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Professionalism in Anesthesiology training

Profesionalismo en la formación del anestesiólogo

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| Abstract |

This reflection article seeks to define and establish the basic professionalism components required for the best practice of anesthesia. Some examples of unprofessional behavior will be identified, while exposing available tools that can be used for its correction. In consequence, professionalism is proposed as a key component for the development of anesthesiology as a medical specialty and the potential beneficial impact of its inclusion in curricular programs is assessed.

Keywords: Education; Professionalism; Students, Medical; Ethics; Professional Competence; Anesthesiology (MeSH).

| Resumen |

En el presente artículo de reflexión se busca definir y establecer los componentes fundamentales del profesionalismo requerido para el óptimo ejercicio de la anestesiología. De este modo, se identifican algunos ejemplos de comportamiento no profesional y de las posibles herramientas positivas que se pueden aprovechar. Se propone, entonces, el profesionalismo como eje fundamental para el desarrollo de la anestesiología como especialidad médica y se evalúa el impacto benéfico derivado de su inclusión en los programas curriculares.

Palabras clave: Educación; Profesionalismo; Estudiante; Anestesiología; Ética; Competencia profesional (DeCS).

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Introduction

Life expectancy has increased thanks to medicine; however, a leading role of medical professionalism is necessary for patients to take ownership of their self-care role and achieve a better quality of life, and for physicians to provide professional care in a comprehensive way, so that patients can add more life to their years.

Professionalism is an inherent characteristic of health personnel, whose essence is to offer the best scientific, moral and human assistance. All training programs in health sciences should seek professional excellence. Specifically, anesthesiology should include didactic basis in three phases: *propaedeutic interventions* that include declarative knowledge (knowledge), procedural knowledge (know-how) and non-technical skills (knowing how to be); *demonstration interventions* that combine the different types of knowledge in high fidelity laboratories, preferably, and *practice in patients of health service delivery institutions*, where decisions are based on group autonomy (group code), protocols or treatment guidelines subject to global hospital care standards framed in professional and human care skills. (1)

In the United States, the Accreditation Council for Graduate Medical Education (ACGME) considers that professionalism is one of the six competences that should be permanent and strict considering its mandatory nature for teaching and evaluation. (2,3)

Definitions

Professionalism involves values, attitudes and technical and non-technical skills at the service of fellow human beings in a comprehensive manner, in order to achieve physical and mental well-being. This characteristic is based on humanism and altruism and should be part of the anesthesiology graduate curriculum, in such a way that it enriches its leadership in the entire work environment (intensive care unit, pain unit, surgery room, recovery room). (4)

Different tools and processes are available for the evaluation of the acquisition of basic knowledge and competence components, such as regressive supervision, compliance lists and learning curves (cumulative and in percentage). (1) However, there is no standard for teaching and qualifying competences in professionalism. Anesthesiologists in training, when exposed to patients or teamwork, lack sufficient comprehensive training (knowledge, know-how and fundamentally to be), so rapid detection and correction or appropriate reorientation by the teaching and assistance team must be guaranteed in order to achieve ethical and humanistic behavior.

Competences are appropriate actions that emerge in relation to a specific task, in a specific context. This action is achieved by acquiring and developing knowledge, skills, abilities, aptitudes and attitudes that are manifested in being, knowing, doing and knowing how to do. (5) Furthermore, competences must be addressed based on actions

for the solution of problems and decision making in the provision of health services (6), since they are a prerequisite in anesthesiology to train good professionals. (7) Although these skills are necessary, they are not sufficient. (8)

Reyes-Duque (6) states that evaluative, communicative, creative, argumentative, proactive, resolute and psychomotor competences are highly relevant, and gives greater importance to clarifying and elucidating when considering these skills as an "installed and adequate capacity for the development, assimilation and expression of universal values, which bring humans and society together with particular values that refer to the individual and his immediate environment". (6, p62)

The medical act, beginning with the modern Hippocratic Oath, establishes a close relationship with feelings of generosity, compassion and concern: "For the most sacred of my beliefs, I promise my patients suitability, openness, commitment to anything that can best serve them, compassion, absolute discretion and confidentiality in accordance with the law." (9, p5) According to Patiño (9), professionalism is characterized by four domains: intellectual capital, intellectual autonomy in decision making, commitment to serve the society and self-regulation, aspects that have been deeply affected by the reform made to Law 100 of 1993 in Colombia.

The development of the medical profession and other health sciences requires vocation for service, although it has been relegated. (10) According to Londoño, "the teaching process does not involve mysticism or love" and "when selecting study programs (medicine, communication, diplomacy, systems, administration, design), popularity prevails and aptitude and vocation are hardly considered." (11)

Paradoxically, depersonalization of the medical act has been enhanced to the point that technology has replaced the human touch required along with semiology. It is true that the scientific impact of discoveries such as the electron microscope, biological markers obtained in the clinical laboratory, diagnostic and ultrasound imaging, telemedicine, surgery, robotics, molecular biology, anesthesia with almost computerized and increasingly precise administration and control systems, and other recent advances, have revolutionized patient care and safety. However, the one thing that has not changed despite these technological developments is the patient himself and his need for human understanding.

The patient, center of humanization

Medicine is a profession that feeds on many disciplines and focuses on the comprehensive care provided to an individual that is considered fragile since Biblical times (Ezekiel 12:20). Through medicine, the patient sometimes heals and sometimes feels relieved, but comfort should also be provided.

According to Patiño (9), the three principles of medical ethics are charity, autonomy and justice. The latter has been affected by the general health social security system, as it has led to deprofessionalize medicine and favored inequity in the provision of health services. Public hospitals that once cared for afflicted patients today are unprotected and almost extinct; thus, the medical act is subject to the profit objectives of the industry and to the power of the market. Postgraduate committees should be the first to respond to these expectations in order to achieve competences in professionalism (12), since the good example of the teachers and their experience will influence students through mirror neurons. (13)

As stated by some researchers, four essential parameters have been established to define professionalism: responsibility, ethics, altruism and humanism. (14) Responsibility implies putting the interests of the patient before those of the physician. Ethics requires moral behavior

and unshakeable honest commitment. Altruism relates to empathy brought to action. Finally, humanism is the *raison d'être* of health care.

The Asociación Colombiana de Sociedades Científicas (Colombian Association of Scientific Societies) considers that "humanism has a very intimate relationship with feelings of generosity, compassion and concern" and according to Vera-Delgado, physicians "should put human being as their essential concern, in the center of reflection and as a gravitational axis of the entire universe". (15, p272)

The "first do no harm" principle, enunciated by Hippocrates more than 2 400 years ago, is violated when the professional engages in reprehensible acts such as greed, dishonesty, abuse of authority, discrimination, intimidation, sexual harassment, negligence, waste of the health resources of the institutions, fraud and undeclared conflicts of interest.

The first contact of the anesthesiologist with the patient occurs during the pre-anesthetic assessment, which should be done with enough time to establish a cordial relationship of trust that allows appropriate satisfaction and security to both. For a safe surgery, before entering the operating room *briefing* (planning) should be performed, followed by the *entry*, the *surgical pause* and, at the end of the surgery, *verification* or *exit*; finally, *debriefing* occurs. The purpose of this process is to obtain the best results in care quality. Disagreements with any member of the surgical team must be solved in other scenarios, once the surgery is completed, as the comprehensive and safe care of the patient prevails.

Another non-technical skill that influences teamwork is fluency and altruistic collaboration in labor relations. Anesthesia competence also includes not abandoning the patients at any time and controlling their homeostasis and post-operative pain in a multimodal manner. Critical patients who will undergo a surgical procedure should be managed according to their condition, anticipating complications.

Currently, the work of the surgical team and the on-call anesthesiologist goes beyond the operating room and the hospital, where the patient is provided with comprehensive pain management, close rehabilitation and follow-up of their postoperative conditions, as well as effective education to promote self-care. (16,17)

After a Delphi analysis with a group of 32 anesthesiologists dedicated to teaching (responsible for 16 anesthesia programs in Canada, 13 in England and 3 in France), a list of 36 qualities was obtained. Such qualities were grouped into the following three areas: humanistic quality (15 cases), personal development (7 cases) and metacompetences in anesthesiology (14 cases) (Table 1). (18) The first two have a generic nature and the last one relates exclusively to anesthesiology.

Most of the tasks performed in operating rooms, pain units or intensive care units are carried out by teams, and improper behavior can lead to unprofessional behavior that, in turn, can lead to adverse events. Human, communication and conflict resolution skills must be considered as a fundamental part of professional training and evaluation, since the lives of patients are at risk.

Before being exposed to the current panorama of health mercantilism, graduate anesthesiology students should receive training in professionalism through a formal subject. The teaching-learning process must be continuous and horizontal (19) and must also establish proper pedagogical development; in turn, teachers must be critical and proactive and encourage student participation in active, flexible, autonomous and comprehensive learning. (20)

Each student faces, in a unique and personal way, his/her learning process and that must be respected. In most cases, grades are more important than qualifications and it is the students themselves who self-evaluate and provide feedback. (21,22)

Table 1. Qualities of professionalism in anesthesiology.

Qualities	Median > 6	Median <6
Humanistic	Integrity Confidentiality Adherence to ethical and legal codes Respect for the patient's point of view, dignity and privacy Respect for colleagues and coworkers Responsibility for their personal actions with the patient and society Reliability Maturity Empathy	Unbiased Altruism
Personal development	Self-awareness Commitment to continuing education Acceptance of uncertainty and error Acceptance of criticism Maintenance of the personal and professional dimension	Motivation Orientation Capacity
Metacompetencies	Surveillance Response speed Teamwork Flexibility Decision-making capacity Style Confidence Communication Experience in pattern recognition	Resourcefulness Assertiveness Conflict resolution Fluency Administrative skills Leadership

Source: Own elaboration based on Kearney. (18)

The curriculum

In developed countries, where health information has surprising records, lack of ethics prevails over lack of expertise or competitiveness in medical claims. (14)

A mechanism proposed for the follow-up of postgraduate students is evaluation of the following academic-assistance aspects: professional attributes and responsibility; self-improvement and adaptability; relationship with patients, and interpersonal relationship with other members of the health team. Curricular implementation of professional training in anesthesiology should be horizontal, as is the case of some American universities. (7) For this, it is important to involve students with the precepts of responsibility, humanism and ethics.

Professionalism also involves the well-being and quality of life of human resources. Carrying out any work activity requires job stability, decent conditions, personal satisfaction, fair remuneration, confidence, etc. In Colombia, organizations and scientific and professional associations of the health sector denominated the period between April 2016 and April 2017 as the “Year of Human Resources in Health” with the purpose of drawing the government’s attention to the pressing needs for dignifying work and quality of life for professionals and health workers. Statutory Law 1751 recognizes the right to health as a fundamental right and seeks to recognize the autonomy of health professionals. (23) Article 17 clearly establishes it, provided that it is exercised within a framework of self-regulation, ethics, rationality and scientific evidence. Additionally, Article 18 promotes fair and dignified working conditions, with stability and facilities to increase knowledge, in accordance with the needs of the institutions.

It can be inferred that a professional who acknowledges that the labor market offers decent salaries and working conditions can count on ideal conditions to carry out his/her work with a sense of belonging, coherence and professionalism.

Proposal for postgraduate programs

The authors propose to design a template to be applied periodically to anesthesiologists in training as a tool for learning and evaluation. It should include an evaluation of non-technical skills such as behavior of the graduate student during service, the acceptance of imposed work and respectful relationships with other members of the team, the patients, the nurses and the support staff (Table 2).

The evaluation must be supported by several teachers in different clinical rotations in order to allow the comprehensive development of students, where social and ethical aspects complement competences and prevail over any other interest. The altruistic behavior of the professional and empathy taken with responsibility and respect to practice were considered for the construction methodology of this tool, since it differs from disruptive behaviors that may manifest an underlying pathological condition that needs special attention. (24) This instrument requires validation to be applied in other clinical training environments, as in the case of proposals such as the study that compares scrupulosity with professionalism, which concluded that the first characteristic is desirable, but does not necessarily have to be part of professionalism. (25)

Table 2. Tool for the evaluation of non-technical skills of residents (physicians in training).

Name (photo included):					
Year of residency:					
Rotation Hospital:					
1. The behavior of the resident during the rotation has been appropriate					
0	1	2	3	4	5
Not observed	Poor		Good		Excellent
2. The resident accepts assigned tasks without unfounded complaints					
0	1	2	3	4	5
Not observed	Poor		Good		Excellent
3. The resident treats the support staff with respect					
0	1	2	3	4	5
Not observed	Poor		Good		Excellent
4. The interaction of the resident with other anesthesiology residents and residents of other specialties is appropriate					
0	1	2	3	4	5
Not observed	Poor		Good		Excellent
5. The resident treats patients in a respectful manner					
0	1	2	3	4	5
Not observed	Poor		Good		Excellent
6. The resident treats the nurses in a respectful manner					
0	1	2	3	4	5
Not observed	Poor		Good		Excellent
Department coordinator					
External observer					

Source: Own elaboration based on Dorotta *et al.* (7)

Conclusions

Anesthesiologists are health professionals who exercise the science and art of medicine; in consequence, they provide individual and collective well-being to the society. The report of the Carnegie Foundation for the Advancement of Teaching, published in 1910 and based on Flexnerism, transformed the schools of medicine with the highest humanistic values around the world. However, new modalities of health service provision have emerged that are alien to teaching methods and have enormous repercussions on patient care, such as the rupture of the doctor-patient relationship and the management of medical practice.

Furthermore, depersonalization and deprofessionalization undermine humanism, but in spite of that, they are being implemented in both undergraduate and postgraduate programs. With this in mind, it is proposed to rescue humanistic values in the postgraduate curriculum and to return to the theses raised more than 24 centuries ago by Hippocrates and taken up by Abraham Flexner, who proposed that physicians must be educated persons, in whom science, humanism and social responsibility converge in an indissoluble way.

The environment, the training method, the application and the evaluation of humanistic and ethical principles contained in professionalism have a beneficial effect for all parties involved in the care process, inside and outside the hospital: patients, health team and social security health system.

Conflicts of interest

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