Published in final edited form as:

Ann Surg. 2018 April ; 267(4): 677–682. doi:10.1097/SLA.0000000000002282.

Barriers to Goal-Concordant Care for Older Patients with Acute Surgical Illness: Communication Patterns Extrinsic to Decision Aids

Lauren J Taylor, MD¹, Sara K Johnson, MD², Michael J Nabozny, MD¹, Jennifer L Tucholka, BS¹, Nicole M Steffens, MPH³, Kristine L Kwekkeboom, PhD, RN, FAAN⁴, Karen J Brasel, MD, MPH⁵, Toby C Campbell, MD, MSCI², and Margaret L Schwarze, MD, MPP⁶

¹Department of Surgery, University of Wisconsin, Madison, WI.

²Department of Medicine, University of Wisconsin, Madison, WI.

³Denver Public Health, Denver Health and Hospital Authority, Denver, CO.

⁴School of Nursing, University of Wisconsin, Madison, WI.

⁵Department of Surgery, Oregon Health and Science University, Portland, OR.

⁶Department of Surgery, University of Wisconsin, Madison WI.

Abstract

Objective: We sought to characterize patterns of communication extrinsic to a decision aid that may impede goal-concordant care.

Summary background data: Decision aids are designed to facilitate difficult clinical decisions by providing better treatment information. However, these interventions may not be sufficient to effectively reveal patient values and promote preference-aligned decisions for seriously ill, older adults.

Methods: We conducted a secondary analysis of 31 decision-making conversations between surgeons and frail, older inpatients with acute surgical problems at a single tertiary care hospital. Conversations occurred before and after surgeons were trained to use a decision aid. We used directed qualitative content analysis to characterize patterns within three communication elements: disclosure of prognosis, elicitation of patient preferences, and integration of preferences into a treatment recommendation.

Results: First, surgeons missed an opportunity to break bad news. By focusing on the acute surgical problem and need to make a treatment decision, surgeons failed to expose the life-limiting nature of the patient's illness. Second, surgeons asked patients to express preference for a specific treatment without gaining knowledge about the patient's priorities or exploring how patients might value specific health states or disabilities. Third, many surgeons struggled to integrate patients'

Corresponding Author: Margaret L. Schwarze, MD, MPP, G5/315 CSC, 600 Highland Ave, Madison, WI 53792, Phone: 608-265-4420, Fax: 608-265-1148, schwarze@surgery.wisc.edu, *Reprints will not be available from the authors.*

Conflicts of Interest:

The authors have no conflicts of interest—including relevant financial interests, activities, relationships, and affiliations—to report.

goals and values to make a treatment recommendation. Instead, they presented options and noted, *"It's your decision."*

Conclusions: A decision aid alone may be insufficient to facilitate a decision that is truly shared. Attention to elements beyond provision of treatment information has potential to improve communication and promote goal-concordant care for seriously ill older patients.

MINI ABSTRACT

In this secondary analysis of conversations between surgeons and older inpatients, we characterized communication barriers to goal-concordant care that persisted despite use of a decision aid. Surgeons missed an opportunity to break bad news, assumed preference for treatment was an expression of patient values, and hesitated to make a recommendation.

INTRODUCTION

In the setting of serious illness, consensus groups endorse shared decision making to promote selection of treatments that reflect the patient's goals and values.¹⁻⁵ Failure to achieve this objective can be harmful, particularly for patients near the end of life. Adverse events are common for frail older patients and contribute to increased healthcare utilization, functional decline and diminished quality of life.^{2, 6-8} Surgeons who are unable to forge a goal-concordant treatment decision may experience conflict postoperatively with families and patients who endure unwanted treatments.⁹ Nonetheless, surgeons face a unique challenge with shared decision making given the acuity and complexity of surgical illnesses in older adults.¹⁰

To address this challenge, decision aids are designed to facilitate difficult treatment choices.¹¹⁻¹³ These tools work to improve patient knowledge of available options by presenting the relative merits of more than one alternative.^{13, 14} In theory, better information about treatments encourages a preference-aligned decision by promoting patient engagement, i.e. supporting the patient's active role in the decision-making process.¹² Embracing strategies prescribed for decision aids, our research group developed and tested a decision aid intervention for surgeons to discuss treatments with frail, older adults facing an acute surgical illness.¹⁵⁻¹⁷ We were pleased that our intervention significantly changed how surgeons described options and improved patient engagement on observer-reported measures of shared decision making.¹⁷ However, we noticed persistent communication patterns that suggested simple delivery of accessible treatment information might not be enough to ensure goal-concordant care.

Quality standards for decision aids ensure patients receive adequate information about their condition and available treatments (Table 1).¹⁸ Yet it is open to question whether this focus on provision of information can effectively expose patient preferences and promote collaborative deliberation.^{12, 19, 20} Even with a high quality intervention, delivery of patient-accessible information may be insufficient to achieve concordance between patient goals and the treatment plan.²¹

Best practices for communication with older adults facing surgical emergencies propose a more comprehensive communication framework to promote shared decision making and

goal-concordant care (Table 2).² These recommendations reflect the consensus of an interdisciplinary expert panel convened to address unique barriers that plague acute surgical decision making with older patients.¹⁰ They endorse a structured approach whereby the discussion of treatment options is just one component of a larger conversation. To help patients understand the treatment decision, surgeons must first disclose how the patient's surgical problem affects the overall prognosis. After describing available treatments, surgeons should aim to understand patient goals and values related to life prolongation and quality of life before recommending treatment to align with these priorities.

Surgeons frequently care for patients with life-limiting illness and are called upon to lead difficult treatment conversations detailed in these recommendations. For example, breaking bad news about a new cancer diagnosis or severe traumatic injury is presumably an essential tool in the surgeon's armamentarium. Furthermore, understanding patient's values and goals ensures that decisions about surgery or continued life supporting treatments in the ICU align with patient priorities. Despite the frequency of these difficult conversations in routine surgical practice, these important communication skills may be underdeveloped.

Little is known about how using a decision aid might support these key conversational elements beyond the description of treatment options. By analyzing surgeon-patient conversations conducted before and after implementation of our decision aid intervention, we sought to characterize communication patterns apart from the presentation of treatment information that may impede the objective of establishing goal-concordant care in the setting of serious surgical illness.

METHODS

Study Design

We performed secondary analysis of audio recordings of surgeon-patient/surrogate conversations obtained during a pre/post feasibility study to test our decision aid intervention in the acute inpatient setting.¹⁷ We used qualitative analysis to characterize three conversational elements outside the primary focus of our intervention: how surgeons framed the surgical problem, elicited patient preferences, and incorporated these preferences into a treatment recommendation (Figure 1). All participants provided written, informed consent and the study was approved by the University of Wisconsin Institutional Review Board.

Primary Data Collection

We audio-recorded 31 inpatient decision-making conversations between surgeons and frail, older inpatients with an acute surgical problem at one tertiary care hospital in Wisconsin. Twelve conversations occurred pre training, 19 took place post training. Training details are described elsewhere.¹⁵ Participants included 17 attending surgeons who practice cardiothoracic (4), vascular (4) or general surgery and acute care surgery (9). Surgeons had been in practice for an average of 11.2 years (range 1–32), and 84% were male. Patients ranged in age from 67 to 95 years and nearly half had five or more comorbid conditions. Patients faced an array of surgical problems including aortic stenosis, incarcerated hernia,

malignant bowel obstruction, and critical limb ischemia. All patients were either critically ill or deemed high risk for serious postoperative complications necessitating ICU-level care based on surgeon assessment. Surgeons offered a choice between surgery and at least one alternative treatment, including medical management (8), less-risky surgery or procedure (11), hospice or palliative care (8), or “no surgery” (4). Ten patients received a palliative care consult or were enrolled in hospice during their hospitalization, and six patients died within 30 days of the recorded conversation. Five conversations occurred exclusively with surrogates. We transcribed recordings verbatim and redacted identifying information.

Analysis

Investigators from surgical critical care, vascular surgery, palliative care, community leadership, and public health generated codes inductively to describe prominent concepts in the conversations. After reviewing and coding transcripts individually, at least three investigators met regularly to adjudicate codes and refine and expand the coding taxonomy. We examined areas of dissent and consensus to clarify our understanding of the data and the patterns evident in this type of conversation. After our primary analysis, we identified patterns within conversational elements apart from the presentation of treatment information. We sorted these patterns using a deductive strategy based on three key elements supported by best practice recommendations for patients with life-limiting surgical illness: disclosure of prognosis, elicitation of patient preferences, and integration of preferences into treatment recommendations.² We generated construct tables to categorize the data and facilitate recognition of the variability within each key element. This process also served to ensure rigor, allowing additional opportunity to verify assessments and explore disconfirming data to ensure identified patterns were faithfully represented. We used NVivo (version 10, QSR International), to catalogue data and facilitate comparisons between conversations to identify specific patterns that interfered with the surgeon’s ability to promote goal concordant care.

RESULTS

After training, surgeons used the decision aid effectively to describe treatment choices and engage patients and surrogates in deliberation. Yet, within these conversations we identified communication patterns, present both before and after training, that failed to promote goal-concordant care. Surgeons did not provide clear information about the context of the treatment decision or regularly elicit preferences beyond the patient’s inclination to pursue a specific treatment. Surgeons also resisted making a treatment recommendation, even when they were asked to do so by the patient. (Table 3)

Setting the stage and breaking bad news

Before presenting options, few surgeons disclosed that the patient’s prognosis was poor with or without treatment. One outlier acknowledged prognosis before offering surgery, noting, *“we’re getting toward the end of where we’re going to be with this cancer problem... she’s going to die from this,”* yet most surgeons missed this opportunity to contextualize the treatment decision. Although surgeons used the decision aid to offer less invasive treatments, they did not encourage patients and families to compare the value of surgery versus comfort-focused care with respect to the life-limiting nature of the patient’s condition. Patients and

families were thus confronted with treatment decisions, including options like hospice, without the forewarning required to understand the gravity of the choice at hand.

After training, surgeons clearly communicated a choice between two valid treatments. However, discussion still focused on the challenge of making a decision, conflating the bad news about the patient's life-limiting surgical problem with the concern that the treatment decision was difficult. Surgeons warned patients of the need to *"make a decision about the situation we're in,"* and acknowledged that *"It's a difficult situation. It's difficult for both you, and all of your family."* Although they empathized with the patient's predicament, surgeons bypassed bad news about the patient's overall prognosis and concentrated singularly on making hard choices.

Instead of providing an initial warning shot that the prognosis was poor, surgeons embedded information about survival and functional impairment within a description of the outcomes and risks of surgery. For example, a 92-year-old patient was told she had colon cancer. However, the surgeon acknowledged that the situation was dire given her advanced age and frailty only within his description of surgical treatment, noting, *"It's possible that despite our best efforts that we couldn't get over it and that we couldn't get you healthy after the operation."*

Surgeons struggled to integrate the significance of the patient's chronic life-limiting conditions. For example, one surgical intensivist discussed treatment for an 87-year-old patient with known metastatic cancer who sustained bilateral rib fractures. After explaining his injuries, she noted, *"all the nodules in the lungs, that we've known about for a long time...I can't believe you have been doing as well as you have, honestly, looking at those lungs."* Although this surgeon acknowledged the patient's underlying malignancy, she described his mortality only in relation to the acute illness as *"any patient over the age of 65...the chance of dying from that increases linearly with every additional rib that is broken."* By not explicitly connecting this patient's acute problem and his chronic condition, she missed an opportunity to set the stage for a discussion about hospice and did not encourage the patient to think about his acute decision in relation the goals of care he had discussed with his primary oncologist.

Eliciting patient preferences

While our intervention emphasizes description of treatment choices and outcomes, we also taught surgeons to elicit patient values and goals. Specifically, during training we gave surgeons exemplar phrases to encourage deliberation such as "How are you thinking about this?" A few surgeons could build upon these phrases to seek out a deeper understanding of what was important to patients, for example, *"Your family absolutely agreed that the top priority was to finally get out of the hospital...if you could eat, but not get out of the hospital, well that's no good... Would you agree with that?"* However, in practice many struggled to follow up this initial query. They did not gain information about how patients might value specific outcomes beyond survival or determine what quality of life or health states would be acceptable.

Surgeon inquiries pre and post training instead targeted a specific treatment preference and accepted the patient's or surrogate's treatment choice as a clear expression of their values. Surgeons asked patients, *"What do you think you'd be interested in?"* Some framed the question as a choice between living or dying; for example, *"If this blockage keeps up like this, do you want to just let it go and die from it or would you rather have an operation to try to fix it?"* While the phrasing varied, the goal was similar: to have the patient express a treatment preference.

Some surgeons did use the exemplar phrases they learned during training to promote exploration of patients' goals. Yet, even with specific instruction surgeons continued to target treatment preferences rather than longer-term outcomes. They rarely explored how the stated treatment preference might be consistent with patient priorities. After describing surgery and comfort care to an 88-year-old woman with an incarcerated hiatal hernia, one surgeon said,

MD: "How are you thinking about things?"

Patient: "Uh, just hoping for the best."

MD: "...I think that's exactly what we're hoping for too...so my hope is that we get you into the operating room a little bit later today and work on getting this all fixed for you."

Some surgeons assumed that the desire to live signified a preference for surgery, for example,

MD: "And have you thought at all about what you would want?"

Patient: "Well I'd like to survive"

MD: "Well that's good cause then we both want the same thing. That's great... Well I think we should go forward with the surgery."

These surgeons did not explore the patient's desire for survival beyond a preference for not dying. They failed to promote conversation about quality of life in relation to survival or what burdensome postoperative interventions would or would not be tolerated in exchange for life prolongation.

Making a treatment recommendation

During training, we encouraged surgeons to reach a treatment decision through partnership with the patient or surrogate. After training we did observe improvement in surgeon ability make recommendations that shared responsibility for decisions. For example, *"What I think I'm hearing from her [patient] and what she wants is that she wants to be as comfortable as possible...as surgeons...we can do a lot of harm trying to do good and I'm unfortunately thinking that's where we might be tonight."*

Although we saw progress, surgeon support for collaborative decision making was not routine; many struggled to provide a clear treatment recommendation reflecting patient preferences. Related to making a recommendation, we observed two patterns both before and after training. In the first pattern, surgeons allocated decision-making responsibility

entirely to the patient or surrogate rather than supporting preferences within a treatment decision. As one surgeon explained, *“we want to gather as much information as possible and we want to let you know so that you can make an informed decision.”* These surgeons specifically asked patients to choose the treatment and in some cases blocked patient requests for guidance. For example:

Patient: “I don’t know what to do, doctor”

MD: “No, it’s up to you....you could just think about it.”

Alternatively, in the second pattern surgeons were directive; either overtly or covertly inserting their own values into the treatment decision. Some explicitly recommended a plan of care to best ensure survival. In talking to the surrogate for a 90-year-old patient with gangrene, one surgeon said, *“That’s why we’re recommending just amputating the foot. It will remove the infection and give him a chance to come back from the infection.”* However, there was no discussion about whether the outcomes associated with amputation aligned with the patient’s values. Others implicitly endorsed a surgical approach, telling the patient, *“Let me leave you guys to think about it... Why don’t I tell them [the OR] to expect to hear from us tomorrow, and then we can stop it if we need to?”* These surgeons explained their need to maximize hospital efficiency with regard to difficulty scheduling or the desire to start a long case first thing in the morning.

DISCUSSION

In high-stakes decision-making between surgeons and seriously ill older inpatients we identified barriers to achieving goal-concordant care found in key conversation elements distinct from the presentation of treatment information. These patterns persisted despite implementation of an intervention that adheres to core requirements specified for decision aids.^{18, 22} While physicians used the decision aid to highlight a treatment choice and improve shared decision making on objective measures,¹⁷ focus on improving patient knowledge of available treatments was did not ensure the broader conversation reliably supported goal-concordant decisions. Specifically, patients and families were not apprised of the life-limiting nature of their illness before considering treatment options. Surgeons also did not consistently encourage deliberation in a way that exposed patient values, and at times directed patients and surrogates to make a decision on their own.

These findings are significant as shared decision making is the preferred approach for difficult treatment conversations^{1, 2, 23–25} yet in the setting of serious illness it often remains an unrealized goal.²⁶ Given the preference-sensitive nature of these discussions, decision aids have been promoted as a solution for busy physicians to support their communication skills. While these tools are valuable for translating complex treatment information, without attention to supporting conversational elements the scope of traditional decision aids may be too narrow to ensure that a decision is truly shared. These observations have important implications for patients, surgeons, and researchers.

For seriously ill patients and their families, the context of the patient’s overall health trajectory impacts decision making about invasive treatments.^{27–29} Palliative care providers endorse breaking bad news as a core communication competency which ideally occurs in a

conversation separate from a discussion about goals of care and treatment options.³⁰ Although the tempo of acute surgical illness does not typically allow for two separate conversations, omission of this initial step is problematic. Orienting patients and families to the life-limiting nature of serious illness allows them to appreciate that comfort-focused care is a reasonable option and signals families to emotionally prepare for an unwanted outcome.^{31, 32}

For surgeons, we found that patient-accessible delivery of treatment information does not assuredly reveal patient values. Our findings build on work by Scheunemann and colleagues³³ who found clinicians rarely discuss specific patient values such as independence, physical or cognitive function during family conferences. Preference elicitation is a distinct skill that requires practice to master. Without targeted follow-up, asking patients and surrogates what they want, or even how they are thinking about a particular treatment, yields little information about their valuation of specific health states.³⁴ Furthermore, this insufficiency may lead to burdensome unwanted interventions when a stated desire to prolong life is assumed to represent a preference for invasive treatment including surgery and postoperative intensive care.

Surgeons who urged patients to make their own decision likely believe this strategy supports patient autonomy.¹⁵ However, in their effort to avoid paternalism, physicians may be abandoning patients and surrogates when their support is most needed.²¹ Lynn and colleagues³⁵ argue that surrogate decision makers may be harmed as they struggle with anticipated regret or psychological stress associated with responsibility for high-stakes decisions. Even “well-informed” patients and surrogates can benefit from sharing responsibility for treatment decisions that best align with patient priorities.

For researchers who aim to improve decision making, our findings reveal a need to target communication elements beyond information about options. Decision aids are designed to present treatment in a manner that allows patients to clarify their preferences,¹⁸ but straightforward description of options is not sufficient to promote collaborative deliberation and shared responsibility. To improve our intervention, we included a clear declaration of bad news as a first step in the conversation (<https://www.youtube.com/watch?v=FnS3K44sbu0>). To reinforce elicitation of the patient’s values and goals we now ask physicians to write, “What is important to you now?” on the graphic component of the decision aid and provide guidance in our training manual including exemplar queries such as, “Tell me what you mean when you say you want to survive?” We defined making a recommendation as a distinct step after eliciting preferences and incorporated this element into a checklist of essential components of our decision aid intervention. (www.hipXchange.org/BCWC) However, to address more global gaps in communication comprehensive educational workshops devoted to core palliative care skills,^{36–38} like responding to emotion or discussing prognosis, are required.

This study has both strengths and limitations. While the communication patterns we describe are robust and observable both before and after surgeon training, not all surgeons had patients who enrolled in each arm of the study making head-to-head comparisons incomplete. Although we were able to observe deviations from communication best

practices, our analysis is confined to the decision-making conversation alone. We are unable to report on how the content of these high-stakes decision-making conversations subsequently influenced patients and family members.

CONCLUSION

Decision aids offer much needed support for high-stakes decision-making conversations with seriously ill older adults with acute surgical conditions. However, to achieve goal-concordant care a narrow focus on treatment choices and options is not enough. Promoting deliberation to reach a collaborative decision requires interventions that ensure patients are apprised of the severity of their condition, and enable physicians with strategies to elicit and integrate patient preferences into a recommendation.

ACKNOWLEDGEMENTS

The authors thank Nora Jacobson, PhD, School of Nursing, University of Wisconsin for her thoughtful review of a previous version of this manuscript. We also would like to thank the University of Wisconsin-Madison Institute for Clinical and Translational Research Qualitative Research Group, which is supported by the Clinical and Translational Science Award (CTSA) program, through the NIH National Center for Advancing Translational Sciences (NCATS), grant UL1TR000427. The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH.

Financial Disclosure:

Dr. Taylor is supported by a training award (T32CA090217) from the National Institutes of Health. Dr. Schwarze is supported by the Grants for Early Medical/Surgical Specialists' Transition to Aging Research Award (GEMSSTAR R03AG047920) and the American Geriatrics Society/ Society of Vascular Surgery, Jahnigen Career Development Award. Dr. Campbell is supported by the Cambia Health Foundation Sojourns Scholar Program. These funding sources had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; and decision to submit the manuscript for publication.

REFERENCES

1. Kon AA, Davidson JE, Morrison W, et al. Shared Decision Making in Intensive Care Units: Executive Summary of the American College of Critical Care Medicine and American Thoracic Society Policy Statement. *Am J Respir Crit Care Med* 2016; 193(12):1334–1336. [PubMed: 27097019]
2. Cooper Z, Koritsanszky LA, Cauley CE, et al. Recommendations for Best Communication Practices to Facilitate Goal-concordant Care for Seriously Ill Older Patients With Emergency Surgical Conditions. *Ann Surg* 2016; 263(1):1–6. [PubMed: 26649587]
3. Carlet J, Thijs LG, Antonelli M, et al. Challenges in end-of-life care in the ICU. Statement of the 5th International Consensus Conference in Critical Care: Brussels, Belgium, April 2003. *Intensive Care Med* 2004; 30(5):770–84. [PubMed: 15098087]
4. Lanken PN, Terry PB, Delisser HM, et al. An official American Thoracic Society clinical policy statement: palliative care for patients with respiratory diseases and critical illnesses. *Am J Respir Crit Care Med* 2008; 177(8):912–27. [PubMed: 18390964]
5. Thompson BT, Cox PN, Antonelli M, et al. Challenges in end-of-life care in the ICU: statement of the 5th International Consensus Conference in Critical Care: Brussels, Belgium, April 2003: executive summary. *Crit Care Med* 2004; 32(8):1781–4. [PubMed: 15286559]
6. Farhat JS, Velanovich V, Falvo AJ, et al. Are the frail destined to fail? Frailty index as predictor of surgical morbidity and mortality in the elderly. *J Trauma Acute Care Surg* 2012; 72(6):1526–30. [PubMed: 22695416]
7. Khuri SF, Henderson WG, DePalma RG, et al. Determinants of long-term survival after major surgery and the adverse effect of postoperative complications. *Ann Surg* 2005; 242(3):326–41. [PubMed: 16135919]

8. Robinson TN, Wallace JI, Wu DS, et al. Accumulated frailty characteristics predict postoperative discharge institutionalization in the geriatric patient. *J Am Coll Surg* 2011; 213(1):37–42; discussion 42–4. [PubMed: 21435921]
9. Paul Olson TJ, Brasel KJ, Redmann AJ, et al. Surgeon-reported conflict with intensivists about postoperative goals of care. *JAMA Surg* 2013; 148(1):29–35. [PubMed: 23324837]
10. Cooper Z, Courtwright A, Karlage A, et al. Pitfalls in communication that lead to nonbeneficial emergency surgery in elderly patients with serious illness: description of the problem and elements of a solution. *Ann Surg* 2014; 260(6):949–57. [PubMed: 24866541]
11. Cox CE, Lewis CL, Hanson LC, et al. Development and pilot testing of a decision aid for surrogates of patients with prolonged mechanical ventilation. *Crit Care Med* 2012; 40(8):2327–34. [PubMed: 22635048]
12. Elwyn G, Frosch D, Volandes AE, et al. Investing in deliberation: a definition and classification of decision support interventions for people facing difficult health decisions. *Med Decis Making* 2010; 30(6):701–11. [PubMed: 21088131]
13. Austin CA, Mohottige D, Sudore RL, et al. Tools to Promote Shared Decision Making in Serious Illness: A Systematic Review. *JAMA Intern Med* 2015; 175(7):1213–21. [PubMed: 25985438]
14. Gionfriddo MR, Leppin AL, Brito JP, et al. Shared decision-making and comparative effectiveness research for patients with chronic conditions: an urgent synergy for better health. *J Comp Eff Res* 2013; 2(6):595–603. [PubMed: 24236798]
15. Kruser JM, Taylor LJ, Campbell TC, et al. “Best Case/Worst Case”: Training surgeons to use a novel communication tool for high-risk acute surgical problems. *J Pain Symptom Manage* 2017; Epub ahead of print.
16. Kruser JM, Nabozny MJ, Steffens NM, et al. “Best Case/Worst Case”: Qualitative Evaluation of a Novel Communication Tool for Difficult in-the-Moment Surgical Decisions. *J Am Geriatr Soc* 2015; 63(9):1805–11. [PubMed: 26280462]
17. Taylor LJ, Nabozny MJ, Steffens NM, et al. Best Case/Worst Case: A Framework to Improve Surgeon Communication in High-Stakes Surgical Decisions. *JAMA Surg* 2017; In press.
18. Elwyn G, Durand MA, Scalia P. How to ensure the quality and safety of patient decision aids? Towards a feasible certification process 2016 Available at: www.qualityforum.org.
19. Frosch D, Legare F, Fishbein M, et al. Adjuncts or adversaries to shared decision-making? Applying the Integrative Model of behavior to the role and design of decision support interventions in healthcare interactions. *Implementation Science* 2009; 4(1):73. [PubMed: 19909547]
20. Frosch DL, May SG, Rendle KA, et al. Authoritarian physicians and patients’ fear of being labeled ‘difficult’ among key obstacles to shared decision making. *Health Aff (Millwood)* 2012; 31(5):1030–8. [PubMed: 22566443]
21. Hargraves I, LeBlanc A, Shah ND, et al. Shared Decision Making: The Need For Patient-Clinician Conversation, Not Just Information. *Health Aff (Millwood)* 2016; 35(4):627–9. [PubMed: 27044962]
22. Elwyn G, O’Connor A, Stacey D, et al. Developing a quality criteria framework for patient decision aids: online international Delphi consensus process. *BMJ* 2006; 333(7565):417. [PubMed: 16908462]
23. Whitney SN, McGuire AL, McCullough LB. A typology of shared decision making, informed consent, and simple consent. *Ann Intern Med* 2004; 140(1):54–9. [PubMed: 14706973]
24. Charles C, Gafni A, Whelan T. Decision-making in the physician-patient encounter: revisiting the shared treatment decision-making model. *Soc Sci Med* 1999; 49(5):651–61. [PubMed: 10452420]
25. Glance LG, Osler TM, Neuman MD. Redesigning Surgical Decision Making for High-Risk Patients. *N Engl J Med* 2014; 370:1379–1381. [PubMed: 24716679]
26. White DB, Braddock CH 3rd, Bereksnyei S, et al. Toward shared decision making at the end of life in intensive care units: opportunities for improvement. *Arch Intern Med* 2007; 167(5):461–7. [PubMed: 17353493]
27. Bernacki RE, Block SD. Communication about serious illness care goals: a review and synthesis of best practices. *JAMA Intern Med* 2014; 174(12):1994–2003. [PubMed: 25330167]

28. Fried TR, Bradley EH, O’Leary J. Prognosis communication in serious illness: perceptions of older patients, caregivers, and clinicians. *J Am Geriatr Soc* 2003; 51(10):1398–403. [PubMed: 14511159]
29. Quill TE. Perspectives on care at the close of life. Initiating end-of-life discussions with seriously ill patients: addressing the “elephant in the room”. *Jama* 2000; 284(19):2502–7. [PubMed: 11074781]
30. Kelley AS, Morrison RS. Palliative Care for the Seriously Ill. *N Engl J Med* 2015; 373(8):747–55. [PubMed: 26287850]
31. Evans LR, Boyd EA, Malvar G, et al. Surrogate decision-makers’ perspectives on discussing prognosis in the face of uncertainty. *Am J Respir Crit Care Med* 2009; 179(1):48–53. [PubMed: 18931332]
32. Apatira L, Boyd EA, Malvar G, et al. Hope, truth, and preparing for death: perspectives of surrogate decision makers. *Ann Intern Med* 2008; 149(12):861–8. [PubMed: 19075205]
33. Scheunemann LP, Cunningham TV, Arnold RM, et al. How clinicians discuss critically ill patients’ preferences and values with surrogates: an empirical analysis. *Crit Care Med* 2015; 43(4):757–64. [PubMed: 25565458]
34. Schwarze ML, Campbell TC, Cunningham TV, et al. You Can’t Get What You Want: Innovation for End-of-Life Communication in the Intensive Care Unit. *Am J Respir Crit Care Med* 2016; 193(1):14–6. [PubMed: 26474354]
35. Lynn J, Arkes HR, Stevens M, et al. Rethinking fundamental assumptions: SUPPORT’s implications for future reform. Study to Understand Prognoses and Preferences and Risks of Treatment. *J Am Geriatr Soc* 2000; 48(5 Suppl):S214–21. [PubMed: 10809478]
36. VITALtalk. Available at: vitaltalk.org. Accessed April 8, 2017.
37. EPEC -O. 2013; Module 7: Communicating Effectively. National Cancer Institute 2013 Available at: <https://www.cancer.gov/resources-for/hp/education/epeco>. Accessed April 8, 2017.
38. WeTALK. Available at: <https://www.medicine.wisc.edu/hemonc/wetalk>. Accessed April 8, 2017.

Figure 1.
Conversation elements and the role of decision aids within a decision-making conversation

TABLE 1.**Quality Metrics for Decision Aids Focused on Provision of Information¹⁸**

State the specific health condition for which a decision is required.
State the decision under consideration.
Describe available options.
Describe positive and negative features of each option.
Describe features of options to help patients imagine the impact of potential outcome.

TABLE 2.

Communication Framework and Key Elements to Promote Goal-concordant Care for Seriously Ill Older Adults With Surgical Emergencies (Adapted From Cooper et al)²

Communication Goal	Key Elements
Describe acute surgical illness in the context of the patient's chronic conditions	Formulate prognosis Disclose the acute problem in the context of illness trajectory Establish shared understanding of overall condition
Present treatment options, including palliative strategies	Describe benefits, harms, and likely outcomes of each treatment option
Elicit patient priorities, goals, and what is acceptable regarding life prolonging and comfort focused care	Understand patient goals, priorities, and tradeoffs
Direct treatment outcomes to achieve the patient's stated goals	Recommend a treatment that aligns with the patient's goals

TABLE 3.

Description of Surgeon Communication Patterns Observed Before and After Implementation of a Decision Aid That Fell Short of Promoting Goal-concordant Care

Conversation Element	Description of Communication Pattern	Representative Quotations
Breaking bad news	Surgeon conflates bad news of new surgical problem and bad news of difficult treatment decision	We should be thinking about small things that aren't going to hurt you rather than big things that are at the very best ... make you sore and painful recovery.
	Surgeon provides survival and prognostic information as a treatment risk	...something happened, you had a heart attack or something like that, in which case you actually died from, as a consequence of that
	Surgeon focuses on the acute surgical problem without context of patient's health trajectory	He's got that one artery that comes down and it kinda sends a squiggly little artery into the foot itself. And so what we're looking at now is this infection here near the end of the foot that's making him sick.
Eliciting patient preferences	Surgeon requests patient preference for a specific treatment	Do you have an inkling kind of what you want?
	Surgeon accepts patient's treatment choice without exploring values and goals	PT: The second one [treatment choice] sounds the best, doctor. MD: The second one sounds best? FT: That's the one I would go with.
Making a treatment recommendation	Surgeon cedes decision-making responsibility to the patient or surrogate	You can think about it and decide which way to go.
	Surgeon implicitly endorses surgery by initiating preoperative planning	...if someone comes up from anesthesia and talk about the operation and things, I would view that as, as um, not a final decision until we make it, but we might as well get those wheels going, rather than start that process tomorrow when it's already morning by the time we get to it