

CASE AND COMMENTARY

Who Should Manage a Patient's Airway?

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Abstract

Ear, nose, and throat procedures in intraoperative environments often involve surgeons' and anesthesiologists' use of shared and sometimes competing approaches to managing a patient's airway. Both clinicians have expertise in laryngoscopy and unique skill sets needed for advanced airway management. This article explores how joint decision making is best achieved despite disagreements and how collegial, collaborative relationships can be preserved to prioritize patients' safety during risk assessment and goal setting.

Case

Ms C is a 52-year-old woman with a hoarse voice and trouble swallowing. She has a history of obesity and obstructive sleep apnea and cannot lay flat without getting short of breath, due to a large (8 x 8 cm) benign thyroid mass that deviates her trachea and narrows its oral opening. Ms C has elected to have a total thyroidectomy with Dr E, a senior ear, nose, and throat surgeon and Dr A, a junior anesthesiologist new to the practice group.

Being able to breathe for a patient after suppressing (via administration of anesthetics and paralytics) the natural drive to breathe is an anesthesiologist's primary focus during surgery. Developing an airway plan is how anesthesiologists and surgeons work together to map out how they will intubate the patient and manage risk that a patient's airway could collapse during general anesthesia induction. A Mallampati score is used to predict how likely a patient can be intubated without complication. Ms C's Mallampati score is 3, indicating her intubation will probably be difficult.

When discussing the airway plan for Ms C's procedure, Dr A recommends fiberoptic intubation, emphasizing the importance of a more conservative, less risky approach to securing Ms C's airway. That is, Dr A's preferred airway plan involves keeping Ms C awake and breathing on her own while they place and secure her breathing tube prior to general anesthesia induction.

Dr E asserts that fiberoptic intubation is not necessary. Although preserving Ms C's drive to breathe longer is less risky, being awake can also make a patient

anxious. Dr E is concerned that Ms C will feel terrified and panic during fiberoptic intubation and thus prefers an airway plan that rapidly secures her airway via rigid bronchoscope.

Dr A reluctantly defers to Dr E's seniority and experience and agrees to implement Dr E's airway plan. Ms C is brought to the operating room, monitors are applied, and she is placed in a 45-degree, head-up position to help her feel more comfortable breathing. Dr A administers anesthetics and paralytics and places an oral airway, but he has trouble securing it. Dr A uses a 2-handed technique to mask ventilate Ms C, but not much oxygen moves into her lungs and her oxygen saturation falls to 88%. Dr A then performs direct laryngoscopy but cannot visualize Ms C's vocal cords and thus cannot intubate her. The team again attempts to mask ventilate Ms C but without success. (After amending the initial fiberoptic intubation plan, Dr A apparently has no back-up plans for failed direct laryngoscopy.) Dr E then attempts several times to place the airway via rigid bronchoscope, but Ms C's oxygen saturation, blood pressure, and heart rate fall, indicating looming cardiac arrest. Finally, Dr E secures Ms C's airway, she slowly stabilizes, and her surgery proceeds.

Drs A and E are relieved. They wonder about how they weighed potential risks and benefits in planning and implementing Ms C's airway plan.

Commentary

Communication and teamwork are important and complex elements in perioperative patient safety. Although assessment of surgical risk factors and outcomes has traditionally prioritized patient comorbidities, extent of disease, and complexity of surgery, there is increasing recognition of interprofessional interactions within teams and within the systems and environments in which team members work as critical contributors to adverse events.¹ Despite its high-stakes implications for patient safety, operating room communication remains underresearched.² Within the operating room—a place of interprofessional demands, potential tension, and need for collaboration and teamwork—[professionals](#) have distinct roles and responsibilities in motivating shared patient safety and patient care goals. Surgeon-anesthesiologist relationships might be the most central factor in determining how effectively operating room teams function. As the case highlights, the dynamics between these 2 physicians—who might share, yield, or compete for leadership in operating room settings—can ultimately facilitate or impede success.³ This article explores how joint decision making is best achieved despite disagreements and how collegial, collaborative relationships can be preserved to prioritize patients' safety during risk assessment and goal setting.

Communicating for Collegiality and Patient Safety

The word communicate derives from the Latin *communicare*, meaning to impart and participate; and to “speak forth” is the literal meaning of *profess*, the root of *professionalism*.⁴ Both anesthesiologists and surgeons face and contribute to

communication challenges that have profound medical, ethical, legal, and personal significance within perioperative environments. Perioperative communication can be for purposes of patient safety, negotiating professional relationships, distributing responsibility, assessing competence, or cooperating on a common interventional goal. Success in communication and other kinds of [interdisciplinary collaboration](#) is influenced by established hierarchies, perceptions of professional roles and leadership, training and expertise, mental models, personality, priorities, stress, and institutional culture. Importantly, how well professionals know, trust, respect, and rely on each other during routine and tense clinical moments influences whether and how information critical to an intervention's success and a patient's safety is communicated.

Conflict about professional decisions, variation in expertise, and judgment differences are to be expected and can motivate collegiality and patient safety when managed well. If an anesthesiologist-surgeon relationship functions well, each clinician can help the other, which serves the interest of the patient.³ If this relationship does not function well, working environments can be [unpleasant and unproductive](#). In the above case, the relationship between the anesthesiologist and surgeon is not a long-standing one, and significant generational and [hierarchical differences](#) exist.

Communication failures often arise from vertical hierarchical differences, role conflict or ambiguity, and interpersonal struggles or power differentials.⁵ In particular, interprofessional communication failures can arise when professionals lower in a hierarchy perceive their co-professionals as unwilling to listen, fear offending them, or are unwilling to risk being perceived as incompetent. In the highlighted case, Dr. A reluctantly defers to the seniority of the surgeon, as he asserts that fiberoptic intubation is not necessary. Safety priorities, case elements, and contingency plans are not discussed, and the junior anesthesiologist fails to communicate a back-up plan after failed laryngoscopy.

Other hurdles to effective collaborative communication, decision making, and teamwork include lacking confidence in others, lacking awareness of cross-disciplinary colleagues' knowledge and skills, feeling threatened by a perceived loss of autonomy, and territorialism. The "captain of the ship" and "quarterback" metaphors for surgeons' roles, for example, are antiquated, and those who hold onto them might have the most difficulty sharing responsibility.

In order for anesthesiologist-surgeon relationships to function well, the 2 professionals must agree on common patient care management goals and a strategy for airway management while recognizing constraints on care goals for any given patient. A plan in which one professional "asserts" and another "reluctantly defers," as in the case scenario, is less likely to be successful or adaptable. Expressing respect for others' expertise and skill; communicating openly, clearly, nonpunitively, and respectfully; acknowledging conflict

productively; and sharing information inclusively are key to successful interdisciplinary teamwork and to taking good care of patients. This formula is easily stated but can be hard for some to practice. In anesthesiologist-surgeon relationships, the clinicians' familiarity with each other and frequent sharing of patient case management duties can defuse conflict and help reconcile disagreement. Alternatively, familiarity can perpetuate dysfunction and distrust, creating distress and even fear.

Making Safer Teams

In other high-risk, high-intensity environments such as aviation, standardized communication tools and behaviors have been developed, studied, and applied to enhance teamwork and reduce risk.⁶ These strategies have been incorporated in high-risk environments like operating rooms to reduce error and improve safety.^{7,8} One such tool adapted from aviation, crew resource management (CRM), includes simulation, interactive group debriefings, and performance measures with a goal of improving team functioning.⁹ Mental models have not been well studied within surgical and perioperative environments,¹⁰ but one recent study of professionals from multiple disciplines in cardiac operating room settings reported a high degree of variability both within and between professional groups in their recognition of and attribution of importance to distinct critical time points during cardiac surgery that have implications for preventable error.¹¹ Ultimately, convergence of knowledge of team tasks, goals, and abilities can lead to the development of shared mental models. This approach ideally would allow an anesthesiologist, a surgeon, and all the other team members to anticipate each other's actions and coordinate their behaviors in time-limited situations.¹² A shared mental model should prioritize patient care and safety over informal hierarchical norms and stipulate how leadership is designated and shared during surgery in different situations. For example, a surgical approach to a patient's airway management, when indicated, should be led by that professional most experienced and adept in this skill. In our experience, collegiality protects patients and is nourished by a collaborative environment, an open attitude, and feelings of mutual respect and trust.

Importantly, debriefing and discussing challenging cases or adverse patient outcomes as a team is highly beneficial for team members, enabling them to recognize and repeat successes, learn from mistakes, optimize interdisciplinary relationships, and foster collaboration and a sense of accountability for and collective ownership of patients' safety and care. Regardless of whether these debriefings and discussions are formalized, they should be predicated on the following assumption about each team member: *I believe that you are intelligent, competent, trying your hardest to do your best and seeking to improve, and acting in the best interest of this patient and the organization.*¹³

In the event of patient harm or other adverse events, the surgeon and anesthesiologist also have a responsibility to share details with a patient or

surrogate in a private setting, with full disclosure and openness to fielding and responding to questions. Case difficulties should be communicated even in cases in which there are no patient deaths, complications, or additional care measures. For instance, in the above case, the details of airway management should be discussed with the patient even though the patient was ultimately and successfully intubated. Communication should be done in a professional and empathetic manner, with both anesthesiologist and surgeon present. This disclosure can be documented in a letter to the patient to inform future care needs as well.

Airway Management

All team members' concerns should be voiced, heard, considered, and addressed well in advance of surgery on a patient to allow time for good decision making and inclusive discussion, confirmation of available equipment, and an organized approach to managing a patient's care. In particular, the patient's airway management plan needs to be discussed by the surgeon and anesthesiologist and agreed upon before a patient is taken to the operating room.

In formulating the plan, one team member's skill set can be prioritized. The anesthesiologist's communication of a pharmacological approach to sedation during an attempted awake fiberoptic intubation might alleviate the surgeon's concerns about patient comfort. Alternatively, a surgeon's adeptness and experience with an available rigid bronchoscope might mitigate an anesthesiologist's concerns that a patient remain spontaneously ventilating during the induction process. Of course, a patient should be aware of surgery goals and potential challenges, decision making should be shared when possible, and the patient's agreement with goals and consent to an intervention should be secured.

Intraoperative and postoperative airway management decisions should be informed by relevant considerations of a patient's anatomy, likelihood of success with any planned strategy (eg, video laryngoscopy), image review, and contingency planning. For example, when considering alternative airway management strategies, anesthesiologists and surgeons can exchange views in response to questions like these: Will a standard-sized endotracheal tube pass through this patient's compressed or deviated trachea? Will cricothyrotomy or tracheostomy be possible in a patient with a large goiter, especially in an emergency? Can or should this patient be extubated later, and what challenges exist? Practice domains of the anesthesiologist and ear, nose, and throat surgeon distinctly blur in the operating room during such clinical encounters and discussions; each professional has expertise, proficiencies, and tools that need to be discussed and shared for effective collaboration and good patient care.

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Editor's Note

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The author(s) had no conflicts of interest to disclose.

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