The Disclosure of Unanticipated Outcomes of Care and Medical Errors: What Does This Mean for Anesthesiologists?

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The disclosure of unanticipated outcomes to patients, including medical errors, has received considerable attention of late. The discipline of anesthesiology is a leader in patient safety, and as the doctrine of full disclosure gains momentum, anesthesiologists must become acquainted with these philosophies and practices. Effective disclosure can improve doctor–patient relations, facilitate better understanding of systems, and potentially decrease medical malpractice costs. However, many physicians remain wary of discussing errors with patients due to concern about litigation, the communication challenges of disclosure, and loss of self-esteem. As a result, harmful errors are often not disclosed to patients. Disclosure poses special challenges for anesthesiologists. There is often very limited time before the anesthetic in which to build the patient–physician relationship, and anesthesiologists usually function within complex health care teams. Other team members such as the surgeon may have different perspectives on what the patient should be told about operating room errors. The anesthesiologist may still be physically caring for the patient while the surgeon has the initial discussion with the family about the event. As a result the anesthesiologist may be excluded from the planning or conduct of the important initial disclosure conversations. New disclosure strategies are needed to engage anesthesiologists as active participants in the disclosure of unanticipated outcomes. Anesthesiologists should be aware of the emerging best practices surrounding disclosure, as well as the training opportunities and disclosure support resources that are increasingly available. Innovative models should be developed that promote collaboration between all perioperative team members in the disclosure process. There are important opportunities for anesthesiologists to play a leading role in defining specialty-specific disclosure practices and to more effectively meet patients' needs for disclosure after unanticipated outcomes and medical errors. (Anesth Analg 2012;114:615–21)

It is another ordinary day; you are in the operating room towards the end of a routine total knee replacement. As the tourniquet is deflated, the arterial blood pressure decreases so you administer a bolus of phenylephrine. Immediately, the patient becomes extremely tachycardic and the blood pressure increases alarmingly, peaking after several minutes at 240/160 mm Hg. The electrocardiogram shows some ST segment depression, and the surgeon complains about excessive oozing in the field. You swiftly administer appropriate medications and the blood pressure subsides to normal. Surgical closure continues without further bleeding and the ST segments return to normal. In the postanesthesia care unit, you order a 12-lead electrocardiogram and cardiac enzymes. On further inspection of your anesthesia cart, you notice that you mistakenly administered a 1-mL bolus of 1:1000 (1 mg) epinephrine. The predrawn epinephrine and phenylephrine syringes supplied to your hospital have recently been changed and you misidentified the epinephrine syringe as phenylephrine. The tests you ordered return and show a small increase in the cardiac enzymes; the patient is admitted to the coronary unit for further monitoring. What should you do now? What, if anything, would you say to the patient and their family about what took place in the operating room?

The disclosure of unanticipated outcomes of care to patients and their relatives, including medical errors such as the one described above, is recommended by professional societies, patient safety experts, and new practice guidelines.[1,2] The potential advantages of this approach include improved doctor–patient relations, potentially lower costs to institutions related to medical malpractice litigation, a better understanding of the causes of errors and the development of error-prevention strategies.[3] Yet implementing these recommendations for disclosure into clinical practice can be challenging.[4] Although physicians are committed to the general principle of communicating openly with patients after unanticipated outcomes, they may experience barriers to disclosure including concern about litigation risk, shame and embarrassment, and uncertainty about effective communication strategies.[5–7] The challenges of disclosure may be especially difficult for anesthesiologists, given their unique practice environment, and in most cases, limited preexisting relationship with the patient and family members.

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This article reviews the currently available literature related to disclosure. The disclosure of unanticipated outcomes, especially those related to medical errors, is discussed in reference to the practice of anesthesiology. The specific challenges of disclosure for anesthesiologists are highlighted, particularly in the ways they differ from other specialties.

PATIENT SAFETY AND THE DISCLOSURE OF UNANTICIPATED OUTCOMES AND MEDICAL ERRORS

The incorporation of the Anesthesia Patient Safety Foundation (APSF) on September 30, 1985, was an important milestone in the development of the concept of patient safety.[8] Although many attribute the beginning of the modern patient safety movement to the Institute of Medicine's 1999 landmark report *To Err Is Human*,[9] the discipline of anesthesiology has been engaged in identification of medical errors for much longer.[10] The pioneering work of Ellison C. "Jeep" Pierce Jr., MD, and other founding members of the APSF in pursuit of the simple goal that "no patient shall be harmed by the effects of anesthesia" preceded the rest of medicine's focus on patient safety by almost 15 years. *To Err Is Human* was nonetheless significant in advancing patient safety outside the field of anesthesia, and made the startling revelation that medical errors account for significant numbers of preventable deaths among hospitalized patients.[9]

In the practice of anesthesiology, errors such as the medication error described in the opening section are difficult to quantify, and studies rely for the most part on data from self-reported surveys. Incidences of 1 in 133[11] and 1:274[12] anesthetics have been reported, and in another study, 85% of anesthesiologists reported having been involved in a medication error.[13] The majority of medication errors in anesthesiology are either "near misses" (in which the error does not actually reach or harm the patient) or minor errors (causing minimal harm). Errors with devastating consequences can occur,[14] but much less frequently.

The Institute of Medicine report profoundly changed the way health care professionals and managers approach medical errors, and stimulated the redesign of health care systems to promote safe practices. Part of this redesign has been a greater emphasis on transparency and full disclosure of "unanticipated outcomes of care" including medical errors, to patients and their families. In 2001 The Joint Commission began to require that patients be informed about all outcomes of care, including "unanticipated outcomes."[15] Subsequent national guidelines developed by the Full Disclosure Working group of the Harvard Hospitals (2006),[16] the National Quality Forum (2006),[2] and the Institute for Healthcare Improvement (2010)[17] have been released, and devote special attention to the challenges of communicating with patients when the unanticipated outcome was due to an error or system failure.

As advocates for patient safety, anesthesiologists have also addressed the issue of communication with patients about unanticipated outcomes. In 2006 the APSF newsletter devoted a number of sections to disclosure of unanticipated outcomes, presenting the viewpoints of both patients and anesthesiologists.[18] More recently, the ASA Committee on Professional Liability has commented on disclosure from the perspective of the anesthesiologist. McDonald's article published in the 2009 *ASA Newsletter* describes a "Principled Response to an Adverse Event," outlining the key steps to be taken after an adverse event, including full disclosure to the patient and family.[19]

Many institutions have developed comprehensive policies and procedures for the disclosure of unanticipated outcomes. The full impact of these standards on the actual outcome of disclosure, however, is unclear. Most physicians have had little personal experience with this new culture of openness when it comes to the disclosure of unanticipated outcomes, and fewer still have had formal training in disclosure skills. As a result, physicians may feel unprepared for having these challenging discussions with patients in the aftermath of an unanticipated outcome of patient care.[20]

ADVANTAGES OF THE DISCLOSURE OF UNANTICIPATED OUTCOMES

Multiple rationales support the disclosure of unanticipated outcomes to patients. From an ethical perspective, disclosure demonstrates respect for patient autonomy and supports informed decision making.[21,22] Disclosure of unanticipated outcomes to patients after a procedure or intervention is a logical continuation of the informed consent discussion about potential risks and benefits that takes place before care is delivered. Disclosure is also supported by the ethical obligation to be truthful with patients, even when the information about the unanticipated outcome does not have implications for the patients' decision making.[23] In addition, disclosure can support the principle of justice, because patients may be unable to access compensation if disclosure does not take place and the patient is not aware that a medical error was responsible for his or her injury.

Patients strongly support the disclosure of unanticipated outcomes, especially those due to medical errors. Patients want to know about errors even when the harm is minor, and to be told the facts concerning the event; they want a full explanation and an apology.[6,24,25] In the aftermath of an unanticipated outcome due to error, patients want acknowledgment of their pain and suffering and reassurances that steps will be taken to prevent the error from happening again. Less is known about patients' preferences for disclosure of errors that do not cause harm ("near misses"), and as such institutional policies and procedures for disclosure of these events are not uniformly defined or standardized.[26]

Despite the many good reasons and well-documented support by patients and physicians for disclosure of unanticipated outcomes, the health care profession has struggled to meet these expectations. Multiple studies of physicians from a variety of countries and specialties including internal medicine, surgery, pediatrics, and radiology show that the majority of physicians believe that adverse events should be disclosed to patients and their families.[27–29] However, when questioned about their actual experiences of conducting disclosure or about how they would respond to a hypothetical situation requiring disclosure to a patient, physicians often fall short of this ideal.[5,30–33] For example, in one large survey, only 9% of

surgeons reported that they would offer a full apology to patients after a case of retained surgical sponge.[5] Another study of patients in Australia who experienced open disclosure confirmed that most disclosures failed to meet patient expectations or current standards for these conversations.[34]

This disconnection between patients' desire for disclosure of harmful errors and physicians' current practice of limited disclosure has been termed the *disclosure gap*. It emanates from multiple sources:[35]

- physicians' fear of litigation;
- loss of reputation;
- feelings of shame and embarrassment;
- insufficient tools and training to conduct disclosures with the patient or family;
- a perceived or actual lack of support for disclosure from the systems in which physicians practice.

Physicians may also be wary of their standing with the National Practitioner Databank, state medical boards, and hospital credentialing committees, and may thus be reticent to readily and voluntarily disclose errors to their patients. The consequences of these failed disclosures can be considerable, including patient mistrust and dissatisfaction, potentially an increase in malpractice claims, and heightened emotional distress for health care workers.[1]

DISCLOSURE: CHALLENGES FOR ANESTHESIOLOGISTS

Anesthesiologists face unique challenges related to their practice when the need to disclose an unanticipated outcome to a patient or the patient's family arises. In the operating room setting the anesthesiologist usually meets his or her patient shortly before administering the anesthetic, and most likely will not meet the family members. The lack of a preexisting relationship may make it more difficult later on for the anesthesiologist to approach a patient or family to disclose an unanticipated event.

Anesthesiologists may also experience challenges related to the team-based nature of care delivered in the operating room. Patient safety experts recognize that many errors reflect breakdowns in the broader systems of health care delivery, rather than just the isolated action of an individual provider.[36] This is especially true for many medication errors, which in the typical care environment will have passed through the hands of multiple physician and nonphysician providers before reaching the patient. In operating room practice, however, the anesthesiologist personally draws up and administers medications without checking the order with anyone else. On the surface this practice places the anesthesiologist as individually accountable for any error. However, a process of care such as described in the opening scenario in which syringes or vials may be changed without warning or closely resemble each other, reflects a defective system that places the individual anesthesiologist at risk for making an error. Such an event reflects a degree of institutional responsibility and requires investigation.

Even when the error in question appears to be the result of the anesthesiologist's actions alone, the anesthesiologist exists as a member of a complex surgical team. This poses unique challenges related to the timing of disclosure conversations, as well as the coordination of these discussions with other health care workers caring for the patient. The outcome of an unanticipated event that occurs in the operating room often requires an escalation of care and transport of the patient to the intensive care department. This activity occupies the anesthesiologist at a time when the surgeon has finished his or her part and is available to speak to the family. Thus, the anesthesiologist may not be included in the initial disclosure of events, making it difficult to explain his or her role and actions later on. It may also be difficult for the anesthesiologist to determine what the family has already been told by the surgeon.

Several studies describe the emotional distress that clinicians experience after errors. For anesthesiologists the relative isolation from the patient for the reasons just described may heighten this distress. In addition, physicians have also reported that their own emotional needs after an unanticipated event frequently go unsupported by their health care institution.[20,37,38] Fortunately, institutions are beginning to develop more formal programs for supporting health care workers after errors, though the effectiveness of such programs is yet not known.[39] National organizations have also emerged, including the Medically Induced Trauma Support Service, which was founded after an anesthesiologist was involved in a serious error and had difficulty finding emotional and professional support.[a] The absence of emotional support after errors makes it harder for that clinician to meet the needs of the injured patient, can affect that clinician's care of subsequent patients, and may diminish his or her personal health and well being.[40]

DISCLOSURE AND MALPRACTICE LITIGATION

Physicians across specialties express concern that disclosure of unanticipated outcomes to patients could precipitate malpractice claims.[41] In the anesthesiology literature, a case report from more than a decade ago relates the harrowing experiences of an anesthesiologist whose patient suffered a severe adverse reaction to bupivacaine.[42] Despite a strong desire on the anesthesiologist's part to communicate with his patient after the event and to apologize, the risk management department recommended strongly against disclosure, advice that was consistent with standard risk management practices at that time. Even recently, articles written mostly by attorneys have appeared on a popular continuing medical education Website for anesthesiologists, advocating for nondisclosure and asserting that "saying sorry is the worst thing you can do."[b] In addition, an article in a respected health policy journal used theoretical modeling to predict the impact of full disclosure, and suggested that higher litigation and legal costs would be inevitable consequences.[43]

Yet, despite the possibility that disclosure could stimulate a lawsuit, many risk managers and malpractice insurers are strongly advocating in favor of disclosure[44–46]; this

[a] Medically Induced Trauma Support Services (MITSS). Available at: http://www.mitss.org/. Accessed April 17, 2011.
[b] Medscape Anesthesiology. When Saying "I'm Sorry" Is the Worst Thing That You Can Do. Available at: http://www.medscape.com/viewarticle/718346. Accessed April 17, 2011.

shift towards a vigorous prodisclosure stance reflects several developments. A growing literature suggests that many patients who file malpractice claims do so because disclosure was absent or ineffective, and litigation was these patients' only option to discover what happened.[47–49] In addition, the legal environment in many states has become more favorable towards disclosure. Thirty-five states and the District of Columbia have adopted laws that make medical apology inadmissible as a statement of liability for an adverse event, and 8 states require the disclosure of serious unanticipated outcomes to patients.[50,51] The protections afforded by these so-called "apology laws" may have significant limitations; however, they can help doctors express sorrow and regret for adverse outcomes. They also promote stronger patient–doctor relationships, build trust, and assist in healing for both parties.

Emerging data show that disclosure and apology may have a beneficial effect on the likelihood of malpractice claims being filed and on the outcome of those lawsuits.[52] Two well-publicized programs have reported reductions in litigation costs as a result of full-disclosure efforts, many of which involve making early offers of financial compensation. The University of Michigan recently reported a significant decrease in the number of claims, lawsuits, legal expenses, and the time to resolution of claims as a result of their patient safety program. This program includes disclosing unanticipated outcomes and making fast, fair offers of compensation when care was unreasonable.[53] Similarly, COPIC Insurance Company, a large medical malpractice liability insurer based in Colorado for private practice physicians, has reported successful outcomes for its "3Rs" (Recognize, Respond, Resolve) program. This combines disclosure to patients along with early offers of financial reimbursement after selected adverse events.[1] These programs provide the most persuasive evidence to date that institutional efforts to increase disclosure of unanticipated outcomes are unlikely to have adverse financial consequences.

COMMUNICATION STRATEGIES AND TRAINING IN ERROR DISCLOSURE

As health care institutions embrace a culture of openness, the expectations that physicians disclose unanticipated outcomes to patients are likely to increase. How should anesthesiologists respond?

New practice guidelines and recommendations for disclosure can provide a starting point for anesthesiologists who are interested in developing their disclosure skills. Both the National Quality Forum Safe Practice on disclosure and the Harvard Consensus Statement endorse the disclosure coaching model.[2,16] This model recognizes that for most clinicians disclosure is a relatively infrequent occurrence, and even for clinicians who have had some disclosure training, considerable time will likely have elapsed until the actual need to use these skills arises. Many health care organizations and malpractice insurers are therefore deploying "disclosure coaches." These individuals receive specialized training to support the disclosure process, and provide "just in time" consultation to clinicians immediately before disclosure.[3,39] It is important for anesthesiologists to be aware of the resources available to help with disclosure, and to take full advantage of such support before speaking with the patient or family. These resources may be available at either their institution or provided by their malpractice insurer.

The recommendation that clinicians consult carefully with disclosure support resources before speaking with the patient or family also recognizes that it may be difficult in the immediate aftermath to know exactly what caused the event. Full analysis of an unanticipated outcome can be complex, time consuming, and may require the assistance of patient safety experts. Most guidelines therefore recognize that disclosure is not an event but rather a process. This process will evolve over several conversations, and the anesthesiologist may need or wish to be present for all of these. This requires that the concerned anesthesiologist's colleagues or department assist in organizing the appropriate clinical coverage to facilitate the anesthesiologist's full participation in the disclosure process. Working closely with a disclosure coach or risk manager can help clinicians decide what information to share at the initial conversation with a patient or family, as well as plan for follow-up discussions. For physicians in private practice, close consultation with their malpractice insurer also helps ensure that the physician and the insurer are in agreement about the plans for disclosure.

When approaching the actual disclosure conversation, most guidelines recommend taking a patient-centered approach.[16] This includes conveying information according to the patient's or family's needs and checking frequently for their understanding during the conversation. Most patients and families desire a full explanation of the facts and their implications.[6] They also want to know how the medical consequences of the error will be managed, and how the error will be prevented from happening again. The patient and family need to be reassured that they will not suffer financially because of the error.[6] Effective disclosure also includes apologizing for what happened, and showing empathy. The communication that anesthesiologists have with their patients during the preoperative discussion plays a vital role in developing rapport and patient trust, making subsequent conversations about an unanticipated outcome easier to initiate and more likely to succeed.

As previously discussed, errors that appear to have an obvious cause may, on later investigation, be found to involve several other systematic issues. This can result in tension between the desire to provide immediate disclosure to the patient and family and the inevitable delays that result from conducting a formal investigation to untangle the often complex series of events. As a result each disclosure conversation should be limited to simply describing the facts that are currently known, expressing regret or sympathy for what occurred, and letting patients and families know that as information becomes available they will be kept fully informed.

Training and practice is vital for effective error disclosure. Although the topic of disclosure is increasingly being introduced in the undergraduate medical education curriculum, the bulk of disclosure education is likely to occur during residency and fellowship training.[37,54] Anesthesiology residency programs should ensure that residents have acquired basic disclosure skills by the end of their training. Web-based learning modules, simulation, and the use of

standardized patients are effective educational methods, and in our experience can be integrated into an anesthesiology residency program's curriculum. At the University of Washington, each anesthesiology resident not only receives didactic information related to disclosure but also practices disclosure with trained actors in simulated settings. Training residents in error disclosure not only imparts a core skill, it also addresses all six general competency areas defined by the Accreditation Council for Graduate Medical Education: patient care, medical knowledge, professionalism, practice-based learning, interpersonal and communication skills, and systems-based practice. Disclosure training for residents can also be integrated into a broader curriculum in which residents participate fully in quality and safety procedures and practices.[55]

Skills-based disclosure training is relevant not just for residents but for practicing anesthesiologists as well. Such training could update practicing anesthesiologists about current approaches to disclosure and alert them to resources available at their institution or malpractice insurer that can assist with disclosure. Disclosure training can also provide anesthesiologists with the opportunity to practice these challenging skills and receive feedback. Providing disclosure training for physicians in practice not only increases their ability to communicate effectively with patients after unanticipated outcomes but also allows them to effectively mentor trainees in this area.

UNRESOLVED ISSUES RELATED TO DISCLOSURE AND ANESTHESIOLOGISTS

Although significant progress is being made to identify and implement best practices around disclosure, there are important unanswered questions regarding the application of these general principles to the practice of anesthesiology, issues that are ripe for further exploration by the specialty. Foremost among these unanswered questions is the best approach to collaboration between surgeons and anesthesiologists concerning disclosure.

Disclosure guidelines increasingly advocate for a team-based approach to disclosure of adverse events,[17] and anesthesiologists are an integral part of the operating room team. Even if an error occurs solely in the domain of anesthesiology or surgery, another provider may well have witnessed the event, and may be asked by the patient or family for their perspective on what happened. Additionally, circumstances may arise when the members of the operating room team are not in agreement about the cause of a particular event. This dissent can cause confusion and distrust among team members that must be resolved before communicating with the patient. Another possible cause of conflict is the variation in the approaches taken by the different medical malpractice insurers to disclosure. Although this is likely to be less of an issue in an academic institution, it may be of considerable concern in private practice where different care providers have different insurers. Placing the patient's and family's interests first in these situations will help to unite the patient care team. Areas of conflict may be avoided by careful collaboration between all the stakeholders involved, by rehearsing possible disclosure scenarios before the real discussions with the patient and family, and by considering the issues prospectively. Articulating practical solutions to these real-world disclosure challenges is another opportunity for anesthesiologists to again take a lead in important patient safety issues.

It is clear from the previous section that new models are needed to promote collaboration between anesthesiologists and surgeons concerning the disclosure of operating room errors. The issue of how to engage the surgeon in a team-based disclosure is important; we advocate that the anesthesiologist be included in the initial disclosure to the patient and relatives, especially if anesthesia-related issues are involved. This may not, however, be a universally accepted viewpoint. The presurgical time out, during which the entire operating room team comes together to discuss the upcoming procedure, might be a model that could be adapted for surgeon–anesthesiologist collaboration concerning disclosure. After an unanticipated surgical outcome, a brief "disclosure time out" would occur at the end of the surgical case when surgeon, anesthesiologist, and other involved clinicians formulate a plan for communicating with the patient and family, perhaps with input from a disclosure coach or risk management. The APSF, the American Society of Anesthesiologists, and other anesthesiology subspecialty societies are well positioned to consider how best to collaborate with surgeons about disclosure.

The practice of disclosure may be more complicated in different anesthesia specialty areas, such as pain management, intensive care, and pediatric and obstetric anesthesiology. At present, there is only limited information about the disclosure attitudes and experiences of anesthesiologists, and how disclosure plays out in these different clinical environments. Increasing the amount of anesthesia-specific disclosure research will provide evidence-based recommendations for disclosure.

CONCLUSION

The disclosure of unanticipated outcomes and medical errors poses important challenges for anesthesiologists. When compared with the other specialties, the errors and adverse events that predominate in anesthesiology are distinct and may leave the anesthesiologist isolated from the rest of the health care team. Anesthesiologists may be less familiar to patients and their families and, as a result, may be excluded from early disclosure conversations, albeit unintentionally. Anesthesiologists need to be fully informed about the local risk management strategies and support for disclosing errors, as well as national trends and recommendations in disclosure principles and practices. Anesthesiologists have always been leaders in patient safety, and undoubtedly will accept this new challenge of educating themselves and their trainees to take a leading role in all aspects of disclosure of unanticipated outcomes and medical errors.

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