only technical skills discussed</td>
<td>No resident-to-patient or family interaction</td>
</tr>
</tbody>
</table>

EM, emergency medicine; FM, family medicine; IM, internal medicine.
to-patient communication skills in a procedural context, for
example, placing a urinary catheter or suturing a laceration in
a hybrid simulation model of an anxious standardized patient
with a task trainer.42–44

The modalities used to teach delivery of difficult news
vary and a combination of methods is commonly used (in-
teractive discussion combined with role-play).29 Significant
primary modalities include didactic sessions,28–30,39,40 video
vignettes,29,33 interactive discussions,28,30,39 role-play,28,30,33,39
and an OSCE with performance feedback by standardized pa-
tients and/or faculty.31,32,38,45 The time for teaching and testing
of the communication skills varies widely; range is from 20
minutes to 40 hours depending on whether delivery of difficult
news was part of a larger curriculum (palliative care) or not.
(See online supplementary Table S1 at www.liebertpub.com/
jpm and at www.liebertonline.com.)

Table 3. Teaching or Assessing Surgery Residents’ Communication Skills: Settings
and Educational Modalities Used in Eligible Studies

<table>
<thead>
<tr>
<th>Author</th>
<th>Specialty, site, learner</th>
<th>Communication skills</th>
<th>Educational modalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bradley CT, et al.30</td>
<td>General surgery, single site, PGY 2, 5</td>
<td>End-of-life code status, breaking bad news, family meeting</td>
<td>OSCE, role-play, didactics with journal club and discussions</td>
</tr>
<tr>
<td>2. Chandawarkar RY, et al.24</td>
<td>Surgery (mixed), single site, PGY 1–5</td>
<td>Breaking bad news</td>
<td>Workshop, standardized patient, role-play</td>
</tr>
<tr>
<td>3. Chipman JG, et al.31</td>
<td>General surgery, single site, PGY 2, 4</td>
<td>Family conference, code status, error disclosure</td>
<td>OSCE, standardized patient</td>
</tr>
<tr>
<td>4. Chipman JG, et al.45</td>
<td>General surgery, multisite, PGY 1, 3</td>
<td>Family conference, end-of-life care, complication disclosure</td>
<td>OSCE, standardized patient</td>
</tr>
<tr>
<td>5. Davis D, et al.34</td>
<td>Plastic surgery, single site, PGY 4–6</td>
<td>Delivering news of melanoma on face</td>
<td>OSCE</td>
</tr>
<tr>
<td>7. Hochberg MS, et al.33</td>
<td>General surgery, single site, PGY 1–3</td>
<td>Delivering bad news</td>
<td>Role-play, video vignettes, faculty role modeling</td>
</tr>
<tr>
<td>8. Klaristenfeld DD, et al.39</td>
<td>General surgery, single site, PGY all</td>
<td>Advanced clinical decision making</td>
<td>Role-play, group discussion, lecture</td>
</tr>
<tr>
<td>10. Lienard A, et al.50</td>
<td>Mixed, single site, PGY 1–5</td>
<td>Breaking bad news</td>
<td>Standardized patient</td>
</tr>
<tr>
<td>11. Lienard A, et al.51</td>
<td>Mixed, single site, PGY 1–5</td>
<td>Communication skills during their daily clinical rounds</td>
<td>Standardized patient</td>
</tr>
<tr>
<td>13. Minor S, et al.40</td>
<td>Mixed, single site, PGY 2, 3</td>
<td>Bad news in ICU</td>
<td>Family meetings, lecture, didactics with study guides</td>
</tr>
<tr>
<td>14. Pernar LIM, et al.28</td>
<td>General surgery, single site, PGY all</td>
<td>Breaking bad news</td>
<td>Workshop, case-based discussion, role-play</td>
</tr>
<tr>
<td>15. Wagner DP, et al.38</td>
<td>Mixed, multisite, PGY 1</td>
<td>Bad news in pediatric setting</td>
<td>OSCE</td>
</tr>
<tr>
<td>17. Wouda JC, et al.46</td>
<td>General surgery, single site, medical students to consultants</td>
<td>Bad news related to cancer and other chronic diseases</td>
<td>Standardized patient</td>
</tr>
<tr>
<td>18. Yudkowsky R, et al.37</td>
<td>General surgery, multisite, PGY 1–3</td>
<td>Giving bad news, obtaining informed consent, dealing with a patient who refuses treatment, addressing domestic violence, providing patient education, and conducting a focused history and physical examination in a patient in acute pain</td>
<td>OSCE, standardized patient</td>
</tr>
</tbody>
</table>

CCU, coronary care unit; CELI, Control, Explaining, Listening, and Influencing (communication competency measurement tool); ICU, intensive care unit; MVA, motor vehicle accident; OSCE, Objective Structured Clinical Examination; SIM, simulation.
Case scenarios used to teach delivery of difficult news

Case scenarios used were based on the unique subspecialty and setting. Subspecialties were more case specific, such as delivering news of melanoma for plastic surgery residents. Other specific scenarios/settings included (1) end-of-life care with a discussion of code status in the ICU setting, and (2) delivery of news of malignancy after a biopsy, such as new diagnosis of pancreatic or breast cancer. Importantly, we found no literature on delivery of difficult news of unexpected death or unexpected change in prognosis in the intraoperative or trauma settings. Both these settings represent a unique high-stakes environment where such events have the potential for stress and high emotional impact on both the family survivors and the surgery residents.

Assessment tools

Some curricula only assessed knowledge and attitudes postintervention, while others did a combination of assessments using standardized patients and clinician rating, knowledge improvement, and attitudes in an attempt to address overall attainment of knowledge, skills, and attitudes.

Overall rating of communication skills by the standardized patient or family actor, one or more clinicians viewing the encounter, or video and self-assessment by the resident were common assessments used. Tools and scales used for such assessment, however, varied from the validated to nonvalidated scales. Both the rating of the quality of resident performance (poorest to best; bad to good; very bad to excellent; below expectations to exceeds expectations) as well as the rating of the level of resident performance or proficiency level (from early learner to professional) was seen. Obviously, one would need to establish prior consensus as to what is an ‘expert level or proficient performance,’ and the complex family communication tasks with layers of decision making such as goals-of-care discussions may need modifications of tools to ‘get to’ these complex skills. Use of a nonvalidated checklist for task completion, for example, not-done to done-completely, was also common.

Examples of previously validated scales used in the studies we reviewed include the Master Interview Rating Scale (MIRS), which addresses communication skills on a behaviorally anchored scale (poorest to best). Limitations of this tool include significant inter-rater variability and the overall bearing of the resident that may lead to subjective influences. Data from this study support the fact that inter-rater variability may also be a concern with nonprofessionals scoring resident OSCE performance. Though content checklists on a yes/no scale are more concrete and valuable for case-specific data, there is still some variability that exists in assessment.

Another validated tool (CELI) was used by Wouda et al. to get to the nuances of communication by assessing four subcompetencies: Control, Explaining, Listening, and Influencing. A communication skill is an ‘utterance’ or observable verbal/nonverbal behavior on the CELI instrument (−2 = bad, −1 = inadequate, +1 = adequate, and +2 = good). So a trainee who elicits and reflects the emotions of a patient would receive a +2 on the ‘listening’ subcompetency. The overall score is then calculated on a 0–10 scale (0 = very bad and 10 = excellent performance).

Discussion

Historically, surgery training uses a tiered apprenticeship approach as an educational model where resident trainees...
learn by practicing in real-life experiences in the clinical setting and may use the traditional “see one, do one, teach one” approach. However, the opportunities to learn in this traditional apprenticeship model are shrinking. Time constraints with competing clinical demands and work hour restrictions, as well as a shrinking inpatient hospital census due to an emphasis on shortened patient stays is decreasing patient-resident-interaction teaching opportunities. Furthermore, even when these real-life bedside opportunities do occur there is minimal guidance and feedback provided to early trainees. While there is opportunity for positive role modeling at the bedside, there are equally available possibilities of negative role modeling; and this learning by using a trial-and-error method is obviously not conducive to patient-centered care. This has prompted residency training programs to explore models of learning and teaching where structured approaches/modalities allow for the learning and practice of essential technical as well as nontechnical skills with provision of feedback and guidance in a safe environment. In this context we explored the literature to identify best practices and learning modalities, as well as assessment tools used to teach surgery trainees the communication skills regarding delivery of bad, sad, or difficult news to patients and family members.

Our review identifies an educational gap in the literature in teaching surgery residents how to deliver difficult news after sudden or unexpected patient events in the trauma and operating room (OR) setting. Traumatic injury is an “out of time and out of place” event. The lack of preparation and often the violent nature of this unexpected event may very often have the family survivors feeling helpless, shocked, and faced with the challenge to cope and adapt to rapidly changing clinical situations and often major life transitions. These stressful events may also have a major emotional impact on the trauma team trainees. Trauma setting therefore has unique communication needs, in that the surgeon has to deliver news to unprepared family with whom there exists no prior relationship in the face of a rapidly evolving and often unclear prognosis. Similarly, unexpected events in the OR setting may have the added burden of guilt on the part of the trainee and may be particularly stressful for both surgery trainees and family.

Regardless of the teaching methods and assessment tools used, it is clear from our review that interactions with the standardized patient/family and the OSCE format has emerged as the major modality not only for teaching but also for assessing surgery-resident communication regarding delivery of difficult news. OSCEs are also used to track performance over a period of time in pre- and poststudies, as well as when studying skill acquisition differences among levels or for making comparisons between groups. Also, teaching delivery of difficult news in the context of scenarios that are relevant to the surgical discipline (such as urology or orthopedics) or linked to other procedural skills training may be effective.

Finally, it is also interesting to note that despite extensive literature on the use of mnemonics to teach the skills for breaking bad news, such as the SPIKES (setting, perception, invitation, knowledge, emotions, and summary) model, the studies we reviewed in surgery resident training do not highlight the use of mnemonics as a tool. SPIKES is widely used for teaching clinicians how to deliver bad news, but the structure and language may hinder its adoption in this setting. It has been speculated before that this may be due to the fact that such mnemonics are not based on active terms and do not list items to do, therefore may be too vague for use in a procedural/technical skills based discipline that may place value on concrete defined steps.

The use of mnemonics with ‘action’ words to enhance communication skills is an area not fully explored in surgery literature. Communication skills in general are considered important for surgery trainees as highlighted by the studies to date, and these can be taught and learned with the ultimate hope that they translate into better overall patient care.

Due to the limited number of studies that met criteria and a lack of clearly identified “best practice,” the authors propose a model to teach surgery residents the skills to communicate difficult news. The curriculum would ideally include (1) targeted didactics with use of online/distance learning and the use of a flipped classroom format to maximize in-class time. (2) practice of communication skills closely tied to patient care using simulation and role-play, and (3) robust assessment of communication skills using an OSCE format with feedback on performance from the facilitator and/or the standardized patient. A mnemonic tool or pocket card that reminds the trainee of the “procedural steps” of communication at the patient bedside may be helpful. If used, we suggest a mnemonic that may be familiar to trainees or one that was developed for the surgery audience, for example, the ABCDE (Anticipate, Be aware of self and surroundings, Conversation and concerns, Debrief/document and dictate, End the encounter) mnemonic developed for use in the trauma setting.

Conclusion

Simulation and the OSCE format have emerged as modalities of choice both to teach surgery residents how to deliver difficult news and to assess achievement of this competency. There is a gap in the literature regarding teaching and assessing surgery resident communication skills in delivering difficult news after unexpected events in the trauma and operating room settings.

Author Disclosure Statement

No competing financial interests exist.

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