

# Safety, professionalism and excellence in Anesthesiology

“Excellence is the result of caring about things more than others think is wise, ... of taking a little more risk than others think is safe, ... of dreaming more than others think is practical, ... and to expect more than others assume is possible.”  
Fran Gutiérrez

## Abstract

Anesthesiology is a safe science and a professional status of medicine that implies safety, excellence and professionalism that guarantees each patient that there will be no harm to their physical, emotional and social integrity. This is an ideal goal, not easy to achieve and for which each anesthesiologist must acquire scientific knowledge, develop increasing skills and empathy during their professional practice. Reducing the current morbidity and mortality figures in anesthesiology requires a high concept of professionalism that includes our responsibilities as doctors, as members of a civil society attached to the Universal Declaration of Human Rights where medical care is our responsibility. As anesthesiologists we are obliged to ensure the well-being of our patients, observing the highest level of professional quality.

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## Introduction

Clinical and social scenario: A 29-year-old female patient with subclinical hyperthyroidism comes for breast implants in an outpatient plastic surgery unit. Despite the altered thyroid function tests, the medical group decided to operate, and the patient developed an intraoperative thyroid storm and died, leaving two orphaned children and a heartbroken husband.

Death or complications from anesthesia in sick or healthy people happen all over the world, not only in low- and middle-income countries, but also in relevant medical centers and in the hands of professional experts. These scenarios represent daily challenges in our professional practice; dares that we can only overcome through continued safe, professional, and excellent practice. Organizations such as the WHO, WFSA, ASA, APSF, ASRA, CLASA, ESAIC, FMCA, among others, have established multiple recommendations aimed at perioperative patient and environment safety.<sup>1-4</sup> Despite the fear that patients have of anesthesia<sup>5,6</sup> this is one of the safest specialties due to the growth in technologies such as automation, artificial intelligence, in basic sciences, in communication-teaching, in novel approaches, and in the professionalism of anesthesiologists.<sup>7,8</sup> Mortality due to anesthesia is 1:100,000, although anesthetic management can cause non-fatal complications that negatively modify the evolution of patients and the cost of health services. This figure is variable depending on the age, the type of surgery, the physical condition of the patients, the anesthetic-surgical environment, etcetera. Most of these negative events occur in the immediate or mid-postoperative period when an anesthesiologist is not available.<sup>9</sup>

Half a century ago, anesthesiologists trained successfully in just a couple of years after medical school. Nowadays, at least three years are required after completing basic medical education. In some places it is necessary to have 1 to 3 years of formal training in internal medicine and there are subspecialties of anesthesia such as pediatrics, cardiothoracic, obstetric, neuro, critical care, pain, regional anesthesia, bariatrics, hospice and palliative medicine, and other areas that require 1 to 3 more years of formal training residency or

fellowship.<sup>8,10,11</sup> In contrast, it is increasingly common to find training centers in secondary level hospitals that do not meet the minimum necessary to create specialists, or the anesthesiologists graduated from these sites finishes his/her specialty with deficiencies that may be significant in their future professional practice. Fortunately, most of these colleagues continue their training and update themselves day by day, seeking excellence in their profession that guarantees safe perioperative care.

Learning in anesthesiology and related sciences involves various resources where teachers play a vitally important role. Our profession as anesthesiologists is studied in the classrooms and is endorsed in the operating rooms, in the post-anesthesia recovery areas, in intensive care, as well as the pain clinic. To train anesthesiologists of excellence, teachers must participate in the development of multiple evolutionary learning resources where technology plays an important role in increasing the quality, improving the accessibility and effectiveness of education materials, making them more attractive. Each patient should be considered not only as a person whom we must carefully care for; each one of them is a living book from which we learn during our residency training and throughout our professional practice.<sup>12,13</sup>

## Safety

Safety in medicine goes hand in hand with two capital factors in professional performance; knowledge and manual skills to resolve each instance, each moment, every one pathology in each one of our patients throughout our professional life. Both components must be seasoned with a human environment that transmits trust, hope, love, and faith in such a way that patients feel the warmth that their doctor gives to them every moment during the care, cure and convalescence of their illness, and in some instances it goes further, turning the doctor-patient relationship into friendship. Empathy and respectable communication with patients are critical in perioperative safety.<sup>13,14</sup>

The search for safety and quality in anesthesiology is a rapidly evolving process. The advances have been notable, although they are still not enough to guarantee success in all procedures that require

anesthesia. On the one hand, there are the academic programs that list various guides to obtain safe results, and on the other hand, there is the individual performance of the anesthesiologists. Anesthesia training programs are essential to providing safe and cost-effective care. Anesthesiology should be taught from medical school with the goal of sparking the interest of students. During residency, these programs are multifaceted, including all subspecialties in our field, in addition to considering the specific needs of the country where these specialists are trained. It is necessary to emphasize lessons learned, professional conduct, improving results and the importance of prevention, safety, professionalism and excellence.

In addition to the full preanesthetic evaluation, the routine electronic monitoring, laboratory and perioperative clinical surveillance in the operating room and in the post-anesthesia period, we should monitor various indicators of the quality of our service in relation to patient satisfaction. Recently Wacker<sup>8</sup> refers to the importance of monitoring the quality of care with the goal of reducing perioperative morbidity and mortality; This author notes that there are not enough scientifically validated quality indicators, so it is necessary to develop a set of quality care guidelines that benefit not only research in this area, but also satisfy the expectations of patients and the health system.

**Excellence**

Excellence is a relative status and will depend on the personal perspective with which it is analyzed, which for some is excellent,

for others it does not seem so. A human being is excellent when he/she continuously seeks perfection in an environment of freedom, intelligence, quality, love, well-being, and pleasure. In other words; an excellent physician is one who is always looking for the best way to practice his/her profession, an attitude that results in abundance, creativity, and makes room for the emergence of outstanding professionals, with new values that promote health, progress, and happiness for his/her patients and himself/herself.<sup>14-18</sup>

On the route to excellence in anesthesiology we must focus on three basic professional aspects; knowledge, skills and empathy with patients and our work group. Connecting, contributing and giving back in our profession goes beyond the diplomas and certificates hanging on the office wall, the short or extensive resume. Ethical professional development, with the purpose of satisfying the health demands of each patient, adhering to the modern Hippocratic Oath (Table 1), are mandatory characteristics in an environment that changes day by day, where professional practice goes hand in hand with technological and knowledge advances, which are impossible to accumulate in a single person. That iconic doctor of the past is part of a beautiful old story<sup>19</sup> from which we must rescue his empathy, professionalism, and season it with a realistically growing accumulation of skills, updated information and experience that favor success in the care of each patient. There is no guarantee, but there must be a professional commitment.

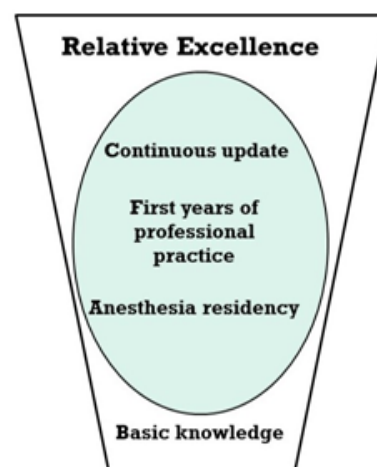
**Table 1** Hippocratic Oath

1. Upon admission to the membership of the medical profession, I solemnly undertake to devote my life to the service of humanity.
2. I will preserve for my teachers the respect and recognition to which they are entitled.
3. I will perform my art with conscience and dignity. The health and life of the patient will be the first of my concerns.
4. I will respect the secret of anyone who has trusted me.
5. I will maintain, to the fullest extent of my means, the honor and noble traditions of the medical profession. My colleagues will be my brothers.
6. I will not allow considerations of religion, nationality, race, party or class to come between my duty and my patient.
7. I will have absolute respect for human life, from its conception.
8. Even under threats, I will not admit to using my medical knowledge against the laws of humanity.
9. I make these promises solemnly, freely, on my honor.

Currently, total excellence in medicine is an unattainable goal for a single person due to the growing accumulation of advances, so we must worry about achieving relative excellence. Our goal as anesthesiologists is to have a level of knowledge and skills that guarantees safe anesthesiological care, without errors or with a minimum of failures that do not endanger the life or physical integrity of each of our patients. This is a feasible category for every anesthesiologist who enters and persists on this path that seeks relative excellence.

The inverted truncated pyramid shown in Figure 1 displays the stages and components necessary to achieve relative excellence in anesthesiology. The central oval refers to professionalism, as a constituent factor that must be included from the training as a medical student, especially during the residency stage in anesthesiology and related sciences. This oval must also include the emphasis on research and teaching, common elements in academic anesthesiology. Note how the pyramid is broader at its upper end, which implicitly indicates that as an anesthesiologist approaches excellence, it will require greater effort to remain at that professional level. The more anesthesiologists there are in this section of the pyramid, the more

protected patients will be and anesthesiology as a science will be more effective, safe and respected.<sup>14</sup>



**Figure 1** Route of excellence in anesthesiology.

## Professionalism

Patients, medical societies, government health authorities, and accrediting medical organizations expect physicians to be professional. Professionalism is largely defined as conducting oneself with responsibility, integrity, accountability, and excellence. Additional domains within the realm of professionalism include competence, efficiency, knowledge, conscientiousness, respect, and confidence.<sup>20</sup> Professionalism is a mandatory attitude, in which knowledge, clinical skills, communication and ethics constitute the elemental basis. From these roots appear behaviors and attributes of professionalism: responsibility, altruism, excellence and humanism. Furthermore, professionalism is associated with better clinical outcomes, where safety is a cornerstone. Therefore, professionalism should be taught to medical students, residents and fellows in training, and practicing physicians. Various methods can be used to teach professionalism (e.g., didactic lectures, web-based modules, role models, reflection, interactive methods, and so on. As Mueller mentioned,<sup>20</sup> there is no ideal tool to evaluate professionalism; instead, multiple assessment utensils should be used (e.g., feedback from multiple sources through 360-degree reviews, patient feedback, critical incident reports, etc.). Data must be collected continuously throughout an individual's career. For the practicing clinician, the data generated by these tools can be used to create a "professionalism portfolio," the sum of which signifies the essence of the individual's professionalism. This portfolio, in turn, can be used for formative and summative feedback. Data from professionalism assessments can also be used to develop professionalism curricula and generate research hypotheses. Health care leaders should support the teaching and assessment of professionalism at all levels of learning and practice and promote learning environments and institutional cultures that are consistent with the precepts of professionalism.

The concept of professionalism has evolved both in society and in the medical field and its meaning tends to change in a high percentage of young medical specialists. In some colleagues this change has been in a negative way due to such banal factors as professional status in the community/social networks, membership in various medical and social associations, the type of automobile, place of residence, place of work, and therefore the greatest interest in money. In certain environments, the patient is secondary, having become a necessary means for the well-being of doctors, administrators, and the productive business of medicine. A typical example is the growth of medical tourism in the hands of disastrous professionals and authorities.<sup>21-22</sup> Fortunately, most medical professionals care about safe, professional and excellent practice. It is prompt to remember William Osler when he said that he saw his profession as "a vocation, not a business." More specifically, he saw it as a "calling that demands from you at all times self-sacrifice, devotion, love and tenderness toward your patients, colleagues and society."<sup>18</sup>

In this era of professional competition, rivalry, challenge, with inappropriate behaviors, doctors have become our main enemy. Although this reality does not necessarily mean a lack of care for patients, we should ask ourselves what contemporary professionalism in anesthesiology should be like? It is obvious that there are too many gaps to overcome, starting with recognizing our mistakes in the daily work, academic and social environment and retaining the characteristics of professionalism as a result of adhering to the safety and excellence guiding principles already mentioned.<sup>23</sup>

As a global anesthesiology community, we do not need to redefine our professionalism, but we do need tutors who preach the importance

of safe professional practice on a path to excellence. Excellence should go hand in hand with competence in this era of accelerated advancement where students, residents and graduate anesthesiologists can develop and maintain their training and continually develop their expertise to meet the demands of their patients and themselves for the rest of a long professional life. Competence and professionalism are different terms; The first refers to the ability to perform a certain task in a specific situation and the second includes competencies in addition to the specific behaviors necessary to perform successfully in a certain specialty.<sup>24</sup>

Many years have passed since Ralph Waters taught the importance of professionalism into the practice of anesthesiology,<sup>25,26</sup> an attitude that we must maintain every day of our professional practice. Guaranteeing professionalism in anesthesiology – as in other specialties – means nobility and dignity in a path that is not easy to walk, but that at the end of the route brings us closer to the fulfillment of that Hippocratic oath that committed us when we became doctors.

## Teaching safety, excellence and professionalism to anesthesia trainees

Anesthesia and related specialties are taught in the classroom and practiced in the operating room, PACU, ICU, and the Pain Clinic. This is a satisfying, easy activity when trainees are interested in learning this dynamic specialty. However, teaching them the importance of safety, the value of excellence and the value of professionalism in our specialty is an arduous task, especially with the new generations who have almost all biomedical information on a smart cell phone, and therefore they always pretend to know more than their educators. Consequently, safety, excellence and professionalism should be taught and evaluated to medical students, residents, fellows, and practicing physicians.<sup>27-30</sup>

## Conclusion

To err is human; making mistakes in medicine is critical, inevitable and can result in an irreversible catastrophe. Complications due to errors in anesthesiology and related sciences have been the subject of much research and the development of guidelines that aim to reduce the incidence and severity of these errors. The goal so that no one is harmed by anesthesia involves an elementary teaching-learning process filtered by three fundamental issues: safety, excellence and professionalism. Surfing on the wave of anesthesia innovation requires evidence-based competence, which is achieved through continuous updating not only in anesthesia but in the sciences related to our profession. As anesthesiologists we are doing many things correctly, but the existing educational deficit must be corrected to avoid an eventual crisis, suggesting a clinical practice based on evidence and values in a better environment. In the correct practice of anesthesiology each step is important. All generations of anesthesiologists have fought this war, have looked to be heard and seen, have achieved exceptional goals and unusual advances. New and future generations can now take advantage of these favorable changes while creating new innovations in our professional field. In the search for the path to excellence the word impossible does not exist. Absolute excellence is a divine characteristic; whatever omnipotent figure you accept. As anesthesiologists, I consider that one of our greatest obligations is to promote understanding and the search for a direction that leads us to relative excellence in the daily practice of our specialty. Once we are all together walking this route towards excellence, we will have safer anesthesiology for the benefit of each of our patients, our environment, and ourselves.

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## Conflicts of interest

The author declare no conflict of interest.

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