

Research Article

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Excellence and safety in surgery require excellent and safe tutoring

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Abstract: The surgical education in Italy has always been a very important issue. The aim of this article is to bring together the feedback of the definitions of the various components of the learning scheme and to evaluate the importance of the legal point.

In March 2016 we performed a literature review. We have also examined the internet pages of the Italian Department of Education, Health and Medical Order.

In Italy the tutor had an unclear role from a legal point of view. He is the person who must be able to perform a specific procedure with expert technical and who must know how to stop the student if this is about to perform a dangerous maneuver. In Italy the ability to work for the trainee is limited in all reality, it depends on several factors including the increase of numbers of medical-legal disputes, the timing, the commitment it requires mentoring and a lack of mentors.

Conclusion: In surgery, the problem is greater because of the increasingly of medico-legal implications that we are after surgical procedure. It would be necessary to define a role of the tutor in a regular protocol and a proper assessment of his performance.

Keywords: Tutor in surgery; Tutor; Tutoring

1 Introduction

Surgical education on medical specialities in Italy has always been a very important issue.

In the United States of America, where several assessments on tutoring needs have been carried out, but in Europe and Italy the literature is very poor in this regard.

The problem of inadequate education in surgery has been raised by American medicine companies since 1960. The approach to learning, called “Problem Based”, was adopted for the first time in Canada [1].

The latest guidelines governing education in surgery are based on the idea that we need constant supervision of procedures performed by an experienced tutor. The latter must be recognized and in turn evaluated consistently to ensure patient safety.

The learning scheme is based on: the surgeon in training, the tutor, the concept of security, efficiency, error and risk knowledge. This is based on the awareness that surgical expertise is given by: self-efficacy, skills, communication, and leadership.

The aim of this article is to bring together the feedback of the definitions of the various components of the learning scheme and to evaluate important legislation.

2 Material and methods

In March 2016 we performed a literature review using these keywords: tutor, surgery, learning curve, learning legal aspects, legal implication in surgery. We interrogated

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three electronic databases (PubMed, Cochrane, World Wide Science) and consulted a standard Italian language dictionary (Devoto-Oli) to identify components.

At first an author (AF) performed the research of the selected studies independently; in a second step, a cross-search was made and the most significant works with medical and legal implications were chosen.

We considered the national regulations of Italian specialty schools of Surgery.

After consultation of the web platform “Federspecializzandi” we examined the internet pages of the Italian Department of Education, Health and Medical Order.

3 Results

The results consisted of 16 works pertaining to the theme of the importance of mentors in medicine, and secondly concerning the legal responsibility of the medical supervisor role. Discussions on civil liability and crimes committed by surgical tutors in surgery were not found.

Four pages on the website of the Medical Association were evaluated pertaining to the regulation of doctor’s behaviour in possible situations that may arise.

On the “Federspecializzandi” Italian site the basic regulation of School of Specialty was found and studied, where limitations of the student were described.

The legal implications of various medical attitudes was searched using the Ministry pages.

The definitions found in the dictionary of the Italian language were as follows:

Tutor: Tutor is an expert person that gives additional or remedial instruction and that is responsible for the supervision of an undergraduate.

Security: The condition of being safe and free from danger, risk, or injury.

Definition of error: An error is defined as the failure of a planned action or the use of the wrong or inappropriate plan to reach an objective [2].

Acceptable risk: Acceptable risk may be defined as an acceptable error related to an occurrence that can be managed with a technique of proven efficacy [2].

Self-efficacy: Self-efficacy is defined as the intrinsic conviction to be able to reach a determined performance level [3] and it is the capability to execute a procedure, learn it, repeat it, and be able to apply it to other situations.

These concepts have been used as a basis for discussing the interplay between necessity and teaching responsibilities.

4 Discussion

The development of new technologies in surgery has thrown a new challenge to surgeons: these experts have to keep up with the pace of development, whilst non-experts have to be committed in acquiring new specialist skills.

Because of the complexity of the surgery, with open and laparoscopic approach [5-29], and because of the advancement in medical and surgical setting [26-36], the tutor is essential in the growth of a good surgical operator.

Frequent disputes that take place between patients and surgeons is a very important aspect; of utmost importance is the knowledge of the risks and implications that can occur during a surgical procedure. [37-49]

In 1999 the Institute of Medicine [2] declared that between 48,000 to 98,000 Americans (USA) died from medical errors, and almost 11% of hospital patients suffered an adverse event associated with the care received.

According to James et al., teaching is a fundamental component of the instruction program throughout the medical-surgical field [50].

The tutor has the responsibility to take action to avoid clinical incidents in near-miss events. The latter is a situation where, due to the use of “barrier mechanisms”, the event that could have happened did not happen.

The international literature reports an adverse event rate of around 10% [51] (30.1% in surgery) [52] and among these, preventable events were 43.5% [53].

In agreement with Kenton [54], we believe that the operating room is the most appropriate setting for teaching the surgical technique with the tricks of the trade. Just for reason the job of the tutor is particularly difficult because during surgery on the patient, the tutor has legal responsibility for the safety of the patient.

The two problems that seem to arise are therefore: the small number of hours spent in the operating room by a young surgeon, and evaluation mode and tutors’ reward.

Another aspect that seems to be important is the relationship between tutor and student: the work by both sides is facilitated from a rapport of esteem and mutual trust.

We will try to discuss all these issues in the light of the definitions that we have researched previously.

Initially at the School of Surgery in Italy, the tutor had an unclear role from a legal point of view. In fact, he is the person who must be able to perform a specific procedure with technical expertise and who must know how to stop the student if the student is about to perform a dangerous maneuvers.

According to the EC (Europe Community) legislation “within each state acceding to the EC legislation has to be

implemented where the participation in charitable activities by the trainee doctor can only be done in the presence, under the control of and behind the responsibility of the physician structured that as tutors “ [55].

In Italy, the whole issue revolves around the text reproduced in paragraph 3 of art. 38, d. lgs. n. 368 of 1999 which regulates the responsibilities and the role of doctors [56].

That provision states that training of specialists implies the gradual assumption of care tasks and the execution of actions bound by the directives received by the guardian, in agreement with the health department and managers in charge of the healthcare companies facilities where the training takes place. In no case should the activity of the doctor in training replace that of permanent staff [57].

By applying these rules to the surgical settings, the question becomes more complicated. The activity in the operating room is trying to tend to the error zero, but achieving this result is not possible. Precisely for this reason no procedure, performed by an expert or a surgeon in training is free from risks. It can be said that the tutor takes on a dual responsibility: the responsibility to ensure a tolerable risk of error, and the responsibility to supervise the student, who is at higher risk of performing incorrect maneuvers.

In particular, the n° 328 article states that the offences may be charged to the doctor for events that occurred in the “act of his office”, and where the doctor should have intervened. The student is not considered responsible for a particular specialistic problem (technical problem, specialist therapy, etc.) because the student will lack the specialist knowledge required, therefore a student who refuses to intervene or makes a mistake during surgery (excluding the act of wrongful death) does not commit any violation of the Regulation. The tutor in this case would be the only one responsible for the real event.

Even in medicine the problem is deeply felt: there are many disputes over who has the responsibility of mistakes made during surgery.

Furthermore the problem is not limited to the surgery specialty. Field training in fact continues even after the achievement of the specialties in surgery, especially in a country like Italy, where the ability to work for the trainee is limited. This limitation depends on several factors including the increase of numbers of medical-legal disputes, the timing, the commitment it requires mentoring and a lack of mentors [58].

In Europe the figure of the tutor, although it is accepted, is not regulated and the teacher is not paid in economic and career as appropriate with respect to the

assumed responsibility. This raises the problem of “how to teach”: this substantially depends only on the intrinsic characteristics of the tutor, arising mostly from his own abilities and his own training as a surgeon (self-efficacy) [59].

According to Graham and colleagues we believe that the tutor’s assessment is crucial. There seems to be one direct assessment tool and almost all the assessments are made by students who have been associated with the tutor. This does not seem to be enough to give a complete and correct judgment because of the influence of personal sympathy [60].

The evaluation should include, in addition to evaluating the technical capacity, the capacity to stimulate, to create a team environment, and to encourage improvement. The resident in surgery needs a tutor who is technically competent, organised, and experienced as a leader in education.

5 Conclusion

The problem of the tutor is still an open problem in medicine. In surgery, the problem is greater because of the increasing medico-legal implications that might occur after surgical procedures. It would be necessary to define a role of the tutor in a regular protocol with proper assessment of his performance. According to the result obtained, competent tutors should be rewarded in terms of career progression, and incompetent tutors should be downgraded. This regulation would aim to avoid incurring risks during tutoring, as well as protecting the surgical career of all operators. We believe that the formation of competent and safe surgeon needs the instruction of a competent and safe tutor.

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