

Quality Process Of The Surgical Instrumentation In The Reduction Of Error In The Surgical Field.

Piedad Barón Sepúlveda^{1*}, Roca Perez Angelica¹, Frank Barón Orozco¹, Laubren Campo Sánchez¹, Lina Fernanda Ebratt Polo¹, Sebastián David Fajardo Gómez¹, Vanessa Gutiérrez Bovea¹, Vanessa Ladrón de Guevara Méndez¹, Valentina Orellano Guzmán¹, Danna Katiana Reyes Olmos¹, Daniela Carolina Vasco Rodríguez¹, José Daniel Vergara Arroyo¹, Díaz-Pérez Anderson^{1,2}

Faculty of Health Sciences. Surgical instrumentation program. Simón Bolívar University, Barranquilla, Atlántico¹

Department of Social and Human Sciences, Simón Bolívar University, Barranquilla, Colombia²

Corresponding Author: 1*



Keywords:

Damages and perjuries,
Lawsuit, Negligence, Errors,
Surgical Awareness, Adverse
Events, Professional Ethics,
Etiology.

ABSTRACT

It was observed that in Colombia there is little research on the individual responsibility of the surgical instrumentator. However, the studies identified in the country show that in the professional practice their disciplinary participation can generate iatrogeny. The most frequent and individual corresponds to insufficient inputs for the needs of the patient, which may be associated with the social security system. Other iatrogenies related to the surgical instrumentator are burns, incomplete counts of the material, improper handling of specimens, incorrect completion of records and lack of verification of the state of the technological elements. These aspects were considered among the fundamental results, since they are a starting point to evaluate iatrogenies in health care institutions related to the function of surgical instrumentation. Identify the impact that the professional in surgical instrumentation has on the reduction of error in the surgical field. Within the research carried out, it was possible to identify that there are different factors that influence the participatory responsibility of a surgical instrumentator and the importance it has in the surgical field and the relationship it has with the entire multidisciplinary team.



This work is licensed under a Creative Commons Attribution Non-Commercial 4.0 International License.

1. INTRODUCTION

Quality care, according to WHO, must be delivered throughout the health system as a measure for quality, in addition to an enabling policy environment, to provide quality services, good governance is needed; qualified and competent health personnel who are supported and motivated; financing mechanisms that enable and promote quality care; information systems that continuously carry out surveillance tasks and learn to promote better care; medicines, devices and technologies that are available, wicked and properly regulated; and accessible and well-equipped health facilities. Taking into account the above, it is necessary to involve human talent based on ethical principles that allow the work to be carried out in accordance with the patient's need, responding with relevance, responsibility, veracity, among other principles established by Law 1164 of 2007

on the performance and ethics of human talent in health. The surgical instrumentator as a health professional is no stranger to these principles, his actions must be focused on the surveillance and control of patient safety, preventing contamination of the surgical field through good surgical and aseptic practices, seeking an integral and team work [1].

In general, there is an approach that seeks to take care of and ensure the protocols that must be complied with, for example: the aseptic rules that avoid a cross-infection, and other needs in the surgical environment, which make us professionals with skill and with a lot of scientific solidity. While it is true that the surgical instrumentator has several occupational profiles in which it has stood out, it is in the care area in which its action predominates, taking into account that the hospital environment is one of the most difficult, so it is the operating room area where patients arrive with more affective needs, added to the physics of their state [2].

In health care there is a risk of harm to the patient, even if the procedure is allowed and beneficial. Therefore, it is pertinent to clarify that the mere fact that a patient visits a health entity can mean a possible damage caused by the environment and consequently violate its emotional character. The current approach seeks patient safety and in the operating room area is stricter because of the complexity of surgical procedures [3].

Errors in patient safety are not the product of perverse or negligent people, but of bad processes and systems; professional practice and the consequences of possible mistakes are now subject to public scrutiny as never before; strengthening the capacity to act and avoid, as far as possible, what should not happen and protecting patients from extreme and unnecessary risks is the goal of all the work being done in patient safety worldwide [4].

The management of the surgical patient requires the participation of a multidisciplinary team and often the error is not the result of individual medical actions but the predictable consequence of a series of actions and factors of teamwork, where nurses, technicians, students, employees participate [5].

2. Methodology

A descriptive study was conducted under a quantitative research and the framework of an empirical – analytical paradigm. The population of this project are the professionals in Surgical Instrumentation, according to the professional competences in the different fields of action, so that a resolute, integral and pertinent service presentation is guaranteed in accordance with each institutional mission. Several sources were used for the location of the bibliographic documents. We conducted a literature search in August 2021, using the descriptors: damage and perjury, lawsuit, negligence, errors, surgical awareness, adverse events, professional ethics and etiology. An internet search was also carried out in the search engine "Google scholar" with the same terms. Those documents that inform about the aspects and capacities that must be developed in the surgical field and the good management of knowledge were selected.

3. Importance of the evaluation to the multidisciplinary team

The ability to accurately and validly assess the skills of human teams working in the operating room is crucial for the improvement and prerequisite for integrating teamwork within workplace-based training and assessments. Surgical team evaluation is a means of structuring feedback for members [including staff in training], by identifying and prioritizing training needs and determining the effectiveness of interventions. To date, a large part of the research has focused on identifying the fundamental technical skills required for the equipment to function safely and effectively in the perioperative situation, and on developing assessment instruments specifically designed to reflect the quality of those skills [6].

The evaluation of work performance in health institutions is a management element that allows the employee's performance to be integrated within the framework of the strategic platform, in order to account for the effective fulfillment of the agreed goals. If this is applied with objectivity and systematicity, it constitutes a strength of the organization, being a cross-cutting tool to all processes that provides information based on evidence that demonstrates the employee's competencies and their results; in addition, it guides decision-making in relation to human talent and contributes to achieving significant advances in the organization, such as the continuous improvement of quality in the provision of health services. Evaluating job performance is essential for any organization to know the results of the work of each of its employees [7].

3.1 Process and care responsibility of the surgical instrumentator

The surgical instrumentation as a professional responsible for adjuvant processes of the treatment and recovery of the surgical patient corresponds to perform with the highest scientific and ethical levels. Be aware of being professional with social duties and personal requirements to achieve excellence. In this sense, the ethical training of the professional in surgical instrumentation goes beyond the decision to apply a surgical protocol, or maintain the surgical instruments suitable for the treatment of the patient, such training must permeate all interaction, in order to allow the professional to integrate values, competencies and concepts in situations in which the action is not correct and could threaten the integrity of the other, in those moments is where professional ethics seeks that the surgical instrumentator is responsible and gives reason for the action or omission of each act [8].

The surgical instrumentation has become professionalized in its knowledge taking into account scientific advances and assumes every day the commitment it has in the care of surgical patients, perfecting its techniques and knowledge to provide in the end a better care to the patient. In general, there is an approach that seeks to take care of and ensure the protocols that must be complied with, for example: aseptic rules that avoid cross-infection⁶ and other needs in the surgical environment, which make them professionals with skill and with great scientific solidity [9].

3.2 Strategies for quality surgical care

One of the main keys to excellent surgical care is surgical awareness which is understood as an act to minimize negligence that this in turn generates an error, either by execution or by the wrong plan by the surgical team. Such is the case, of surgical verification, this in turn refers to the moral principles that govern them, in any case, for the surgical team is a major challenge in health systems, which is based on improving the quality of care. The only effective way to achieve this is by establishing quality strategies safely and responsibly led, which are mentioned below:

- Creating the culture of safety [checklist, checklist]
- Cultivating the culture of humility [communication]
- Creating a culture of teamwork
- Develop the culture of open and direct communication. In this section the fundamental thing is to lose the fear / fear of the recognition of the error.
- Strategies to reduce errors in the surgical act.
- Create the culture of voluntary error reporting

Taking into account the leadership, communication, lack of surgical awareness and decision-making in the surgical team, it allows to obtain good performance results that lead to quality in health care in the patient. Therefore, teamwork is an integral component of a culture of good communication in the operating room, patient safety [10].

For the analytical construction, the following terms were focused:

Health team: "The health team was defined by the WHO, in 1973, as a non-hierarchical association of people, with different professional disciplines, but with a common objective that is to provide in any field to patients and families the most comprehensive health care possible" [11].

Surgical instrumentator: "It is defined as the health professional trained to integrate the team that provides comprehensive care to the surgical patient with ethical principles and attitudes that guide their action as a social being" [12].

Medical responsibility: "It is the obligation that doctors have to repair and satisfy the consequences of voluntary and involuntary acts, omissions and errors even, within certain limits, committed in the exercise of their profession" [13].

Medical error: "It is any failure that occurred during health care that has caused some type of harm to the patient, and whose origin can be related to the organization and implementation of the service, through multiple and complex mechanisms" [14].

Safe practices: These are the types of processes or structure whose application reduces the probability of adverse events associated with health care, which are based on the best available scientific evidence and which seek to prevent, minimize or eliminate the risk associated with clinical practice [15].

Asepsis: "Preservation of sterility at all times of healing material or consumer goods and medical devices, for the indicated use" [16].

Antisepsis: "Application of an antiseptic on skin and/or mucous membranes to decrease bacterial concentration, just before the invasive or surgical procedure, the amplitude and extent of antisepsis depends on the anatomical region" [16].

4. Conclusion

Within the research carried out, it was possible to identify that there are different factors that influence the participatory responsibility of a surgical instrumentator and the importance it has in the surgical field and the relationship it has with the entire multidisciplinary team.

5. References

[1] WHO. Quality health services. WHO. 2020. p. 1–5.

[2] Carrillo González S, Lorduy-Gómez J, Muñoz-Baldiris R. Professional of Surgical Instrumentation in front of the application of the Bioethical Principles and Values according to the Law of Human Talent in Health in Colombia. *Pers and Bioethics*. 2018;22[1]:134–47.

[3] Herny T, Nicole C. Instrumentator view quirúrgico_ Iatrogeny, frequent events and responsibility in the operating room.pdf.

[4] Tobergte DR, Curtis S. Patient Safety: Generals and Basic Concepts. *J Chem Inf Model*. 2013;53[9]:1689–99.

[5]. Tania D, Agulla A, Ángel J, Quesada M. Malpractice medical in the operating room *Medical malpractice*

in the operating room. 2015;54 [2]:187–94.

[6] Hull L, Sevdalis N. Teamwork and safety in surgery. *Colomb J Anesthesiol* [Internet]. 2015;43[1]:3–6. Available from: <http://dx.doi.org/10.1016/j.rcae.2014.10.007>

[7] Han ES, Goleman, Daniel; Boyatzis, Richard; McKee A. Criteria for Evaluating Job Performance in Nursing Professionals. *J Chem Inf Model*. 2019;53 [9]:1689–99.

[8] Instrumentation S. Ethics and bioethics in Surgical Instrumentation. [2020]:277–302.

[9] Galán Camargo V. Legal aspects of surgical instrumentation in Colombia. *Dixi*. 2020;22 [2]:1–14.

[10] Díaz A, Lys P, Jimenez S, Alejandra M, Guerrero B, Carolina R, et al. Negligence as the main medical error on the part of the surgical team: Surgical Awareness and Praxis. *J Med Case Reports Rev*. 2019;6:268–76.

[11] 8th National Medical Convention [Internet]. THE HEALTH TEAM AT THE FIRST LEVEL OF CARE. Available from: http://www.convencionmedica.org.uy/8cmn/comisiones/funcionales_armefycu.html

[12] Moreno J. Instrumentación_Quirúrgica_Octubre2014. 2010; Available from: https://www.minsalud.gov.co/sites/rid/Lists/BibliotecaDigital/RIDE/VS/TH/Instrumentación_Quirúrgica_Octubre2014.pdf

[13] Luis J, Mariñelarena M. Medical professional responsibility. *Cir Gen*. 2011;33[S2]:160–3.

[14] Alvarado-guevara AT, Flores-sandí G. Medical errors Medical Errors. *Acta Med Costarric*. 2009;51[1]:07–9.

[15] Safe H-PQ. HEP-GC-PS-011 SAFE SURGICAL PRACTICES Dr. Guillermo San/Ilán Pilca 14/05/2019. 2019;

[16] W H. Antisepsis of the operative site Asepsis and antisepsis Antisepsis of the operative site Asepsis and antisepsis. 2020; [1]. Available from: <http://cirugia.facmed.unam.mx/wp-content/uploads/2020/10/Asepsia-y-Antisepsia.pdf>