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Regret in the Moral Psychology of Surgical Professionalism

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FROM THE EDITOR

Regret Is Endemic to Surgical Professional Life and Navigating It Is a Skill

Kimberly E. Kopecky, MD, MS

It has been said that shame dies when stories are told in safe places.[1] But what happens when surgeons do not have safe places to share their experiences or are not exposed to behavioral practices that reflect healthy coping strategies for navigating unwanted patient outcomes? These were the questions I asked myself as I completed my surgical training and prepared to step into my new role as a surgical faculty member. Over the course of my residency and fellowship, I had learned a lot about surgical technique, management of routine and complex clinical decisions, and ways to communicate with patients facing high-stakes decisions. Like any surgical trainee, I had managed patients who had suffered from the consequences of surgical errors of judgment, technical complications, and adverse patient outcomes. Despite this exposure, I had not been taught how to navigate the complex moral emotions that arise in these types of clinical scenarios.

I had questions to which I wanted answers: *When is navigating regret from an unanticipated or unwanted outcome different from navigating regret caused by an intraoperative error? What is the recommended strategy for maintaining trust and confidence in myself and my training when an outcome is not what I expect or hope for? How could I best prepare myself to handle such situations?*

In this issue of the *AMA Journal of Ethics*, surgeon contributors have shared their recommendations and best practices for navigating poor outcomes that contribute to regret and its associated moral emotions. Cases are used to highlight adverse outcomes not due to error, adverse outcomes due to factors beyond the surgeon's control, and best recommendations for surgeons to support one another. Articles in this theme issue also discuss evidence-based strategies to mitigate the development of regret and whether or not to share experiences of regret with patients. I had the opportunity to solicit the input of leaders in the field to help me answer questions about how organizations might be held accountable for poor outcomes that lead to regret and the ways in which regret directly influences clinical decision-making.

These perspectives can help shape how surgical trainees are taught to navigate complex moral emotions they face in their professional lives. As a field, surgery still has considerable progress to make in modeling healthy responses to regret as part of professional training and career development. It is my hope that this theme issue will

give senior and mid-level surgeons some tools to model habits of reflecting on and navigating regret with their junior surgeon colleagues and trainees in ways that foster growth, resilience, and support for present and future surgeons.

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CASE AND COMMENTARY: PEER-REVIEWED ARTICLE

How Should Senior Surgeons Help Junior Colleagues and Trainees Experiencing Regret?

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Abstract

Unanticipated outcomes and adverse events are inevitable in surgical training and practice and tend to elicit complex emotional experiences, including regret. Navigating these experiences with support from mentors and peers is essential for surgeon well-being, a healthy surgical culture, and optimal patient care. Critical incident stress debriefing and metacognitive behavioral models offer tools senior surgeons can use to help junior surgical colleagues in the wake of unanticipated outcomes and adverse events.

Case

Dr R is a chief surgical resident caring for the patient, SM, who is currently admitted to the surgical intensive care unit at an academic health center. Dr R has been caring for SM for 2 weeks; 3 days ago, they decided that it was clinically appropriate to remove SM's nasogastric tube (NGT). Speech and swallow therapists evaluated SM for dysphagia and authorized SM to consume thin liquids and minced, moist food by mouth. SM continued to make progress eating and drinking with assistance from a nurse until early this morning, when SM suddenly aspirated. SM's blood oxygen levels dropped, even with immediate supplemental oxygen intervention. SM's oxygen saturation percentages remained in the low 80s, at least 15% below normal, and Dr R decided to reintubate SM.

The next morning, Dr R commented to Dr A, the attending surgeon, "If only I hadn't let SM eat." Dr R tells Dr A that they regret letting SM eat and drink food by mouth. How should Dr A respond?

Commentary

Unwanted outcomes are inevitable in surgical training and practice. Every surgeon has experienced, or is likely to experience, their own version of SM's case in the role of either Dr R (surgery resident physician) or Dr A (attending surgeon). These scenarios are common yet can feel unique and isolating. If surgeons do not receive appropriate support, regretted outcomes can negatively influence their well-being, team dynamics, surgical culture, and patient care.[1] Indeed, surgeons are susceptible to both burnout and "second victim" syndrome related to adverse events and patient deaths.[2,3,4,5,6,7]

Demanding schedules comprising clinical, teaching, administrative, research, and personal responsibilities can make it difficult to prioritize debriefing challenging cases outside of formal presentations like morbidity and mortality conferences. Furthermore, the primary purpose of formal presentations is to analyze, learn, and improve from an academic and clinical perspective rather than to foster surgeons' emotional processing and growth.

Using the above case example, we offer a framework that senior surgical team members can use to help junior members as they navigate complex moral emotions endemic to surgical training and practice. Our framework is modeled after critical incident stress debriefing and is heavily influenced by metacognitive behavioral models,[8,9] which have been successfully adapted to support medical and surgical trainees after distressing clinical events.[10,11,12,13,14,15,16] Although there is evidence to support proactive clinical debriefing,[17] our proposed framework focuses on debriefing following incidents that disrupt surgeons' trust in the health care system (eg, an adverse outcome), with the goal of mitigating the negative effects of unanticipated and traumatic events or outcomes.

Who, What and Why, Where and When, How

For whom is this framework designed? Our adapted framework is appropriate for junior-senior dyads—such as a senior attending surgeon and junior attending surgeon, attending surgeon and fellow, and resident and medical student. Dyadic support is important, given that debriefing behaviors are not often modeled in surgical training. In a survey of 125 surgical residents, 88% had personal involvement in medical errors, yet only 24.3% received emotional support following those adverse events.[18] Similarly, a cross-sectional survey of 126 practicing surgeons found that 80% reported at least one intraoperative adverse event in the past year.[7] These alarming statistics underscore the need for proactive and empathetic support for surgeons at all levels of training who are navigating emotionally laden patient experiences.

Regardless of training level, it is normal for each team member to feel responsible for an unanticipated outcome. For example, the surgical intern may feel most responsible, given that they often have the most contact with the patient and family during the hospitalization and are tasked with placing orders and consults, removing drains, and closely monitoring patient status. The senior resident or fellow can feel most responsible because they participate in more complex operations and generate plans with attending surgeons. Finally, an attending surgeon can feel most responsible, given that they oversee and are medico-legally responsible for all clinical decisions, in addition to often having a longitudinal relationship with the patient from the time of the initial surgical consultation.

In scenarios involving junior and senior surgeons, the junior surgeon may not always feel comfortable reaching out to the senior surgeon for support. Such a move signals vulnerability, which can be uncomfortable. It is particularly important for a senior surgeon to respond by setting aside time and creating a safe space to touch base when a junior surgeon initiates discussion. When the junior surgeon does not ask for support but offers more subtle clues, it is important for the senior surgeon to follow their instincts and check in. In the "How" subsection below, we describe 5 steps of this process.

Which emotions might emerge, and why do they matter? In this case, Dr R made the decision to remove SM's NGT based on a well-informed clinical assessment with

appropriate oversight and approval from Dr A. With assistance from the speech and swallow therapists and the nurse, SM initially made progress eating and drinking. Unfortunately, SM later aspirated, resulting in decompensating respiratory status, and required reintubation. Dr R, who likely was managing this particular complication for the first time, assumed self-blame and expressed regret for advancing SM's diet.

A large systematic review found that "anxiety, guilt, sadness, shame," and "interference with professional and leisure activities" were the most commonly reported adverse emotions following patient-related complications.[19] In one study, 84% of surgeon respondents reported experiencing a combination of anxiety, guilt, sadness, shame, and anger in response to intraoperative adverse events,[7] and, in a more recent survey, up to a third of surgeons reported that patient deaths impacted their professional career, emotional well-being, or social life, with 18% having considered taking a break and 12% having considered leaving their career.[20] Self-perceived medical errors can also be accompanied by feelings of remorse or inadequacy; fear of retaliation, judgment, and retribution; and anxiety or insomnia.[18,21] These findings can help us better understand, normalize, and support surgeons' navigation of complex emotions following adverse patient events.

Where and when should check-ins and debriefs happen? Protected time and space are needed for debriefs and check-ins. In the above case, we recommend that Dr A have an initial conversation with Dr R, ideally within a day or two of the aspiration event. If possible, this conversation should occur in a private setting rather than in a patient care area, crowded elevator, or busy cafeteria in order to minimize interruptions. In addition to protecting privacy, Dr A should practice deep listening to promote psychological safety and facilitate an open, authentic conversation. A face-to-face discussion is preferable, but a phone conversation can be effective if time constraints and obligations make an in-person meeting impractical. After the initial discussion, Dr A should follow-up with Dr R within the week via phone, text, or email to check in. Additional follow-ups would depend on the needs of the resident.

How should surgical trainees and colleagues be better supported? Providing support for a surgical trainee or colleague dealing with a challenging patient scenario requires situational awareness and emotional intelligence, including skillful use of interoception, compassion, and empathy. A colleague in need of support will often offer cues, including overt statements, tone of voice, body language, or behavior change. In this case, Dr R's stating "If only I hadn't let SM eat" is a hint to Dr A that Dr R might be indulging in self-blame for the patient's aspiration.

We have adapted the critical incident framework[8,10,16] and incorporated metacognition tools for application to surgeon support in 5 steps. (See the Supplementary Appendix for definitions and resources.)

1. *Review facts*. The senior surgeon and junior surgeon together review key case facts, including sequence of events and objective outcomes. This step can be brief. Dr R and Dr A would review that SM had minimal NGT output and was having bowel movements, that a speech and swallow therapy assessment was ordered and followed, and that nursing assistance with eating was provided. When SM aspirated, appropriate clinical assessment was performed and appropriate treatment was provided.

2. *Understand thoughts*. The senior surgeon elicits the underlying narrative that the junior surgeon has ascribed to the case, such as "I made the wrong decision" or "I must be a bad surgeon." Dr R would then be encouraged to explore the underlying narrative by sharing their inner dialogue: "If only I hadn't let SM eat" or "It was my fault that SM aspirated and needed to be reintubated." During this discovery phase, it is important for the senior surgeon to refrain from negating the junior surgeon's self-assessment, instead simply holding space with the junior surgeon to explore a natural response to a challenging experience.

3. *Recognize reactions*. The goal of this step is to support the junior colleague in distinguishing between facts and thoughts. Gentle exploration of these different "truths" enables the junior surgeon to decouple event from reaction and thoughtfully consider alternative conclusions. Dr A would demonstrate, based on the available evidence, that it was not Dr R's fault that SM aspirated. In a case in which the surgeon was primarily responsible for the unwanted outcome (as might be the case with an intraoperative error), it is common for the reaction to overshadow the incident. Thoughts such as "I shouldn't be a surgeon" or "I should leave clinical practice" can feel like facts in the moment but are an exaggerated and understandable emotional response to the situation. It can be helpful to identify how emotions may be manifesting in the body physically. This embodiment can be monitored in tandem with emotional processing and resolution. Common expressions of emotional stress to look out for include new or worsened insomnia, headaches, clenching of the jaw, tightness of the neck and shoulders, gastrointestinal upset, and so on.

4. *Normalize experiences*. We recommend that the senior surgeon discuss how the clinical situation affected them or share a time when they felt similarly. Clinical details should not be centered; reflection on emotions like regret or guilt should be prioritized. Normalizing experiences and emotions is important for demonstrating vulnerability and common humanity, which tends to build trust and strengthens relationships between surgical colleagues. Awareness and recognition of these experiences are key for surgeons' cultivation of connection, compassion, and resilience.

5. *Plan together*. Lastly, the senior surgeon should guide the junior surgeon in developing a plan. This is an opportunity to share healthy coping strategies or ask open-ended questions that prompt the junior surgeon to devise their own healthy coping strategies. In some cases, offering peer support or professional mental health resources might be helpful. Before closing the discussion, a plan should be made to check in again.

Conclusion

A surgeon can experience sadness, worry, and stress when an undesired patient outcome or patient suffering occurs and the surgeon feels responsible. Surgeons, especially trainees, experience regret over specific patient management decisions and frequently resort to self-blame following a negative patient outcome.[22] Regret and self-blame can result in anxiety, guilt, shame, and perseverative negative unhelpful thought patterns. Unchecked, these experiences can have long-term cumulative effects on personal and professional identities.[22]

In this commentary, we have outlined the ways in which surgeons can offer support for colleagues experiencing regret and other moral emotions that are endemic to the practice of surgery. Our adapted framework, outlined above, can be an additional tool in the toolbox for surgical colleague support.

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The people and events in this case are fictional. Resemblance to real events or to names of people, living or dead, is entirely coincidental. The viewpoints expressed in this article are those of the author(s) and do not necessarily reflect the views and policies of the AMA.

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CASE AND COMMENTARY: PEER-REVIEWED ARTICLE

Which Systemic Responses Should We Evolve to Help Surgeons Navigate Their Regret Experiences?

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Abstract

Regret in surgical practice is typically construed as resulting from the commission or the omission of a specific action at a specific decision point, which leads to a deleterious outcome. This article suggests a need to expand this conception of surgical regret to better account for surgeons' regret experiences arising from factors beyond their control. The commentary accompanying the case investigates these external sources of regret, such as resource limitations or professional interpersonal dynamics that prevent a desired outcome from being realized. It also discusses the normative value of addressing surgeons' experiences of regret, especially as a catalyst to facilitate positive systemic changes to ameliorate surgeons' kindred experiences of moral distress, burnout, and compassion fatigue.

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Case

Mr P is an undocumented and uninsured immigrant in his mid-40s who currently lives in the United States. Mr P presents to a major quaternary care cancer center with a large primary chondrosarcoma localized to his right hemipelvis that is over 30 cm long and extends into his abdomen, displacing many of his abdominal organs. Chondrosarcomas typically do not respond to chemotherapy or radiation,[1] and the surgical resection of such a massive tumor (which would require an external hemipelvectomy with amputation) would require the assistance of orthopedic, general, plastic, vascular, and urological surgeons. However, due to Mr P's immigration status, he is unable to receive care at the cancer center and is referred to a local county health system that primarily provides care for indigent patients.

At the county hospital, Dr O, a junior attending orthopedic oncologist, and Dr G, a senior attending surgical oncologist, collaborate to manage Mr P's care and lead discussions during tumor board meetings. Mr P's tumor type and stage suggest a 5-year overall survival rate of 72% with surgical treatment.[2,3] Without surgery, the 5-year overall

survival of similar patients is 29%.[2] Dr O and Dr G anticipate Mr P's in-hospital intensive care unit postoperative recovery from a 2-day surgery to be nearly 40 days, with an additional 20 days in a rehabilitation space.[4] Dr O and Dr G meet several times to discuss Mr P's case, both concerned that the county hospital, with its limited resources, is not sufficiently equipped to enable Mr P's care team to meet his intraoperative and postoperative care needs. However, Dr O and Dr G meet with Mr P and explain that there is a philanthropy program at the county hospital that would enable Mr P's transfer to the quaternary cancer center to which he first presented. Mr P considers this option for a couple of days and decides against surgery, opting to manage his cancer palliatively.

Although the regret was mainly experienced by Dr O, both surgeons felt regret regarding Mr P's case.

Commentary

Wilson et al has identified 2 types of surgical regret in the literature: regrets of commission, in which a surgeon proceeded with a surgery that brought about a deleterious outcome; and regrets of omission, in which a surgeon elected not to proceed with a surgery that could have prevented the worsening of a patient's condition.[5] Notably, these regrets are outcome dependent and are predicated on the surgeon having sole agency in the making and execution of a decision, isolated from colleagues, patients, and systemic factors.

By challenging these underlying assumptions, the analysis that follows aims to expand the concept of regret in surgery to include an additional type of regret in which surgeons' agency is diminished due to factors beyond their control, thereby preventing surgeons from providing the care that they believe best aligns with their patients' goals of care.

Regrets Beyond One's Control

In what follows, the authors draw upon their experiences with cases similar to Mr P's and offer additional context for Dr O's and Dr G's regret experiences. Through the discussion of the case, this section aims to demonstrate how aspects of Mr P's care that were beyond the control of the surgeons resulted in the surgeons' experiences of regret.

Professional interpersonal dynamics in the case of disagreement between junior and senior surgeons. Suppose the surgeons in this case disagreed about whether surgery was indicated for Mr P, with Dr O believing it was indicated and Dr G believing it was not. Contributing to Dr O's regret might have been his reticence to voice his concern that Dr G might not appreciate the details of Mr P's case from the perspective of an orthopedist. Although the 2 surgeons might have extensively discussed the management of Mr P's case over multiple meetings, Dr O might have been hesitant to resist Dr G's position too strongly out of respect for Dr G's seniority in rank and experience.

An aspect of medical decision-making that is not unique to this case but warrants mentioning is the dynamic between a junior physician and a senior physician. Although this relationship has not been extensively written about, ethical tensions that can arise in disagreements between junior and senior physicians can be analogous to those in disagreements between residents and attending physicians[6]: even if a senior physician has not explicitly demanded that a junior physician acquiesce to their recommendations, a junior physician's self-perception as lower ranking can influence their deferral to a senior physician's recommendations. As such, even if Dr G did not insist on Dr O's adherence to his recommendation, given Dr G's seniority, Dr O might still feel that he

could not make the decision for surgery without Dr G's genuine belief that surgery was the right option for Mr P.

With the increasing interdisciplinarity of surgical care, this case also brings attention to ethical concerns that arise when specialists in related but distinct fields have differing perspectives on the care a patient should receive. Although Dr G is not an orthopedic oncologist, he has extensive experience in cancers of the abdomen, and the tumor invasion into this space brought the case within his domain of expertise. Dr O specializes in cancers of the musculoskeletal system and their surgical management, although he does not typically operate in the abdomen. In the context of a clinically ambiguous case that few surgeons in the world have encountered, both surgeons could have regretted that they did not have prior experience with such a case to be able to definitively identify and reach consensus on the best course of treatment for Mr P.

Physician influence on patient decision-making. When Dr O initially met with Mr P, Dr O likely explained that surgery was the best chance for a cure and recommended proceeding with surgery; Mr P assented to the procedure. However, if we infer from the case that Dr G also had an appointment with Mr P, he likely emphasized the detriments of surgery and recommended against it. Both surgeons based their recommendations on their expertise in different oncologic specialties, and although both surgeons assured Mr P that the choice was his to make, Dr O could have been concerned that the presentation of information in this disjointed manner undermined Mr P's agency in making an informed decision.

Central to a responsibly guided informed consent process is the explanation of risks and benefits to the patient, which allows the patient to determine what amount of risk they are willing to accept for an anticipated benefit. In practice, however, informed consent discussions are rarely straightforward. Among the factors that lead patients to follow their clinicians' recommendations is the worry that choosing otherwise would result in retaliation or the provision of lower-quality care.[7,8] Thus, although patients are theoretically freely able to choose between the options made available to them, they might feel compelled to align their decision with their physician's recommendation despite having reservations. It can be imagined that, for Mr P, such a concern was amplified, as either choice could be construed as contrary to a recommendation of one of the surgeons, even though both surgeons would be involved in his care moving forward.

Additionally, Dr G's likely description of the negative sequelae of surgery may have disproportionately heightened Mr P's tendency toward risk aversion in decision-making.[9] In enumerating the risks of surgery, the functional deficits following surgery, and the possibility of recurrence and subsequent mortality, Mr P, if risk averse, would have interpreted such losses as overridingly unfavorable compared to the benefit of a cure, making him liable to choose in a manner that comports with Dr G's recommendation. Indeed, Mr P did ultimately elect to not undergo surgery for his tumor, noting that he wanted to preserve his current quality of life. Although it is impossible to determine the extent to which Dr G's recommendation influenced Mr P's decision, it's likely that Dr O's knowledge of Dr G's influence on Mr P's decision contributed to Dr O's regret.

Systemic factors. In the end, Dr O and Dr G agreed that the county hospital was not equipped to provide the perioperative care that Mr P would need and expressed regret that they could not offer surgery to Mr P as a treatment option. Mr P decided not to

transfer from the county hospital to the cancer center for care. The unfortunate nature of this case weighed heavily on the minds of all members of the care team, perhaps most of all on Dr O, who was left grappling with the knowledge that Mr P's only chance for a cure was decisively obviated by the systemic insufficiencies faced by the hospital.

The regret that Dr O experienced was the product of an interplay between systemic and interpersonal factors beyond Dr O's control that precluded the surgery that he believed aligned most strongly with Mr P's goals of care: resource limitations at the county hospital and his own lack of seniority and lack of unanimous collegial support meant he could not continue to offer surgery as an option in good faith, and, if both surgeons met with Mr P at different times, Mr P's decision could be affected by discrepancies in information presentation, which could have prompted Mr P to decline to transfer his care to a hospital equipped to perform the surgery.

Moral Distress and the Value of Regret

Despite regret being a negative experience, surgeons should take care not to stifle feelings of regret, as instances of ignoring regret can beget moral distress, which can occur when a health care professional is unable to perform the action they perceive to be morally right.[10,11] Left unaddressed, repeated experiences of moral distress can result in psychological harms, such as moral injury,[12] burnout, and possibly the loss of empathy, termed "compassion fatigue,"[13,14] which invariably diminish the quality of care that a surgeon can provide. It is thus of crucial importance to identify means by which surgeons who are experiencing regret can be provided with a sense of closure and assurances that their regret has been noticed and is being considered seriously. By establishing a relationship between surgeon regret, moral distress, and moral injury, the interventions that have been promulgated in the literature pertaining to clinician distress can be extended to ameliorate the moral harms that can result from surgeon regret. Reflection on regret experiences can be beneficial in identifying not only patient care values but potential targets of systemic change to prevent regret, and the negative emotional experience of regret can serve as a powerful motivator for effecting this change.

The authors recall an instance in which a surgeon at the county hospital faced a case similar to that of Dr O. The surgeon advocated for the patient by enumerating the technical and ethical difficulties of his case to physicians from different specialties and hospital systems, raising enough awareness that the blood bank at the county hospital now tries to accommodate the increased system-wide demands necessitated by the complicated cancer surgeries that the surgeon performs. The surgeon's activism, motivated by his regret experience, expanded the scope of the oncology services offered to medically underserved populations by the county hospital.

Remediation of Regret

The events of this case reveal 2 institutional interventions that may be beneficial in remedying regret. Firstly, hospitals should consider the establishment of structured debriefing sessions for the involved parties to share their thoughts on how they felt throughout the decision-making process, including ways in which they felt that their perspective was or was not considered fully, areas in which they experienced uncertainty and how they chose to navigate it, or ways in which systemic factors precluded their desired outcome from being realized. Such debriefing sessions should be a space that equalizes the hierarchical differences between care team members to allow for open

communication and can motivate quality improvement efforts to enhance patient and clinician well-being.

Secondly, as medical care becomes increasingly interdisciplinary, the incidence of disagreements among clinicians is bound to rise, and efforts to preempt regret occasioned by such disagreements are warranted. Physicians evaluating patients as part of a multidisciplinary team should thus disclose that their opinions do not always concur with the final recommendation of the care team as a whole. Subsequent meetings can occur after every member of the team has had a chance to meet with the patient and the team has had an opportunity to align recommendations with a patient's values and goals of care. Presenting information as a united team can minimize the amount of decisional conflict that patients face, as it reduces the degree to which diverging opinions of members of a care team can complicate the making of important medical decisions. In instances of inter-clinician disagreements, every effort should be made to resolve conflicts before a unified recommendation is presented to the patient to ensure that every member of the care team is given the opportunity to express their perspectives and concerns.

Conclusion

Regret is an unavoidable experience in all aspects of health care and is felt by both patients and clinicians. Regret as experienced by surgeons, however, is given scant attention in medical training and literature. This case and commentary aims to broaden the definition of regret in surgical settings, thereby legitimizing a wider scope of negative affective experiences as genuine regret deserving of attention, and to suggest novel ways of interpreting and responding to experiences of regret. Such a reconceptualization of regret in surgery might be helpful in mitigating surgeon burnout and moral injury and in catalyzing personal and structural change in the service of improving patient care.

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CASE AND COMMENTARY: PEER-REVIEWED ARTICLE

How Should Professional Resistance Be Integrated Into Conceptions of Professional Accountability?

Rachel Ellaway, PhD, Lisa Graves, MD, and Tasha R. Wyatt, PhD

Abstract

As more health professions students, trainees, and clinicians engage in acts of professional resistance, professional accountability is needed when acts of resistance influence patient care. This article suggests standards that can help distinguish between professional and nonprofessional resistance and prioritize minimizing harm and injustice to patients.

Case

Dr A is a resident physician working with a patient, MM, in the emergency department. MM wants their nasogastric (NG) tube for feeding removed, and it is unclear to Dr A whether MM understands the risks of doing so when the NG tube is still needed from a clinical standpoint. Dr A, therefore, conducts a cognitive assessment to determine MM's capacity to make this specific decision at this point in time to remove their NG tube against clinical indication to keep it placed. Dr A determines that MM has capacity to make an informed refusal to continue with the NG tube and then calls the on-call surgeon, Dr S. Dr S is irritated that MM, a patient frequently seen in the emergency department, wants their NG tube removed and orders Dr A to administer medication to MM to "calm them down and help them tolerate the NG tube." Dr A is not comfortable administering medication to MM for this purpose when MM has capacity to make an informed refusal. Dr A considers how to respond.

Commentary

This case prompts a question: whether and how Dr A should resist Dr S's order about how to treat MM, their patient. Specifically, if Dr A does resist, which standards should guide Dr A's decision making, actions, and responses to consequences of those actions that might affect their patient?

Students and clinicians engage in acts of resistance in response to many injustices, including those related to racism, sexism, homophobia, patient and trainee mistreatment,[1] and structural underinvestment.[2] This is not a new phenomenon, as clinicians have long engaged in such acts, both overtly and covertly, but it is one that is growing in prominence and that is increasingly taxing schools' and professional bodies' ability to respond.[1] As an indication of the challenges that professional resistance can

create, the authors have all observed that some relatively mild acts of professional resistance are punished, while other acts that seem quite unprofessional are allowed to continue unchecked.[3] Without structure, professional resistance is random, ungrounded, and open to abuses that can harm or compromise those who resist, those who respond to acts of resistance, and bystanders. The problem is not simply one of naming and providing structure to professional resistance; it is ensuring that principles of professional resistance (what it means and how it should be pursued) are adopted as professional standards and then used to hold all professionals accountable for their actions. Without accountability, acts of professional resistance can undermine the integrity of individual professionals and the trust that society invests in the profession as a whole.

Accountability

In earlier work, the first and third author advanced the concept of professional resistance as a way to legitimize the discussion of resistance in health professions education.[4] We based this work on 4 core principles, in that professional resistance should be:

- Affirmative and principled: it should be for something rather than against something.
- Deliberate: it should be undertaken intentionally and mindfully.
- Proportionate: it should be sufficient to achieve its ends.
- Constructive: it should be about finding and building solutions.

In the case above, if the resident decides to resist the on-call surgeon, then they should affirm the patient's desire for the tube's removal; they should clearly communicate this intention; and they should act mindfully to achieve this end in ways that respect professional boundaries to achieve high-quality care for the patient. That said, we need to add the principle of accountability to standards, since being affirmative, deliberate, proportionate, and constructive are insufficient to resolve conflict and ambiguity regarding whether acts of resistance are or are not professional. In the case, this determination is not simply a matter of the resident's accountability to their supervisor; it is about mutual accountability and the accountability of both parties to the standards of their profession as a whole.

Professional accountability has both an internal and an external orientation.[5] From an internal perspective, being accountable involves an individual or group taking responsibility for their actions, and, from an external perspective, being held accountable centers on the judgments of others (such as patients and peers) that matter. Both are needed; neither will suffice on its own. To that end, the Medical Professionalism Project writes that physicians are expected to "participate in the processes of self-regulation, including remediation and discipline of members who have failed to meet professional standards.... These obligations include engaging in internal assessment and accepting external scrutiny of all aspects of their professional performance."[6]

Accountability can have multiple facets. For instance, health care professionals have legal accountabilities (for their actions or omissions), ethical accountabilities (to the rights and integrity of persons and collectives), contractual accountabilities (to their employers), personal accountabilities (to their families, friends, and communities), and professional accountabilities (to the standards of their profession). While these facets

have served us well to this point, we now add one overlooked dimension of professional accountability to the list: that of accountability for professional resistance. This accountability is not to persons but rather to professional principles expressed as standards of conduct, such that all professionals are bound by them, both internally as a guide to behavior and externally as means of being held accountable by a professional collective for their individual behaviors.

Why Do We Need Standards?

Why do we need standards and accountability for acts of professional resistance? First, we need standards to be able to distinguish professional resistance from nonprofessional resistance, in which acts contesting power are unrelated to professional practice, such as political activity as a private citizen (although we acknowledge that separating private and professional lives can be challenging). When resistance is carried out in a professional context, it is critical to distinguish professional from unprofessional acts. For instance, sometimes an act of resistance may be an expression of pique, unfocused anger, frustration, or selfishness, such as when a resident, who is tired from long shifts and does not feel they are paid enough to treat patients and teach, barks orders at a student. Even acts of resistance that lack an ethical basis, such that resistors have no clear sense of what needs to change, are unhelpful, and their concerns can be easily dismissed by leaders as mere complaints.[7] Rather, acts of professional resistance should be constructive and aimed at changing how the collective thinks about and imagines the world.[8] In a positive sense, professional resistance typically responds to and seeks to address social harm and injustice and could be added to existing guidelines on professional behavior. In a negative sense, physician resistance can also be self-serving and coercive.[9]

Second, standards are needed for health professionals acting as change agents, particularly with respect to addressing social determinants of health, as what constitutes professional resistance is unclear and acts of resistance can conflict with each other.[10] For instance, there are those who campaign for greater social accountability in health care based on clinicians' obligations to respond to problems such as education and income inequity and food scarcity. Such acts challenge long-held beliefs that physicians, in particular, should attend to a biomedical model of care and instead extend physicians' roles into society at large. Additionally, there are those who argue that the social sciences have no place in health professions education, stressing instead the development of medical expertise, in particular.[11] Rather than taking a side, we note positive examples of resistance (engaging in public debate, focusing on patient and population health) as well as negative examples (shutting down debate, engaging in ad hominem attacks) on both sides. Again, standards can serve as a guide for individual behavior and as a basis for fairness, transparency, and accountability to health professions.

Third, standards are needed because professional resistance often happens in a vacuum (it is neither taught nor modeled by preceptors) and can take many different forms (eg, protest, workarounds, noncompliance, disengagement). Advocacy and resistance are part of a continuum; therefore, acts of resistance can be hidden or protected by describing them as advocacy while more substantial acts of advocacy (such as noncompliance) can be delegitimized as acts of resistance.[12] Engaging in professional resistance can be like walking a tightrope: too little resistance fails to effect change while too much resistance leads to individuals being punished or excluded.

With standards in place, it would be easier to distinguish between professional and nonprofessional acts of resistance and to do so in ways that are themselves fair and accountable. For instance, acts of resistance that are objectively judged to fall short of professional standards not only could lead to sanctions or remediation for those involved, but also could help to guide ethical reasoning. Recognized standards for professional resistance would also mean that they could be integrated into the training and subsequent professional development of health professionals, such that all members of the profession could ensure that their acts of resistance were both grounded in and bounded by professional values and expectations.[13]

Standards for professional resistance can also form a basis for meaningful discussions about resistance as a principle and its application. Resistance grounded within professional standards can help motivate shared understandings of what these acts should accomplish (ie, signal real or perceived social harm) and provides individuals with a space to discuss differences in experience or perception. By contrast, resistance outside of a professional context cannot be easily recognized as an effort to be constructive. Rather, it is often perceived to be lawless, ungovernable, and dangerous.

Accountability Grounds Authority

A profession that refuses to set or uphold standards loses its authority. While there are standards for providing patient care, interacting with colleagues, and social and fiscal probity, until now there have been no standards for professional resistance.[4] This article has outlined 5 principles of professional resistance (affirmative, deliberate, proportionate, constructive, and accountable) that we have found effective in establishing meaningful conversations and guiding policy development.

Care will be needed in translating these principles into professional standards and in identifying who decides whether these standards have been followed or breached. That is the work of existing professionalism committees that can add the standards for professional resistance to those already in place for professional practice. Some thought is also needed in balancing accountability for professional resistance with other accountabilities (eg, legal, fiscal, contractual) in ways that uphold a professional's responsibilities to respond to perceived harm and injustice.

Not only should those engaging in resistance in the context of a professional role follow standards of professional resistance; standards for professional resistance need to be solid, well understood, and woven into policy. They also need to be upheld, championed, modeled, and exemplified by the profession as a whole. Clearly, these kinds of changes cannot happen without the commitment of leaders as well as the investment of the profession. The bigger threat is letting the status quo continue, with professional resistance having no boundaries or structure, not least because resistance without accountabilities can destroy that which the profession seeks to heal.

Although we have set out a case both for professional resistance as a whole and for the need for standards for professional resistance and broad accountability (both internal and external) to those standards, further work is needed in establishing, reviewing, and implementing these standards by professional societies, medical schools, and licensing and credentialing boards (to name but a few). More research is also needed to explore the impact of this work on individual practitioners, on the profession as a whole, and on the quality of patient care.

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AMA CODE SAYS: PEER-REVIEWED ARTICLE

Experiencing and Coping With Regret After a Patient's Poor Outcome

Amber R. Comer, PhD, JD and Meredith Rappaport, MS

Abstract

Most clinicians dedicate their professional lives to ensuring their patients' well-being. Despite clinicians' best efforts, however, patients can experience poor outcomes, some of which might be iatrogenic, but many of which are beyond the scope of clinicians' control during any specific clinical encounter or course of care. Such poor outcomes might lead some clinicians to feel regret. This article considers how the AMA *Code of Medical Ethics* can support physicians while they cope with regret due to a patient's poor health outcome.

Regret After Poor Outcomes

The patient-physician relationship is rooted in what some call a "covenant of trust,"[1] which obliges physicians to provide high-quality care that promotes the welfare of their patients.[2,3,4,5] To that end, physicians dedicate their professional lives to ensuring the well-being of their patients; however, despite their best efforts, some patients will ultimately experience a poor medical outcome for reasons both within and beyond physicians' control, including individual physician medical error, health system breakdown, and inevitable circumstances. Regardless of the reason, it is common for physicians to feel regret in the wake of a patient's poor outcome, and feelings of regret may be heightened when they believe that the poor outcome was due to their error.[6] This article considers how the American Medical Association (AMA) *Code of Medical Ethics* can support physicians while they cope with regret due to a patient's poor health outcome.

Expectations Can Contribute to Regret

Participating in the medical decision-making process is a large component of physicians' responsibilities and a foundational component of the patient-physician relationship. Decision-making happens through a thorough process in which clinicians share information; come to understand patients' values, goals, and beliefs; and evaluate patients' physical or mental condition with an overall goal of improving health outcomes. The importance of the shared decision-making process is reflected in the AMA *Code*'s emphasis on various ethical principles, such as respect for patient autonomy and informed consent, and rights, such as physician exercise of conscience and patient rights (eg, refusal of treatment).[7,8,9] However, no matter how thorough a decision-making process is and how confident a physician is that the chosen medical plan will improve

the patient's health and realize the agreed-upon medical goals, the possibility of error always exists. Medical decisions made using the best available evidence do not guarantee their anticipated outcomes; however, the goal or expectation of a successful outcome and the extent to which decision-making is a part of a physician's job contributes to regret when outcomes are poor.

Additionally, patients' and societies' high expectations of physicians contribute to regret when outcomes are not as expected.[10] Perceiving physicians as infallible, especially when faced with medical uncertainty, can provide immediate, temporary relief or psychological comfort to both physicians and patients.[11] However, the hierarchical patient-physician relationship places greater decisional pressure on physicians and mitigates the importance of sharing information with the patient on the reality and the degree of medical uncertainty of the patient's condition. Failure to disclose such information in the event of an adverse outcome not only would compromise patient autonomy and informed consent but would risk greater psychological harm to physicians and create distrust within the patient-physician relationship.[11]

Experiencing Regret

The experience of regret, especially when left unresolved, can contribute to physicians' own long-term sequelae of negative experiences that affect both their personal and their professional lives. Hospitalists report experiencing regret in the form of extreme emotional distress, including sadness, anxiety, eating disorders, and increased alcohol use.[2,3,4] Additionally, experiencing regret is associated with higher burnout rates and a desire to leave the profession among hospitalists.[3,4] When physicians experience regret after a patient's poor medical outcome, the ability to discuss the incident with colleagues or attending physicians and accept responsibility when necessary is associated with constructive changes during clinical practice.[4,5] Conversely, lack of support and institutional judgment for medical errors has been associated with physicians' emotional distress, and burnout, as well as practice of defensive medicine.[5,12,13] For example, some physicians might be reluctant to suggest the same treatment to another patient or, conversely, might overtreat or over test perhaps as a way to overcompensate for a poor outcome they deem attributable to their own or another clinician's earlier poor decision-making.[14] In this way, practicing defensive medicine can have long-term consequences for physicians, patients, and the health care system.[14]

Identifying Regret

Given the high stakes associated with regret, such as defensive medicine and burnout, it is imperative for physicians to identify when they are experiencing and negatively coping with feelings of regret. Nevertheless, patient and societal expectations, whereby doctors are typecast as Godlike or superhuman "thinkers" rather than "feelers," have the potential to cloud physicians' judgment, keeping them from getting in touch with their own emotions.[10]

In order to fulfill the ethical responsibility of competence and to provide high-quality, safe, and effective patient-centered care, it is imperative that physicians recognize their limitations and refrain from practicing medicine when their physical or mental health impairs their ability to practice safely.[15] When health care professionals neglect to care for themselves and practice while impaired, they risk compromising patient safety, the inherent trust in the patient-physician relationship, and public trust in the practice of medicine.[6,12,13,15,16] Physicians can use continuous self-awareness and self-observation

skills to identify feelings of regret and to remain aware of their well-being and ability to provide quality care at any given time.[17]

Coping With Regret

Physicians and other clinicians experiencing physical or psychological effects of regret must engage in effective coping mechanisms in order to maintain their own physical and mental wellness.[6,12,13,15,16] Physicians cope with regret in different ways that can play a role in their long-term well-being.[18] While it is sometimes difficult to admit when one is not coping well, physicians have an ethical and professional obligation to engage in honest self-assessment about whether their mental or physical wellness is affecting their ability to safely treat patients.[17] In order to fulfill this ethical duty, physicians should make themselves aware of resources and, when appropriate, seek help in addressing their feelings of regret and its physical and psychological consequences. Additionally, physicians and other clinicians should be aware that occupational stressors, such as sleep deprivation, which is common while experiencing regret, can temporarily impair their ability to safely practice medicine.[19] Importantly, physicians should refrain from self-treatment or self-medication.

While one is coping with emotions associated with regret, it is also important to remember one's responsibility to the patient, especially in the case of a poor health outcome. While experiencing regret might make it easier to avoid having tough conversations with patients about their poor health outcomes, especially when they result from errors, physicians have responsibilities to not abandon their patients.[9] Open communication and encouraging a patient to express concerns and fears after a poor outcome increases the chances of maintaining trust and allows the physician to either continue providing care or direct the patient to additional care elsewhere.[11] While empathic physicians can improve clinical outcomes, empathy and compassion training is rarely included within medical education, and, in one survey, roughly a third of physicians reported a desire for empathy training.[20] Uncertainty about how to express empathy makes it challenging for physicians to regulate their emotions during a distressing event and while engaging with a patient after a poor outcome.[18,20] As a result, physicians experience negative emotions, such as sorrow, guilt, frustration, and regret, rather than reacting more constructively through proper emotional regulation.[18]

Helping Colleagues Cope With Regret

While physicians strive to improve their patients' health and alleviate suffering, facing poor patient health outcomes is inevitable due to the imperfect nature of medicine and the reality of human error. However, physicians are often perfectionists by nature and held to exceptionally high standards by society and throughout medical training, which makes coping with a poor medical outcome especially challenging and, without proper coping tools, can increase regret, maladaptive behaviors, distress, and burnout.[21] This phenomenon is often referred to as "second victim" syndrome and can be detrimental not only to physicians, but to patient care and organizations.[22]

Although it can be difficult, it is imperative and ethically indicated to intervene when a colleague is unable to practice medicine safely or is endangering patients.[6,12,13,15,16,23] It is important to intervene with compassion and to refer or report a physician colleague who continues to practice unsafe medicine despite attempted intervention.[23] In order to foster an environment of support, physicians should strive to eliminate stigma regarding physical and psychological effects of coping with regret. One way to work toward this

goal is to advocate for respectful and supportive peer-review policies to identify and assist physicians with a potential impairment.[6,12,13,15,16,23]

In addition to physicians helping colleagues find support in coping with regret, greater changes within the culture of medicine can be made to support physicians when patients experience poor health outcomes. Effective psychological care provided through organizations for physicians not only benefits individual physicians but, by increasing service accessibility, contributes to the awareness and normalization of the need for and use of such care.[24] On its own, however, availability of supportive resources is not enough to reduce the number of clinicians experiencing debilitating side effects of regret. Organizations and individuals should make additional efforts to shift the work culture from blame toward proactively dealing with poor patient outcomes through education. Preparing physicians for realistic rather than perfectionist expectations of patient outcomes can begin during medical education by raising awareness of the emotional challenges of the medical profession and the resources available for seeking support and by teaching resilience, self-regulation skills, and constructive methods of dealing with regret in the event of poor patient health outcomes.[25]

Conclusion

It is common for physicians to experience feelings of regret in the wake of a patient's poor medical outcome. Failure to address feelings of regret can contribute to mental and physical health disorders and burnout. Physicians must be aware of their own impairments and care for their own mental and physical health so that they can continue to safely care for their patients. Physicians should cultivate practice environments that promote communication to ensure the delivery of safe and effective care. Additionally, physicians should compassionately intervene when a colleague is experiencing emotional or physical consequences of regret that affect their ability to safely practice medicine.

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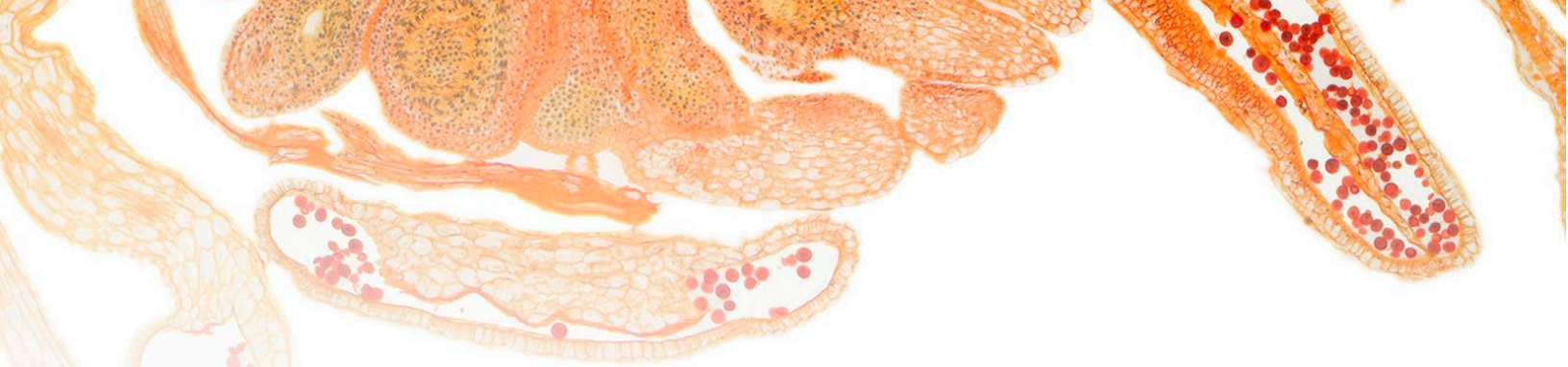

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POLICY FORUM: PEER-REVIEWED ARTICLE

Should Xenotransplantation Surgeries Be Authorized Under the Food and Drug Administration's Expanded Access Pathway?

Christopher Bobier, PhD, Daniel J. Hurst, PhD, and Daniel Rodger, MA

Abstract

This article examines use of the US Food and Drug Administration's (FDA's) expanded access pathway to permit cardiac xenotransplants. This article first argues that, although data are collected from cardiac xenotransplant surgeries authorized through the FDA's expanded access pathway, uses of preclinical trial data do not align with the FDA's stated aims of expanded access. This article also argues that potential risks of xenotransplantation merit greater caution than risks posed by devices and that it is unclear how caution about such risks is regarded and operationalized during the FDA's expanded access authorization processes.

Risk, Data, and Expanded Access

We are concerned about the use of the US Food and Drug Administration's (FDA's) expanded access pathway to permit 2 recent cardiac xenotransplants. We argue that (1) preclinical trial data are being collected from these uses as a precursor for clinical trials, which does not align with the FDA's stated aims for expanded access, and (2) the potential public health risks associated with xenotransplantation merit greater caution compared to other medical devices; it is not clear how precautions are being applied under the expanded access authorizations to date. Importantly, our concerns are not with the acceptability of the expanded access pathway per se, but only with its use for the specific practice of xenotransplantation. The FDA should clarify its rationale for and use of these one-off xenotransplant authorizations.

Compassionate Use of Xenotransplantation

In January 2022, a team of clinicians and researchers at the University of Maryland Medical Center transplanted a genetically modified pig heart into a severely ill patient, David Bennett Sr, in an operation that was granted emergency authorization through the FDA's expanded access, or compassionate use, for implanted devices program.[1,2] This program grants patients and clinicians access to experimental devices, and, between 2018 and 2022, more than 99% of the device requests evaluated were accepted.[3] To qualify for compassionate use, 3 conditions must be met: "(1) the patient has a life-threatening illness; (2) there is no therapeutic alternative; and (3) the benefit-risk ratio is favorable."[4] Mr Bennett was 57 years old with end-stage heart failure and on

venoarterial extracorporeal membrane oxygenation support (condition 1). Because of a history of prior medical nonadherence, he was deemed ineligible by 4 organizations for a heart allotransplant (condition 2). With no other clinical options and death imminent, his clinical team considered heart xenotransplantation to be the most promising option (condition 3). Despite the xenograft, Mr Bennett began deteriorating suddenly 49 days after transplantation, and he died 11 days later.[1]

Now it has come to light that the same team transplanted a genetically modified pig heart into another severely ill patient, 58-year-old Lawrence Faucette, on September 20, 2023, under the same FDA provision.[5] Faucette had end-stage heart disease, and, due to preexisting peripheral vascular disease and other comorbidities, he was deemed ineligible for a heart allotransplant. Because he was experiencing symptoms of heart failure and deemed ineligible for an allotransplant (conditions 1 and 2), the team considered cardiac xenotransplantation to be the most promising option (condition 3). However, similar to the outcome in the first heart xenotransplant, Faucette died just 6 weeks after transplantation on October 30, 2023.[6]

For someone who meets eligibility criteria, participating in the expanded access program can be a welcome opportunity, and there is considerable public support for the program.[7] The families of both cardiac xenograft patients expressed a sentiment that the extra days with their loved ones meant incredibly much to them.[8] However, we need to ask whether the FDA is using the expanded access pathway as a proving ground for xenotransplant phase 1 clinical trials.[4] As yet, there are no formal cardiac xenotransplantation clinical trials under consideration, and the FDA states that, despite recent advances, "more studies are needed to ensure safe and effective xenotransplantation,"[9] which suggests that the FDA is looking for more preclinical and decedent data to justify approving formal cardiac xenotransplant trials. David Cooper has written that before formal cardiac xenotransplant clinical trials can begin, "consistent survival … needs to be achieved."[10] It is unclear what the benchmarks are that should be met for approving a cardiac xenotransplant clinical trial, but this much is clear: although the expanded access program allows "devices that are not being studied in a clinical investigation" to be used, the program is not intended to be a proving ground, or a de facto clinical trial.[11] That is, expanded access is not envisioned as a pathway for providing evidence of efficacy and/or safety to initiate a clinical trial. And yet, in the absence of cardiac xenotransplant clinical trials, it seems as though it is being used in this way.

This use of the expanded access pathway for xenotransplantation is troubling. If several heart xenotransplants are permitted via the expanded access program that would be equivalent to the number of participants acceptable for a phase 1 trial, then the reasons for not permitting a formal clinical trial are prima facie redundant; the expanded access program could potentially end up being used as a de facto clinical trial in violation of the spirit of the expanded access program. Let's suppose that the FDA does not permit a phase 1 trial within the next 5 years but that several more cardiac xenografts are permitted via the expanded access program. While the data gained would be valuable, they would not be equivalent to those obtained from a phase 1 trial. Because equivalency will depend on the entry criteria used for a clinical trial, the expanded access and clinical trial patient groups could be dissimilar: Bennet and Faucette were both medically fragile, leading to the question of whether this preclinical use data will support clinical trials. Regardless, there must be a threshold achieved whereby either no more compassionate access uses should be permitted or formal trials must be initiated.

Perhaps this is the FDA's plan: once *x* "compassionate uses" have been permitted or *y* results have been achieved, these data would count as sufficient evidence to justify initiating phase 1 clinical trials.

This leads to our second point that there has been a general lack of transparency regarding the use of the expanded access program in the context of cardiac xenotransplantation, which may present a public health risk. The FDA's guidelines and information for the public emphasize the risk to public health through possible zoonotic infection and the requirement for lifelong biosurveillance of xenograft recipients,[12,13] and yet, in both of the compassionate use cases, it remains unclear how public health was being protected, as the transplant teams have not disclosed this information. We therefore recommend greater transparency from the FDA regarding the criteria it is seeking before approving a cardiac xenotransplantation clinical trial,[4] clarification on why expanded access has been the approved mechanism for cardiac xenotransplantation to date, and greater transparency regarding public health protection, such as biosurveillance protocols for xenograft recipients and possibly their close contacts. By clarifying its rationale for and use of these one-off xenotransplant authorizations, the FDA can help advance the field.

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MEDICINE AND SOCIETY: PEER-REVIEWED ARTICLE

How Might the Use of Shared Decision-Making With a Patient Mitigate Surgeon Regret in Circumstances of a Poor Outcome Not Due to Error?

Josh Sommovilla, MD

Abstract

Surgeons might experience regret after interventions for high-risk patients who have poor outcomes, even when no errors occurred. Some regret experiences stem from incomplete communications or miscommunications about options, expectations, or prognoses. Experiences of regret, and even moral distress, might be mitigated when surgeons share key surgical care decisions with patients or their surrogates and draw on strategies for communicating well about patients' serious illnesses or injuries. Shared decision-making is a communication framework whose principles may contribute to mitigation of surgeon regret.

Focus on Surgical Decisional Regret

Regret is a widely acknowledged yet poorly understood influence on health care decision-making. Regret can occur as a result of incomplete communications or miscommunications during the decision-making process, and it can potentially live on as a source of distress and bias in clinicians' future decision-making conversations with other patients. Thus, regret can both result from the decision-making process and influence future clinical decisions. While decisional regret among patients is relatively well studied,[1,2] there are few studies that assess factors that contribute to clinicians' regret experiences.[3,4] In high-stakes situations, surgical decision-making can be complex, and a poor outcome can have substantial consequences for surgeons, patients, and other key stakeholders in surgical decisions, even in the absence of error.

Surgeons may experience regret for different reasons in the setting of a poor outcome: because of the outcome itself, the clinical option chosen, the role they played, or the process through which a decision was made. Although these types of regret may be distinct, some are related to each other via common psychological mechanisms (eg, justification in the face of a poor outcome).[5] Traditional discussions at morbidity and mortality conferences focus heavily on techniques utilized during surgery or on which option was chosen (ie, factors related to outcome regret and option regret) rather than on issues related to *process* or *role* regret. It is for these categories of regret that robust shared decision-making (SDM) may provide the most benefit.

SDM is a physician-patient communication process that emphasizes collaboration between patient and physician in reaching decisions. It is an increasingly utilized framework for decision-making in serious illness, including surgical situations. While robust SDM may not prevent a patient from having a poor outcome, I hypothesize that it might contribute to mitigating surgeon regret when poor outcomes do occur.

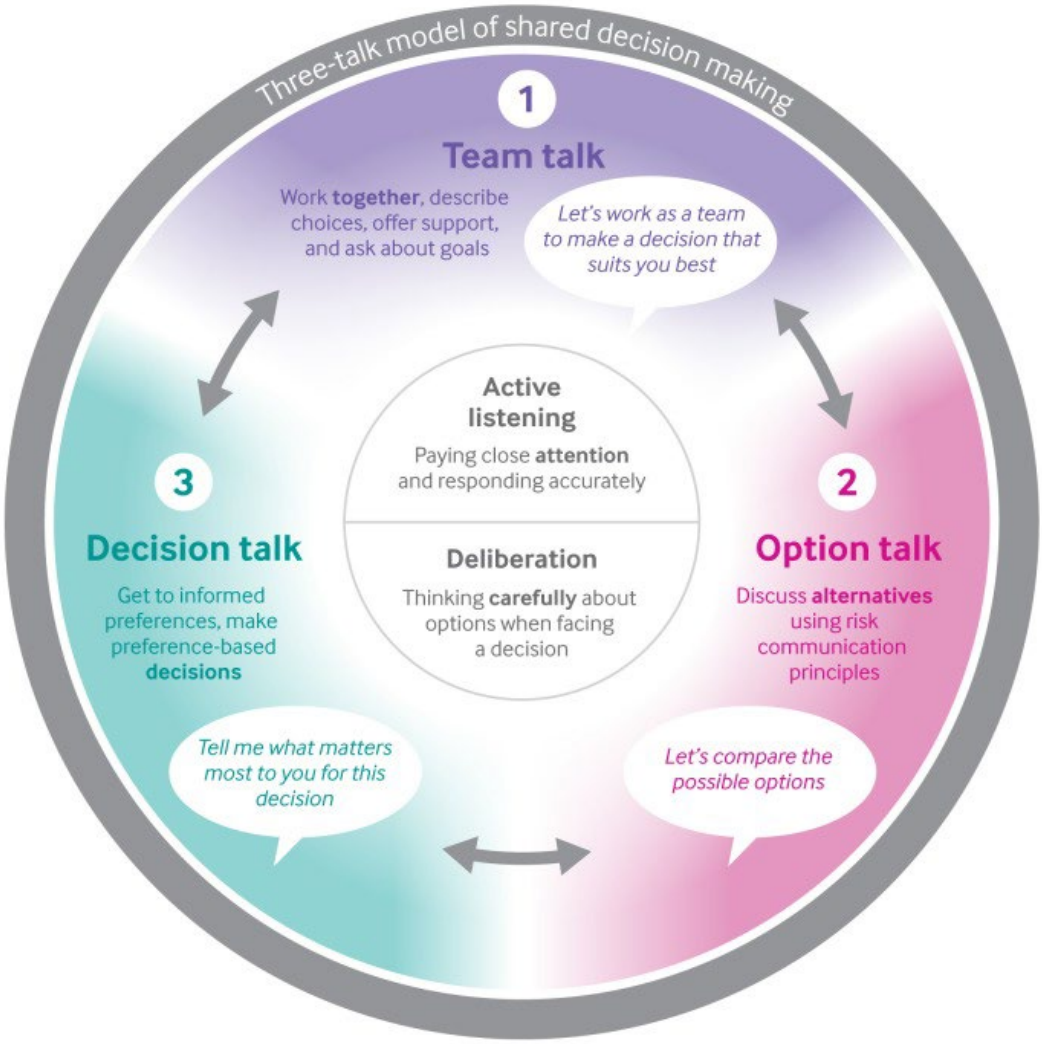
Shared Decision-Making in Surgery

Studies of surgeon regret in surgical decision-making have focused on option regret. Some studies assessing surgeon regret utilize scales that classify regret as that of commission or omission.[3,4] This classification breaks down regret by the decision that was made: regret of commission occurs as the result of a decision to perform surgery; regret of omission results from a decision against operative intervention. Regrets related to omission may be more difficult to study, as these cases are less likely to be presented at morbidity and mortality conferences or in written work submitted for peer review. This distinction is useful for organizing our thinking about situations in which regret can occur, but it relies on which decision was made and does not address process regret. It's reasonable to believe that robust SDM may play a role in mitigating the degree of process-related regret and even moral distress that surgeons experience when poor outcomes occur.

The collaborative nature of SDM stresses placement of equal value on patients communicating values and goals and on physicians sharing information about clinical context, medical evidence, and expected outcomes. Together, a decision is made based on a mutual exchange of information among patient, family, physician, and other stakeholders involved in the decision.[6] When studied in context of surgical decision-making, SDM has been shown to improve decision quality and patient preparation and to decrease conflict.[7] Its impact on postoperative regret of patients or surgeons in the setting of a poor outcome, however, has not been well studied. Nevertheless, it stands to reason that engaging in a thorough SDM process may provide benefits in lessening the likelihood of surgeon regret in scenarios with a poor outcome. To understand why, we need to first think about what exactly SDM is, how it might differ from what we routinely do as part of surgical practice, and what impact this process could have on regret in the context of a poor outcome.

SDM has been summarized using a "three-talk model" consisting of team talk, option talk, and decision talk (see Figure).[8] *Team talk* refers to the focus on making a team-based decision that incorporates informed goals and preferences of the patient in the context of the clinical scenario. *Option talk* refers to discussing alternatives to the surgical plan and thoroughly discussing the risks and likely outcomes of all possible choices. *Decision talk* integrates team and option talk to arrive at a preference-based plan. Throughout this process, active listening and deliberation are relied upon to arrive at a decision that integrates the surgeon's best medical knowledge and the patient's knowledge about their preferences and goals.[8]

Figure. Three-Talk Model of Shared Decision-Making



The SDM process differs from a more simplified model of surgical decision-making that involves discussing a diagnosis and proposed surgical treatment, along with risks and expected outcomes, and reliance on patients to make decisions based on that provided information. While on the surface this process aligns with the principle of respect for patient autonomy, it may not allow for truly informed decisions that account for both expected outcomes and patient goals. The three-talk model, which strives to create an equal playing field with all stakeholders, nevertheless may not completely equalize the power dynamic between patient and surgeon, and this fact should always be kept in mind while engaging in these discussions.[9]

To explore the relationship between decision-making and regret, we need to identify aspects of decision-making that could contribute to regret and how SDM could potentially address them.

SDM and Regret

Inadequate options talk. After a poor outcome, surgeons may regret not having fully discussed all options available to a patient and their likely associated outcomes, including nonoperative options. During a brief surgical visit, it has been shown that much time and effort is spent describing disease processes and technical aspects of procedures.[10] This prioritization leaves less time to discuss the likely outcomes of nonsurgical alternatives and patient goals. In the setting of a poor outcome, it's reasonable to believe that surgeons may regret not having spent more time discussing alternatives out of a desire to explain technical aspects of procedures and specific risks. A foundational aspect of SDM is option talk, which ensures that patients understand that there are options and that they have a choice between these options. While "best supportive care" is not an option many patients might end up choosing, the SDM model ensures that this option, as well as its consequences, are included in a decision-making discussion, in addition to other surgical and nonsurgical options. Direct discussion of this option could potentially contribute to mitigating surgeon regret in the setting of a poor postoperative outcome.

Inflated patient or family expectations. Surgeons can also experience regret in situations in which patient or family expectations are incongruent with those of the surgeon, and a complication or poor outcome occurs. In high-stakes situations, for example, a surgeon might believe that they have adequately communicated the high-risk nature of an intervention, but patients and families are caught off guard when a complication or poor outcome occurs. While using risk calculators and describing complications of surgery may create the impression that the downsides of surgery have been communicated, these tools may not fully impart to patients and families the realities of a poor outcome. The SDM model necessitates creating space for narrative descriptions of life after the different options discussed, which can better allow patients to understand likely outcomes. This approach contrasts with other communication methods that might rely on numbers and percentages to convey surgical risk. Some approaches that have been described to assist in creating such narrative descriptions are Best Case/Worst Case[11] and presenting patients with the comprehensive "downsides" of surgery rather than just the risks.[12] The Best Case/Worse Case communication tool involves describing for both surgical and nonsurgical options the range of outcomes that may occur (in real-life, narrative terms) and creating a visual tool for the patient that locates the "most likely" outcome on a spectrum for each option. The visual tool is given to the patient and family while they deliberate and can be referred to later. This communication tool, as modeled in a whiteboard video,[13] expands on the three-talk model previously discussed. Following an SDM model of communication that includes tools such as Best Case/Worst Case likely will lead to patient and family expectations that are more congruent with the option chosen, which intuitively might mitigate regret that follows a poor outcome.

Patient's or family's desire for futile aggressive treatment. Finally, surgeons may experience regret after a poor outcome if, during the decision-making process, the patient or family had expressed a strong desire for aggressive treatment or that they wanted "everything done," even in the setting of a poor prognosis. Specifically, surgeons might experience not only regret but moral distress[14] if they feel they have been pressured to provide treatment they knew would not end well or if they did not adequately—or in enough detail—outline the downsides of treatment. In these situations, applying the SDM framework can facilitate decision-making in a number of ways. First, the SDM framework naturally provides opportunity to avoid the description of options as "everything or nothing," with "everything" possibly corresponding to a major operation

and “nothing” to best supportive care. Presenting all options (including best supportive care) as detailed narratives allows patients to fully appreciate the benefits and downsides of those choices. Most patients, unsurprisingly, will not opt for medical care described as “nothing.” Besides creating space for thorough discussion of options, the team talk component of SDM creates a natural alliance between the patient and surgeon so that discussions of options can occur in the context of goal alignment. Discussion of multiple options and whether they align with patient goals can minimize the extent to which surgeons might feel they are being pushed towards a specific choice. If the patient’s goals are aligned with the chosen option, even in the setting of a poor outcome, regret (and even moral distress) may be dampened by having followed this process.

Conclusion

Ultimately, it is likely not possible to eliminate surgeon regret following the poor outcome of a patient, even in absence of error. The time and emotion that surgeons dedicate to patients makes it reasonable to feel regret in these situations. It is reasonable to imagine, however, that aligning surgical decisions with patients’ goals and values can minimize the regret experienced when things go poorly. This approach in particular would minimize regret about the decision-making process, which can be considerable in high-stakes situations. SDM provides an established model to maximize the alignment of decisions with patients’ goals and values. While further study is needed to determine what communication models best protect surgeons from decisional regret, there is ample evidence that the SDM model provides an ideal framework.

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MEDICINE AND SOCIETY: PEER-REVIEWED ARTICLE

Should Surgeons Share Experiences of Regret With Patients?

Paul Adam Gonzales, MD, Yash Shroff, Michael Berler, Anna S. Bresler, MD, Steven Molina, Feyisayo Ojute, MD, and Carter C. Lebares, MD

Abstract

Regret is ubiquitous in surgical practice and emphasizes the nature and breadth of surgeons' responsibilities to patients and colleagues. Expressing regret to patients requires transparent and honest communication but can leave surgeons vulnerable. This article recommends strategies for communicating regret to patients and suggests how organizations and colleagues can help surgeons trying to cope with regret experiences continue their professional growth.

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Responsibility and Regret

In surgery, high-stakes situations and complex decision-making lie at the heart of the weighty responsibility surgeons carry. Several studies of psychological impacts on surgeons of surgical incidents, complications, and adverse events note similar experiences of frustration, self-doubt, cognitive challenges, and regret.[1,2,3,4] Regret is defined as a negative emotion that arises from thinking that a different choice might have led to a better or more preferred outcome.[5] For example, a surgeon might regret not recommending a more aggressive treatment option earlier in a case of progressive cancer, believing such a recommendation could have improved the patient's downstream prognosis. Another surgeon may regret performing a high-risk surgery that led to complications, questioning if a conservative approach would have been safer or resulted in different outcomes. In these instances, regret stems from unfavorable outcomes that might not always be predictable or avoidable and that result from inaction (not recommending a treatment) or action (performing a more aggressive operation). This type of regret is distinct from regret that stems directly from preventable errors resulting in patient harm (eg, performing surgery on the wrong limb, forgetting to give prophylactic anticoagulation), which may be additionally associated with remorse or guilt.[6] Experiencing regret may be inevitable for surgeons, as unfavorable outcomes (with or without associated errors) can happen despite the best efforts and sound judgment of even the most experienced and respected surgeons.

This article discusses the impacts of regret on surgeons and recommends strategies for communicating regret to patients. It also suggests how organizations and colleagues can help surgeons trying to cope with regret experiences continue their professional growth.

Impacts of Regret on Surgeons

Harms. Work to date shows that unfavorable patient outcomes that elicit feelings of guilt, failure, and self-doubt can profoundly affect physicians' well-being and sense of professional identity.[7,8,9] In fact, "second victim syndrome" (SVS) is a defined phenomenon that describes the lasting feelings of emotional distress that clinicians experience after negative outcomes.[10] A 2024 scoping review identified regret as one of the manifestations of SVS in surgeons, along with guilt, depression, and self-doubt, which have been shown to precipitate burnout, acute traumatic stress, and suicidal ideation.[11] In particular, regret and rumination can lead to surgeon self-doubt in decision-making and difficulty concentrating at work.[12,13] These sequelae can have profound consequences.

Benefits. However, emerging work shows that unfavorable patient outcomes can also facilitate self-reflection and lead to greater personal and professional growth.[12,13,14] Qualitative research on surgeons who had experienced unfavorable outcomes highlights that learning and reflecting in purposeful ways are crucial for improving future decision-making, judgment, and communication skills.[14,15] This growth process can be facilitated by better communication with patients and peers.[12] In fact, studies of surgeons' reactions to adverse events highlight how communicating with patients' families and receiving forgiveness or sharing grief can offer emotional relief for surgeons and strengthen patient-physician relationships.[7]

Both surgeons and patients support disclosure. A survey of mixed-specialty surgeons in the Veterans Affairs system found that a majority expressed regret to patients for adverse events and held positive attitudes toward disclosure, examples of which include moral responsibility (eg, "it's the right thing to do"), personal well-being (eg, alleviating guilt), and strengthening trusting relationships with patients.[16] Studies of patients also show that sharing regrets humanizes doctors and deepens patients' trust.[17,18] Despite the demands of expressing difficult emotions, transparent communication has been shown repeatedly to enhance patient autonomy, aid in shared decision-making, and help surgeons reflect, thereby improving future decisions and reducing long-term negative impacts.[19,20,21]

Not surprisingly, expressing regret is part of national guidelines for disclosure and is deemed crucial to communicating negative outcomes and adverse events to patients.[22,23] Yet qualitative research exploring how surgeons handle communication of unfavorable outcomes highlights that surgeons' reluctance to express regret stems from fears of losing patients' trust, damage to their reputation, and legal or professional consequences.[17,24] Despite these concerns, research suggests that apologies or acknowledgments of errors can lower settlement and liability costs and expedite legal proceedings.[21,25,26] Conversely, evidence indicates that poor communication and insensitive handling of negative outcomes often precede patients' decisions to pursue legal action,[27] underscoring the importance of supporting surgeons' expressions of regret to patients via training in skills, such as patient-centered communication, and in local laws concerning disclosure, for example. Recognizing there will be subtle differences in the setting of unavoidable negative patient outcomes as opposed to

preventable medical errors, we will nonetheless explore guidance on best practices for communication and supporting surgeons faced with the task of disclosure in either context.

Best Practices

Expressing regret is a key component of open disclosure and requires a nuanced approach. Below, we outline best practices for expressing regret to patients, ways institutions can support surgeons, and strategies for surgeons to support their well-being. However, while guidelines for disclosure exist, it is important to understand specific legislation pertaining to disclosure and apology laws, which generally protect physicians when expressing sympathy and, in some cases, admissions of fault,[28] although they can vary by state[26] or country of practice. Thus, a universal first step in managing negative outcomes should be to contact institutional legal counsel for risk management.

Sincere communication with patients. Once the local legal landscape has been clarified, surgeons can support affected patients and families by expressing regret following established guidelines that recommend using clear and sincere language and avoiding any speculative statements.[22] National guidelines developed by Australia's Commission on Safety and Quality in Health Care outline specific steps, which include acknowledging and apologizing for the event ("I am/we are sincerely sorry for what has occurred"), providing factual explanations for what happened, and describing measures to prevent recurrence if any errors occurred.[23] Additionally, the guidelines recommend avoiding language that implies blame or speculation ("I would say that the night shift staff probably neglected to…"), vague apologies ("I apologise for whatever it is that happened"), passive apologies ("Mistakes were made"), or conditional apologies ("If I did anything wrong, I'm sorry").[23] Expressing regret requires a patient-centered approach that includes providing an objective recollection of what happened, followed by sincere apologies.

Sincerity in expressing regret depends on tone and body language. Studies show that physicians' nonverbal communication—such as expressions of empathy, warmth, and listening—are associated with patient satisfaction with clinical interactions.[29] The EMPATHY protocol, a nonverbal communication training tool,[30] has been proven in a randomized controlled trial to enhance physician empathy as rated by patients.[31] The acronym stands for nonverbal behaviors for conveying empathy during patient interactions, which include maintaining *eye contact* and being aware of *muscles of facial expression*, as well as *posture* (eg, sitting at eye level). It also includes assessing patients' *affect* or emotional state and using a compassionate *tone of voice* to express understanding of the patient's situation. By focusing on the patient and imagining what it is like to have the patient's personal life experiences, the surgeon conveys that they are *hearing* the patient as a whole person (ie, not just treating their disease). Finally, having curiosity about or monitoring *your response* (eg, tension in the body, feelings of frustration) to what you are hearing in difficult interactions could help bring a mindful approach to emotionally charged situations.[30] Literature suggests that physicians who are better attuned to these nonverbal behaviors can strengthen their patients' perceptions of physician sincerity.[32]

Techniques also exist to help surgeons navigate emotionally charged situations. The SPIKES protocol is a widely used communication tool in health care.[33] It entails ensuring a private *setting* to minimize interruptions, assessing the patient's or families'

perceptions of the situation (what they already know, hope for, or expect) through open-ended questions, *inviting* questions about preferences for receiving (or not receiving) difficult news, providing information appropriate to the patient's or family's level of *knowledge* and understanding, addressing their *emotions* with empathy and patience, and offering *strategies* to provide hope and encourage shared decision-making to achieve outcomes together.[34] If the situation becomes highly emotional, the conversation can be paused, and resources for further emotional, psychological, or spiritual support should be readily provided.

Supporting surgeons. Evidence suggests support for surgeons is lacking in the work environment, with institutions typically responding punitively to unfavorable outcomes or preventable errors.[13] Studies reveal that more structured support is needed from institutions that includes fostering a work culture wherein transparent communication is encouraged without fear of retribution.[11,35] Models for institutional responses to adverse events include the University of Michigan's Michigan Model and the CANDOR toolkit from the Agency for Healthcare Research and Quality (AHRQ), which aim to foster honest communication and commitment to learning from errors to enhance patient safety and reduce the financial and emotional burdens associated with medical malpractice.[36,37]

While morbidity and mortality conferences (MMC) are standard platforms for discussing complications, evidence suggests that their structure offers limited emotional support for surgeons and could exacerbate feelings of self-blame.[4] Research suggests that supportive and blame-free environments allow surgeons to feel comfortable in sharing regret and promote better learning during MMCs.[11,38] Pang and Warraich argue for humanizing MMCs by restructuring MMCs as shorter, focused sessions for collective reflection, as well as by incorporating compassion, empathy, and respect by asking questions such as "What was the personal impact of a patient's adverse outcomes on the well-being of the health care staff involved?" or "How did we comfort the patient's family following the patient's death?"[39] Studies also reveal that discussing negative outcomes with other surgeons is the most effective form of support, as it can foster open communication, normalize emotions in difficult situations, and reduce negative feelings.[4,11]

Although surgeons can support each other by recognizing when a colleague needs help and reaching out, studies suggest doing so can be challenging due to feelings of discomfort in discussing negative outcomes or fear of eliciting negative reactions and perceptions from colleagues.[7,40] Institutionally supported strategies to help surgeons navigate difficult conversations with colleagues include the AHRQ's Care for the Caregiver Program, which involves preemptively training peers in critical communication and fostering a culture that normalizes intense emotions after negative outcomes.[41,42] This program, developed for long-term services and crisis assistance, involves learning key conversation skills (ie, ensuring privacy, discussing struggles, showing care without assumptions, and using open-ended questions) while providing ongoing follow-up support. Nationally, additional resources include the American Foundation for Suicide Prevention, which offers support for those with self-harm thoughts, as well as the free, confidential Physician Support Line, which helps physicians and medical students navigate crises or other personal and professional challenges.[43,44]

Finally, surgeons can preemptively cultivate individual coping strategies to handle difficult emotions. Evidence supports the importance of surgeons' recognizing and managing reactions to challenging situations, avoiding denial, and embracing difficult

emotions, all of which can be formally cultivated through mindfulness-based skills training.[7,45] Several studies indicate that emotional self-awareness is crucial for building authentic connections and improving patient-physician relationships.[46,47,48] While experiencing regret can be painful, studies show that expressing regret to peers and patients can rebuild internal confidence, strengthen connections with others, encourage self-reflection, and help reframe what it means to be an "ideal surgeon."[8,49] As such, expressing regret can mean the difference between burnout and professional growth.

Conclusion

The discussion of whether surgeons should share experiences of regret involves balancing the ethical imperative for transparency with potential legal and professional repercussions. While disclosing regret can enhance trust, improve patient-physician relationships, and contribute to surgeons' emotional recovery and professional growth, these outcomes are predicated on a safe legal landscape, humane institutional culture, and systems-level resources. Providing clear guidelines and support systems to help surgeons navigate these disclosures will ensure that both patient welfare and surgeon well-being are maintained.

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MEDICINE AND SOCIETY: PEER-REVIEWED ARTICLE

What Are Organizations' Responsibilities When Surgeons Experience Regret?

Amy E. Vertrees, MD and Matthew R. Endara, MD

Abstract

This article considers the nature and scope of health care organizations' responsibilities to respond to clinicians' regret experiences and suggests that one ethically important reason to do so is to mitigate burnout and prevent decreased patient access to skilled, experienced, and motivated surgeons. This article canvasses possible sources of regret experiences among surgeons and suggests strategies organizations can implement to help support surgeons experiencing regret and to help sustain surgeons' impulses to practice.

Organizations and Regret

As more physicians have become employees of large health systems, responsibility to address environmental factors that contribute to clinicians' feelings of regret should be shared by organizations. Health care environments, for example, can contribute to surgeons' regret about not being able to adequately treat patients and can be noticeable to patients.[1] Organizations also play roles in surgeons' experiences of career regret, especially when surgeons bear individual responsibility for key actions and decisions over years. Holding organizations accountable should be done with nuanced understanding of many players' contributions to surgical care environments.

Financial Regret

Focusing on their education, high-stakes examinations, continuing education, and recertification requirements instead of business operations, many surgeons have found themselves woefully unprepared for the business of running a practice. Financial and administrative demands of running a practice have prompted many surgeons to relinquish control of their practices to professional health care administrators and business operations experts. The American Medical Association's Physician Practice Benchmark Survey noted that, between 2012 and 2022, the share of physicians who work in private practices dropped from 60.1% to 46.7%.[2] Physicians are now employees and fall under the rules of engagement in business. The organizations in which physicians work are responsible to all parties, not just them. These organizations must provide a service to the consumer (the patient), follow the rules (state and federal laws), make a profit (for shareholders), create the best deals (with hospitals and insurance

companies), get the most out of their investments (assets, including employees), and treat their employees well to keep the competition from taking their lifeblood.

Business practice includes the exchange of value for money, and physicians' inadequate understanding of the key business operations in health care organizations can lead to financial regret. When physicians are viewed as employees, organizations are not held to an obligation outside of contracts that are built to protect them, not physicians. Physicians are offered standard corporate contracts based on statistics not available to them and unfavorable non-compete clauses without adequate leverage to strongly negotiate in their favor, as increasingly larger health systems have the competitive advantage. Although physicians' annual salaries are higher compared to many professions,[3] few professions require as long a duration and as steep an expense of training. Patients, administrators, the government, and physicians themselves forget that physicians' income only begins after deferring income and accumulating debt for more than a decade. Financial regret can be mitigated by reminding everyone involved about deferred income and that the amount of money surgeons will receive is based on the value of their training and experience, not the exchange of time for money. Creating more opportunities for residents and attending physicians to understand the business that they are joining is crucial to preventing financial regret.

Financial Literacy

Although remembering the motivations behind their career choice and appreciating their contributions to patient care is an excellent first step every surgeon can take without additional work or training, gaining a better understanding of the business aspects of health care can allow for more effective negotiations and the ability to advocate for changes that prioritize quality over mere performance metrics.

Many physicians finish residency without understanding how they get paid. The lack of financial literacy is exacerbated by the hesitance to discuss income, as physicians believe they should only think about their patients, not themselves. Traditional, simple fee-for-service payment has evolved into an increasingly complex system. Inquiries into how much income surgeons bring to the hospital for the services they provide are met with concerns about violations of the Stark Law and insurance nondisclosure limitations.[4] The Stark Law is an evolving federal statute intended to prevent conflicts of interest by imposing significant financial penalties for physicians' referral of patients to entities with which they have a financial relationship.[5] Many physicians are not aware of the details of the law or how it could be used against them. When the organization allows financial details of reimbursement to remain opaque, it can lead to physicians' financial regret over their loss of control of how they are reimbursed for their time and expertise from over a decade of deferred income and accumulated debt. If surgeons understood the details of how much their services are worth to the system based on their professional fees and the resources they bring to the system, as well as on the financial health of the organization, then feelings of regret would be far less likely.

Career Regret

As surgeons realize they are limited not only in the income they can make based on the value they have gained at personal sacrifice, but also in the care of patients who are uninsured, underinsured, or unable to get approval for services from insurance companies, they might experience career regret. Physicians frequently encounter the disheartening reality of being unable to provide care to patients lacking adequate insurance, a situation that starkly contrasts with their primary motivation to help those

in need. This inability to act due to financial or policy constraints not only limits patient care but also leads to career regret for many surgeons, who find themselves determining treatment based on coverage rather than medical necessity. If surgeons are ultimately forced to work for free to provide care for their patients, the working conditions become unsustainable and lead to a loss of the most talented surgeons in communities. In cases where the working conditions are unsustainable, making the difficult decision to leave may be necessary to preserve personal well-being and professional integrity. This power to leave their current position or even the profession as whole is the ultimate control exerted by practicing surgeons to manage overwhelming regret.

Another source of career regret is that physicians are perceived as interchangeable (or optional) cogs in an increasingly large wheel. Health care was the third largest industry facing cuts in the workforce in 2023. According to an analysis by consulting firm Challenger, Gray & Christmas, the health care sector cut 58 560 jobs in 2023, a 91% increase over the previous year, trailing the technology and retail industries.[6] Physicians facing layoffs experience significant regret while grappling with noncompete clauses, which restrict their employment opportunities within a geographical area and a specified time frame, thereby requiring them to relocate. The high costs of tail coverage insurance and the tedious, time-consuming process of recredentialing with insurance providers can also present formidable barriers to relocation, as each state and hospital will have different requirements. The alternative to an employment model is setting up a small surgical practice, although it has become increasingly difficult for private practices to compete against larger health entities that monopolize the market through stringent contracts and expansive insurance arrangements.

Another reason for career regret is overwork. A recent poll of 2600 physicians found that 81% were overworked.[7] The poll noted heavy workloads and high administrative burden as so problematic that many physicians were either considering accepting lower compensation for more work-life balance or leaving clinical practice altogether. The betrayal of physicians' time and effort, acknowledged as a limited resource, has played into deepening the regret already prevalent among physicians operating in the high-stakes practice of medicine.

Responsibilities for Managing Regret

Organizations. To mitigate possible career regret, health care organizations can advocate for more inclusive insurance policies and work to reduce the bureaucratic barriers that contribute to health care disparities. Additional support for surgeons who choose to care for indigent patients at their own financial risk would decrease regret.

Another way to reduce career regret would be to address physician discontent over scope-of-practice creep. Health businesses have sought to balance the moral obligation to provide affordable, accessible, unbiased, and high-quality care to patients with cost control measures, including employing mid-level clinicians like nurse practitioners and physician assistants instead of physicians. Although these advanced practice clinicians were meant to augment the medical team, the recent trend has been for them to replace physicians. In addition to the augmented tasks of rounds, order writing, and postoperative follow-ups, nonphysicians are performing procedures.[8] Nearly all specialties have seen nonphysicians gain more ground on tasks that were traditionally physician-only jobs. A cooperative approach to the division of labor could improve the accessibility and affordability of health care without diminishing the invaluable

contributions of highly trained physicians, which can contribute to the feeling of regret for becoming a doctor if clinicians with alternative degrees are allowed to fill the same roles.

Wellness programs might also help reduce regret over outcomes, as they markedly improve physician well-being and reduce burnout by enabling participants to recognize that feelings are not determined by the environment set by organizations.[9,10,11] Peer coaching, in particular, provides a supportive framework whereby physicians can discuss challenges and regrets associated with daily practice.[9] These relationships provide a nonpunitive environment, thereby promoting healing and learning rather than blame. Professional coaching programs provide effective frameworks and safety outside of peer interactions, with randomized controlled trials supporting this strategy.[9,10,11] Beyond providing and supporting coaching initiatives, organizations can create a culture that facilitates open discussion of failures and complications without stigma, often through peer review, professional enhancement committees, or nonpunitive debriefing sessions that can help normalize these experiences and reduce feelings of isolation and guilt.

Self-care, mindfulness, and strategies for dealing with difficult emotions like regret often need a multifaceted approach. The effectiveness of these programs hinges significantly on the voluntary participation and genuine engagement of physicians themselves. It also depends on a cultural shift within the medical community to destigmatize seeking help, particularly among older generations of surgeons. Such a shift would encourage openness and acknowledge the human aspects of practicing medicine, thereby fostering a more supportive and sustainable professional environment.

Surgeons. Although organizations create environments where feelings of regret could develop, surgeons play a crucial role in managing and mitigating their own feelings of regret, a responsibility that extends beyond availing themselves of organizational support. As employment dynamics have changed, it can feel tempting to indulge in feelings of helplessness, powerlessness, and financial dependence. These feelings can lead to a victim mentality, allowing systemic issues to diminish one's sense of self-worth. Surgeons can empower themselves through proactive measures and by engaging actively in shaping a health care environment that values and supports their critical work. Specifically, surgeons can address "scope creep" by nonphysicians by clearly defining and asserting their unique roles within the health care team. Surgeons should be treated as empowered and valued members of the organization and be able to employ the problem-solving skills and intelligence that they honed in their medical training.

Conclusion

In transferring the business aspect of medicine to the organization, physicians made assumptions about how the relationship would be conducted. The perception that organizations have not adequately valued surgeons' training, experience, and expertise led to feelings of betrayal, as the organization seemed to renege on the deal that was never really clarified. Over time, as the betrayal set in, financial and career regret ensued. After a long lead time, doctors were now stuck with large debt, time lost for earning income, and financially insecure environments without the resources to succeed, all of which ultimately affect patients if regret leads surgeons to leave medicine.

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MEDICINE AND SOCIETY: PEER-REVIEWED ARTICLE

How Should We Understand Regret as a Moral Psychological Experience That Can Influence Clinical Decision-Making?

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Abstract

This manuscript focuses on regret as a significant moral experience in surgical professionalization. It distinguishes between constructive regret, which encourages self-reflection and growth, and destructive regret, which can lead to emotional withdrawal and impaired decision-making. This article also offers recommendations for how both colleagues and organizations should respond to each type of regret, especially regret over poor outcomes, to nourish professional formation. Recognizing the tipping point at which regret shifts from a positive driver of improvement to a source of harm is essential.

Regret Experiences Among Surgeons

Although patient decision regret is a widely studied phenomenon with significant literature devoted to the rates of regret and techniques to avoid it,[1,2,3] the incidence and impact of surgeon regret are far less well understood. However, surgeon regret is a powerful experience that shapes a surgeon's sense of self, future interactions with patients, and intraoperative decision-making.[4,5] Surgeon regret is one of many moral experiences that have a profound impact on a surgeon's career. While all physicians are exposed to complex and formative moral experiences, surgeons have a unique exposure to regret and moral injury, given the invasive nature of their relationship with their patients and the highly interdependent "surgical contract" they form with their patients.[6] This bidirectional contract entails a mutual understanding in which the surgeon commits to the operation and the patient agrees to the postoperative care required for recovery. It is based on the surgeon's sense of responsibility for the outcome developed over the course of training. As such, the experience of a poor outcome can leave a surgeon feeling exposed and can have a disproportionately negative impact on their confidence, resulting in moral injury.[7] In this paper, we discuss factors contributing to regret, the impact that regret as a moral experience has on a surgeon's development, and strategies for mitigating the inevitable and potentially consequential downstream effect of this regret on patients.

Factors Contributing to Regret

The range of moral experiences affecting physicians is vast. Moments involving regret, conflict of interest, treatment over objection, treatment at the end of life, truth telling,

and so on are faced by all physicians. Here, we first explore the factors that make the surgeon's experience of particular moments of regret exceptional. As described by Char et al, "surgeons not only determine the treatment for a given illness, but are also the instruments of that treatment, necessarily inflicting bodily harm in order to heal."[8] In other words, unlike other specialties, a surgeon cannot dismiss their role in the patient's outcome once they operate (or even decline to operate), as the surgeon's decision-making and skill become inseparably linked with the outcome. High-risk preoperative shared decision-making, isolated intraoperative decision-making, and the management of postoperative complications are all specific to surgeons and shape the moral experience that follows an encounter with a patient.

In addition to a sense of personal responsibility for outcomes, external pressures must be recognized as contributors to regret from a surgeon's perspective. Although an operation is necessarily a team activity and it is understood that system failures can contribute to poor quality care, surgeons inevitably fear blame for a poor patient outcome after an operation.[9] When faced with a complication in a morbidity and mortality conference, a humble surgeon must publicly explain their role in the bad outcome and what they could have done differently to prevent it. Moreover, the increasing emphasis on clinical productivity and revenue generation pressures surgeons to operate and has a disproportionate impact on surgeons when systemic inefficiency—exacerbated by scheduling delays, inadequate staffing, or resource shortages—increases stress. Additionally, the cost of malpractice insurance is significantly higher in surgical specialties, highlighting surgeons' higher risk of facing a malpractice claim, as well as the need for more clinical activity to make up for the cost.[10,11]

Effects of Regret on Surgeons

Regret is a complicated, strongly negative emotion driven by the feeling that an outcome would have been different had one made a different choice.[12] Regret is equally complicated for surgeons. Given the number of choices that are made when taking care of a patient pre-, intra- and postoperatively, there are innumerable opportunities for surgeons to face regret. Indeed, in one study of surgeons interviewed about their experience when one of their patients died, 18% responded that, in retrospect, they would have managed their patients differently.[13] As Boyle et al point out, "determining in retrospect that different actions may have led to a more favourable outcome does not in itself imply regret."[5] However, when a surgeon does experience regret, it can be a positive motivator. When regret is constructive, it encourages reflection and growth, allowing surgeons to refine their judgment and improve patient care. This form of regret often motivates self-improvement, leading surgeons to enhance their surgical techniques or improve communication with patients.[14] On the other hand, when felt too intensely and without constructive resolution, regret can cause a surgeon to withdraw emotionally or practice more conservatively, both of which might compromise patient care. When regret reaches a tipping point, becoming overwhelming and without motivating change, it can lead to damaging self-recrimination and have a negative and potentially long-lasting impact on a surgeon's emotional well-being, confidence, and sense of self. This shift from constructive to destructive regret often happens when a surgeon excessively internalizes blame, allowing regret to erode their confidence and impair decision-making.

Similarly, there is a tension between empathy as a positive and a negative tool. Empathy is a quality that is highly valued in a surgeon, as it can enhance the process of shared decision-making and help forge a more meaningful patient-physician relationship. The

loss of empathy, or the maintenance of an emotional distance from patients, is a risk factor for physician burnout.[7] However, to be empathetic, surgeons must allow themselves to feel what the patient is feeling. It is far easier for surgeons to distance themselves from the patient's experience of a complication and even blame the patient's risk factors for the bad outcome rather than accepting personal responsibility. Intensely engaging with a patient's distress could worsen a surgeon's regret about their decision-making or skill.

Finally, regrets of commission and regrets of omission can affect surgeons' future behavior differently.[1] Commission regret refers to regret after an action is taken, which might occur when a surgeon decides to operate and the patient has a poor outcome. Omission regret is the regret a surgeon experiences when an action was not taken; perhaps an operation was not offered, and the patient dies. A surgeon who experiences commission regret might be more likely to withhold an operation in the future when faced with similar circumstances. On the other hand, a surgeon who has suffered from omission regret might be more insistent on operating in similar future cases even in the face of evidence suggesting that an operation is not in the patient's best interest.

Regret Mitigation Strategies

The downstream effects of surgeon regret are not confined to the surgeon alone but can have significant repercussions for patient well-being. These effects can manifest through altered clinical decision-making, such as a more conservative approach in future cases to avoid further regret, or through a diminished sense of confidence that directly influences the quality of care. Therefore, supporting surgeons is not only crucial for their own well-being but also for ensuring that their ability to provide the best possible care to their patients remains uncompromised.

A system that actively fosters resilience can help mitigate these negative consequences, ultimately benefiting both the surgeon and their patients. As Devon Cassidy describes it, "experiencing surgical regret after a loss or poor outcome demonstrates the ability to accept that harm has been done."[4] In the world of surgery, resilience represents a surgeon's ability to carry on after accepting that harm has been done to a patient that is attributable to their care. The ability, for example, to continue with the scheduled cases for the day after an unexpected major intraoperative event, or even death, represents resilience. To this end, resilience has become a highly valued trait in a surgeon and has been described as "not only something surgeons should possess, but … also something that they can learn and develop."[15] Moreover, data have shown that resilience is protective against negative mental health outcomes.[7] Without resilience, regret can lead to more conservative decision-making, emotional withdrawal, self-doubt, moral injury, and burnout, potentially compromising patient care.

Resilience, or a healthy response to regret, can be encouraged by efforts to improve institutional and cultural responses to an undesired outcome. In Boyle et al's study on regret among surgeons, themes relating to nontechnical aspects of care, rather than technical errors, emerged as the most significant contributors to surgeon regret.[5] Institutional commitments to improving nontechnical aspects of care, such as the hand-off process, can strengthen transitions of care and enhance information sharing between individuals or hospitals. These actions, which focus on communication and collaboration rather than surgical technique, promote resilience by reducing preventable errors and ensuring more informed decision-making. A complete transfer of information is especially critical for thorough shared decision-making, but this process can be

particularly challenging during emergencies when time is limited and decisions must be made swiftly.

Advanced communication training for surgeons that enhances shared decision-making, particularly in high-risk circumstances, can help to improve the quality of decisions made and mitigate both patient and surgeon regret.[6] Building a surgical culture in which surgeons can safely ask a colleague for advice about a difficult case may help to prevent an undesirable outcome and to provide support if something does go wrong. Morbidity and mortality conferences should be an opportunity for surgeons to model humility and resilience for younger surgeons. Conferences should be structured in a way that does not place blame but instead focuses on the learning opportunities of a complication and frames regret as a valuable teaching tool.

Conclusion

Regret is an unavoidable experience for a surgeon. As the saying goes, "the only surgeon who never has complications is a surgeon who never operates." Certainly, the same applies to the experience of surgeon regret. However, unchecked regret can lead to unintended consequences for future patient care, such as overly conservative decision-making or withdrawal from the emotional aspects of patient care. Regret must be framed not as a feeling to be avoided but rather as a critical opportunity for growth. By confronting regret, surgeons can develop the resilience needed to continue providing compassionate, confident care in the face of inevitable challenges.

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March 2025, Volume 27, Number 3: E227-228

ART OF MEDICINE

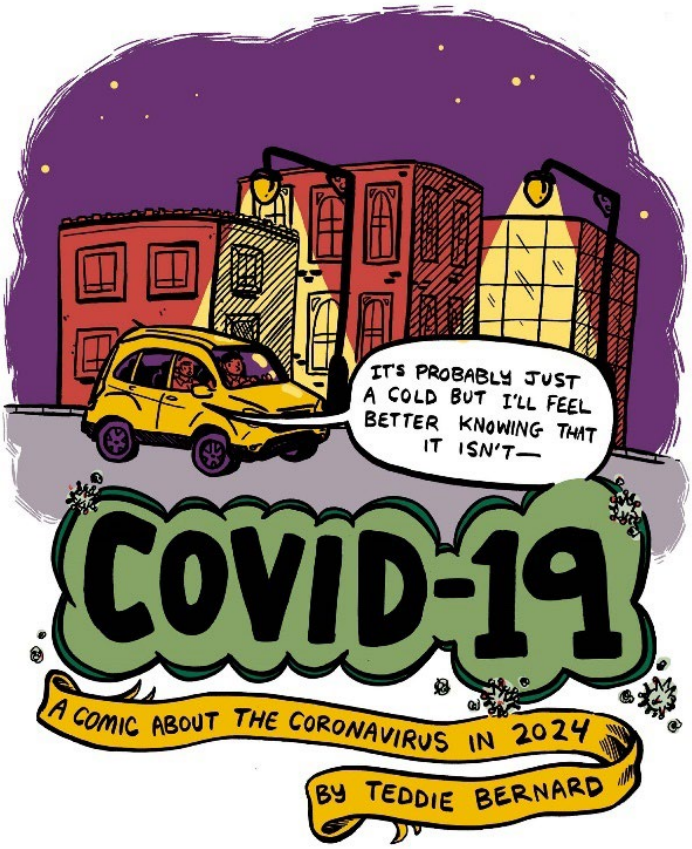
COVID-19 in 2024

Teddie Bernard

Abstract

The first cells of this multi-panel comic represent the artist's personal experiences of testing positive for and enduring COVID-19 in January 2024. The latter part of the comic follows their anxiety and kindred feelings about shifts in health information sharing trends and public attitudes about transmission risks since 2020.

Figure. Detail from *A Comic About COVID-19 in 2024*



(Click here to view the entire comic.)

Media

Traditional ink on Bristol, digital color in Clip Studio Paint.

Teddie Bernard graduated from the School of the Art Institute of Chicago with a bachelor's degree in fine arts in 2023. Their editorial comics and graphic journalism have been recognized by the Society for Professional Journalists (Mark of Excellence, 2023), the College Media Association (2023, 2022, 2021), the Illinois College Press Association (2024), and the Associated Collegiate Press (2021).

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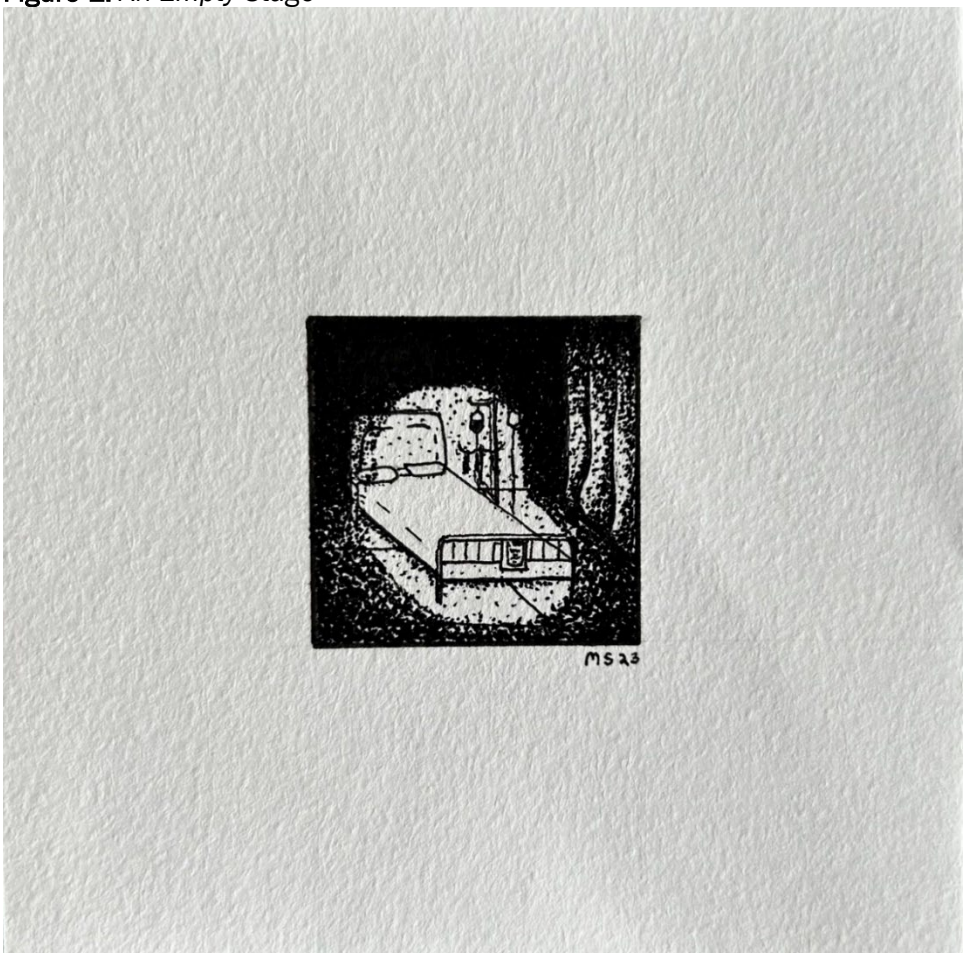
ART OF MEDICINE

Stage, Cut, Investigate, Regret, Heal

Maximilian Schaefer

Abstract
This series of drawings considers clinicians' responses to the death of a surgical patient.

Figure 1. *An Empty Stage*



Media
Ink and paper.

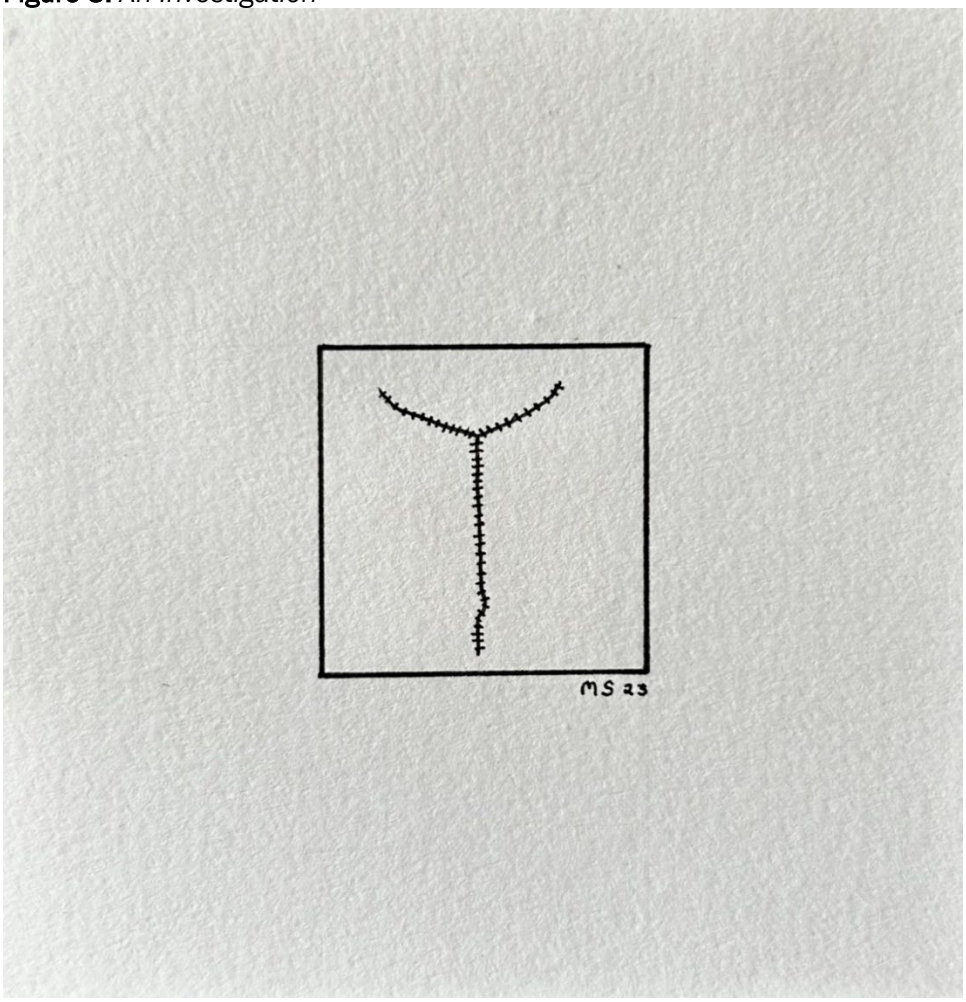
Caption
A hospital bed is empty, but an intravenous pole and bags signify that someone has just been there.

Figure 2. *One Wrong Cut*

Media
Ink and paper.

Caption
A bloody scalpel suggests a surgical error led to the patient's death.

Figure 3. *An Investigation*



Media
Ink and paper.

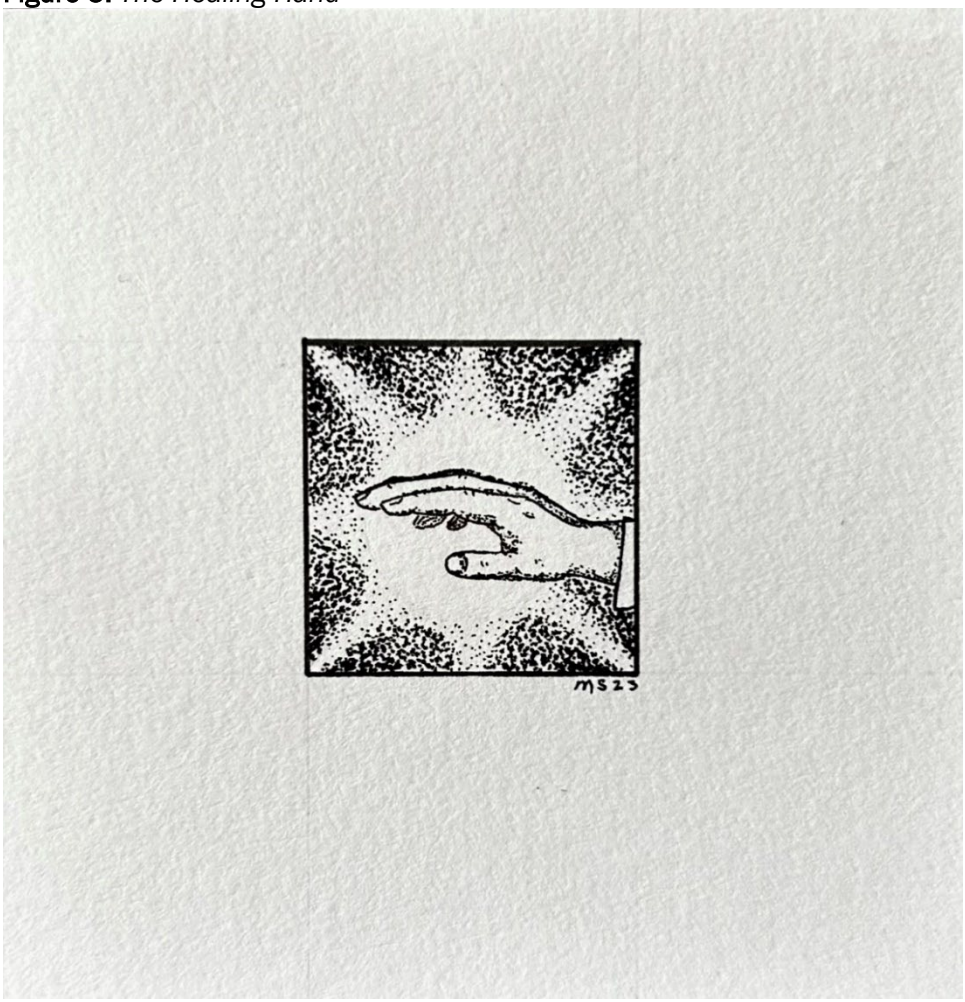
Caption
A Y-shaped autopsy scar indicates the patient's death is under investigation.

Figure 4. *Regret*

Media
Ink and paper.

Caption
A distraught clinician sits at the foot of their deceased patient's bed. Another clinician approaches.

Figure 5. *The Healing Hand*



Media
Ink and paper.

Caption
A fellow healer's outreach alludes to clinicians' duties to one another when a patient dies from an error.

Maximilian Schaefer is a third-year student at the University of Missouri Kansas City School of Medicine. He graduated from the University of Alabama with degrees in biology and art.

Editor's Note

This is a co-winning artwork of the 2023 John Conley Art of Medicine Contest.

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ART OF MEDICINE

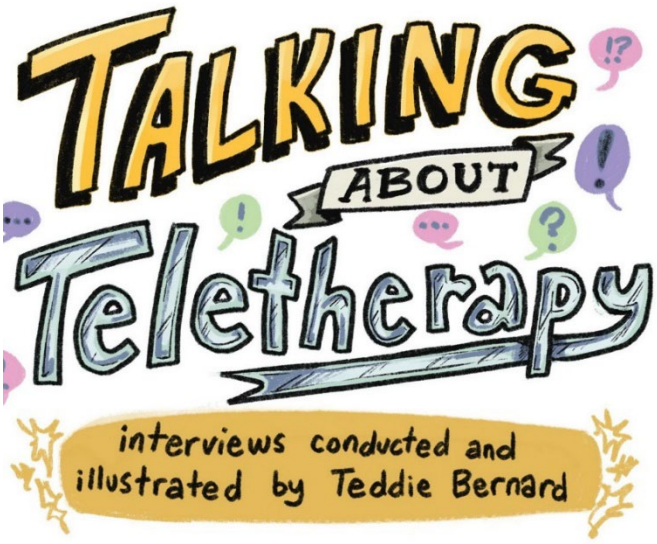
Teletherapy Ethics

Teddie Bernard

Abstract

Teletherapy services increased in popularity during the COVID-19 pandemic. This comic is based on interviews of 3 individuals who consider questions about patient-therapist interactions in individual and group therapy. Key ethics questions emerging from interviews this comic draws upon are the following: *How should patients' emotions be responded to by therapists during teletherapy? How should phone or screen-based media change mental health care interactions among therapists and patients in individual or group therapy? How should therapists create care environments in phone or screen-based meeting spaces? Which advantages and drawbacks of teletherapy are most clinically and ethically relevant from patients' and clinicians' perspectives?*

Figure. Detail from *Talking About Teletherapy*



(Click here to view the entire comic.)

Media
Digital in Procreate.

Teddie Bernard graduated from the School of the Art Institute of Chicago with a bachelor's degree in fine arts in 2023. Their editorial comics and graphic journalism have been recognized by the Society for Professional Journalists (Mark of Excellence, 2023), the College Media Association (2023, 2022, 2021), the Illinois College Press Association (2024), and the Associated Collegiate Press (2021).

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