

# Phenomena Causing The Cancellation Of Surgeries

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## ABSTRACT

To know the phenomena that influence the cancellation of surgeries scheduled in an IPS of the city of Barranquilla, through the collection and analysis of the information provided by the institution between years 2019-2021, in order to specify the impact of this indicator on the IPS and provide recommendations for improvement. To carry out the search for the bibliographic documents, an exhaustive investigation was carried out since August 2021 in several documentary sources such as the reservoir of the Simón Bolívar University, unisimón journals, Spopus, among other research sites offered by the university library system, using descriptors such as: cancellation of surgeries, causes of the cancellation of surgeries, operating rooms, failures, rescheduled patients, consequences of cancellation; so that in this way it would be a precise and concrete search. In addition to this, the Internet search engine "Google Academico" was also used with the same descriptors mentioned above, selecting only those documents with formal and truthful aspects. The conclusion of our research is to analyze the causes of cancellation of surgeries since it is a public health problem due to the impact it causes both economically to institutions and psychology to patients.

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## 1. INTRODUCTION

The cancellation of scheduled surgery is an indicator of quality that can be related to inefficiency in strategic planning processes for patient safety and is a frequent phenomenon in health institutions [1].

This problem is framed in the types of unsafe health care that can cause adverse events, specifically type 14 that includes what is related to resource management or organizational management, constituting an element that affects the quality of care of users [2].

The cancellation of surgery can not be seen as a routine of the care centers and the multidisciplinary team can

not be indifferent to this occurrence in the hospital centers because a failure to perform a surgical procedure can increase the time of hospital stay and can generate risks of infection framed in a type of unsafe care that can become an accident or an adverse event (...) These types of events, for reasons specific to the Institution, affect safe care and should therefore be avoided [3].

Similarly, the suspension of surgeries is a significant event in the budget and psychological impact of the patient, which requires the attention of the health team and administrators. The cancellation of surgeries can be seen as a routine typical of the processes in healthcare centers and, therefore, [a1] [MG2] could be considered as an indifferent phenomenon for the multidisciplinary team of hospital centers; however, these institutions should be interested in the consequences that may affect the patient, the family, the institution and the State itself, due to the increase in hospital costs due to prolonged hospital stays [4].

This research was framed in the cancellation of surgical procedures which is justified by the empirical analytical paradigm, the research provides tools for the improvement of surgical procedures within health institutions, this research provides data from which it is evident what type or what reasons are those that provide cancellations in surgical procedures, it is based on different theorists that provide solutions and can serve the different institutions in turn to the students who investigate this topic [5].

The administrative aspects, which were considered as the main causes of cancellation of surgeries are indicative of the need to improve the organization and planning in this institution [6].

This type of problem has become an object of study for different institutions providing health services -IPS-. This situation is due to the fact that national and international studies have shown the background of the problem, which involves economic and social aspects related to the non-fulfillment in the quality of the promises of services that support the strategic platforms of the institutions [7].

The cancellation of surgeries is a problem associated with all institutions providing health services of high level of complexity, generated by multiple causes: those related to the patient, those of administrative issues with the institution and the entities responsible for payment, etc. [8].

According to the World Health Organization [WHO], during several periods surgical care has been an important element in health care, but public health problems have changed significantly, which has had an impact on an increase in surgical interventions [9].

This situation is common in any hospital center, which leads to inconveniences for the patient, their relatives, loss of surgical time, longer hospital stay and significant increase in expenses. That is why the suspension of a scheduled surgery affects the hospital center and conditions budgetary, labor and legal medical conflicts in the institution. This situation is common in any hospital center, which leads to inconveniences for the patient, their relatives, loss of surgical time, longer hospital stay and significant increase in expenses. That is why the suspension of a scheduled surgery affects the hospital center and conditions budgetary, labor and legal medical conflicts in the institution (...) Surgical movement is considered a variable that interferes with the quality and productivity indicators of hospital institutions. It constitutes parameters for evaluating productivity in the operating room, that is, occupancy rate, time of permanence, anesthetic recovery, time interval between surgeries, rate of delay and suspension of surgery [10].

Each surgical procedure requires planning that involves attention time, consumption of material, human and economic resources. However, surgical suspensions [CFS] are frequent situations in any hospital center,

causing not only inconveniences for the patient and his environment, but also labor and medico-legal conflicts to the institution. In addition, each CFS carries an economic cost, in a situation in which, more and more frequently, the surgeon has to adapt to the intrinsic or extrinsic problems that, in a framework of cost efficiency, a hospital faces to carry out its activities. Therefore, the CFS rate is considered an indicator of quality of care [11].

This situation is due to the fact that national and international studies have shown the background of the problem, which involves economic and social aspects related to the non-compliance in the quality of the promises of services that support the strategic platforms of the institutions [12].

## **2. Methodology**

To carry out the search for bibliographic documents, an exhaustive investigation was carried out since August 2021 in several documentary sources such as the reservoir of the Simón Bolívar University, unisimón journals, Spopus, among other research sites offered by the university library system, using descriptors such as: cancellation of surgeries, causes of the cancellation of surgeries, operating rooms, failures, rescheduled patients, consequences of cancellation; so that in this way it would be a precise and concrete search. In addition to this, the internet search engine "Google Academic" was also used with the same descriptors mentioned above, selecting only those documents with formal and truthful aspects.

## **3. The Role of the Administrative Process in Decision Making**

When considering planning, organization, direction and control individually, these make up only administrative functions that limit decision-making, while if they are considered in an integral way a balanced basis is formed for the administrative process and this will allow the decision maker to be assertive, The administrative process is the means to integrate different activities to implement the business / institutional strategy and achieve the desired objectives. Each administrative level plays an important role in implementing the strategy and, at all levels, the process of planning, organizing, directing and controlling the administrative process can be applied to the health area and all the elements that constitute it, including the operating room. Both managerial and operational staff are part of the administrative process that aims at effectiveness, quality of care and patient safety [13].

### ***3.1 Administration of the Operations Room.***

It is essential to have clear goals for managing an operating room: to improve productivity and efficiency while maintaining a high quality of care at all times. Improving efficiency implies a shorter duration of cases, rational scheduling of the different types of surgery and minimizing non-surgical time. To achieve this requires a motivated work team at each step of the care process it can be highlighted that the most important variable that affects the time a patient spends inside the operating room is the speed of the surgeon and is modified by many variables including the presence or participation of a resident doctor [can prolong the time up to 70%] , so it is recommended to previously train the resident with the help of a simulator and always provide an experienced assistant when they begin to operate more independently [14].

### ***3.2 Strategic and Operational Decisions in the Operations Room.***

Despite the growing literature on operating room management, there are some areas that have not been understood or at least evaluated. One of these points is the strategic decision taking into account the scope of service, volume and capacity of a higher level of organization, Virtually no study combines the strategic orientation of the operating room and operational practices, such as the programming method, process models and personnel management. It is important to note that each decision made has an influence on the next [15]

### ***3.3 Operations Room Personnel Management.***

The operating room is one of the main sources of income and one of the most expensive areas of a hospital, which is why it is essential to improve the management of time, material resources and human resources [16].

The function of the operations room is closely linked to the administration of human resources and the activities carried out by each of those who make it up, it should be noted that the planning to have the appropriate personnel in the operations room depends on the act of balancing the competitive priorities, among which are:

- Provide quality care to patients [16].
- Generation of income and care of material and financial resources [16].
- Provide a healthy work environment for staff [16].
- Operate within or below budget [16].
- Recruit staff according to the complexity of the organization [16].

Instruments can be created to calculate the personnel required in the operating room area taking into account the number of hours worked per day/week/year, the number of staff per shift, food times and between surgeries, adapting to the needs of each hospital unit [16].

### ***3.4 Effective Use of the Operations Room.***

Successful hospital administration requires the construction of cost-effective and quality surgical programming. The operating room represents one of the most important admissions of a hospital, but it is also an expensive area to maintain and on which the flow of patients in the hospital depends in large part [17]. To achieve an effective utilization of the operating room, changes are required in all phases of the administrative process, A change can only be implemented if those involved are fully committed and willing to make the changes that are required. The communication and collaboration of a multidisciplinary team improves job satisfaction and promotes the use of the operating room by reducing patient change times by controlling preventable variables [17].

## **4. Economic and financial aspect in the operating room.**

High frequency of cancellations, due to organizational problems in health institutions, including lack of beds, programming errors, communication errors and other administrative problems. Although several authors recognize that the impact of the cancellation of surgery raises the operative and financial costs of the Surgical Center Unit and reduces the efficiency of the service, few studies have analyzed the issue from the economic-financial aspect, especially in terms of direct costs [human resources, medication and material] and opportunity cost [18].

### ***4.1 Failures of administrative planning of the surgery area.***

Surgical cancellation is an indicator in the process of evaluating the quality of care provided by hospital service, pointing out a failure in the administrative planning of the Unit of the Surgical Center, and can be considered avoidable, most of the time, if worked by those responsible for the unit, Therefore, it is an event that must be evaluated, through the unfavorable repercussions that involve not only the patient, but the family, the institution and the health team itself [19].

## **5. Surgical Programming Errors**

Patient safety is one of the main goals of all hospitals, however, errors such as wrong surgical site, wrong body side and wrong procedure or patient continue to occur alarmingly [20].

These errors don't just happen when the patient is in the operating room. Lack of communication between the surgeon, who requests the patient's scheduling, and the hospital's surgical scheduling office results in incomplete or error-making scheduling [20].

Errors in programming can result in medical errors as well, on the other hand, the extra time for the correction of these errors can be costly and lead to delays in the rest of the scheduled surgeries. In the event that the material has already been opened for the erroneously scheduled surgery, the cost of material waste, the time it will take to request the correct material and the re-sterilization of the material that is necessary are also increased [20].

There are 5 potential times when programming errors can be detected:

1. When the patient presents for hospital admission [20].
  2. When the patient is hospitalized and the identification is placed around the wrist [20].
  3. When the patient is initially evaluated by the nursing staff [20].
  4. When the patient is in the waiting area or pre-anesthesia [20].
- When the patient is in the operating room [20].

### ***5.1 Causes of Cancellation of Scheduled Surgeries.***

The rate of suspension of surgery is a parameter used to evaluate the efficiency and quality of care provided by the surgical area. All reasons for the suspension of surgery must be taken into account, including those dependent on the patient, the surgeon, the anesthesiologist, nursing, providers and administrative causes [21].

Cancellations can be divided into two large groups:

- Preventable: lack of surgical time, unavailable recovery bed, programming error, equipment or transport problem, communication failure, ill-prepared patient, lack of available surgeon [21].
- Non-preventable: cancellation by the patient, change in the patient's clinical status, priority emergency [21].

The most frequent causes of surgery cancellation are:

- Lack of surgical time [21].
- Lack of inpatient bed [21].
- Cancellation by the patient [21].
- Change in the patient's clinical status [21].
- Emergency surgery [21].
- Poorly prepared patient [21].
- Programming failed [21].
- Administrative causes [21].
- Lack of available surgeon [21].
- Equipment/transportation/organ [21].
- Communication failure [21].

### ***5.2 Delayed surgeries.***

One of the most frequently asked questions asked by both doctors and patients is: Why doesn't my surgery start on time? [22]. The answer to this question is undoubtedly related to some of the many complaints that can be heard from the medical staff in the operating room area, such as: the time between one surgery and

another is too long, the patient was not brought in time to the operating room [especially the first patient of the day], nurses are never ready in time, bumped into someone, or were provided with incorrect surgical scheduling [22]. The optimization of medical care is an issue that is becoming increasingly important and the delays that occur in the operating room represent a major problem of which their causes are poorly documented and communicated [22].

### **6. Way to reduce the cancellation fee**

Cancellation of planned surgeries causes prolonged waiting times, harm to patients and is a waste of scarce resources, To reduce high cancellation rates in a Norwegian general hospital, the pathway for elective surgery was redesigned, Changes included earlier clinical evaluation of patients, better planning and documentation systems, and greater patient participation in the scheduling of surgeries. We collect the number of planned operations, operations performed and cancellations per month of the hospital's patient administrative system [23]. We then used Student's t-test to analyse differences in cancellation rates [CR] before and after interventions and a U-graph to analyse whether improvements were sustained. We also conducted semi-structured interviews with hospital employees to explore changes in the surgical pathway and the factors that facilitated these changes [23].

### **7. Cancellation costs**

The cancellation of the surgical procedure increases the operational and financial costs, causing losses to the institution, Financially the loss is caused by the deficient process and can be evidenced by the reservation of the operating room and loss of opportunity to schedule another patient, underused operating rooms, longer hospitalizations [and risk of hospital infection] and, consequently, increase in the price bed/day and decrease in the availability of beds [24]. Other sources of losses are waste from sterilized materials, rework of personnel involved in the preparation of the operating room and sterilization [24].

### **8. Implications of a cancelled surgery**

Currently health demands increase and human resources decrease, which, in the field of surgery, becomes increasingly important, The new economy of health care tends to favor the increase in productivity, the improvement in quality and the reduction in costs [25]. It is estimated that the suspension of an elective surgery costs a hospital 198 00 dollars per patient, in 1996 the cost per minute of surgical time calculated was 8.13 dollars, this cost changes as the volume in operating rooms increases, since as the number of surgeries increases, the operating room is used more and costs decrease, Operating rooms are one of the most expensive departments of hospitals due to the problems of planning and scheduling operations, Financial losses caused by surgical cancellation are evidenced in the reservation of the operating room and loss of opportunity to schedule another patient, underutilized operating rooms, longer hospitalizations [and risk of hospital infection] and, consequently, increase in bed/day, price and availability of reduced beds [25].

### **9. Health Care Insurance Marketplaces**

Government mandates often reduce choice and competition in insurance markets and increase overall premiums. In the individual and small group markets, many consumers face limited coverage options that cover services they don't want or need and that raise premiums, while others have been completely priced out of the market [26].

Regulations limiting coverage options need to be changed so that states have more flexibility to develop policies that take into account the diversity of consumer preferences This report recommends reducing government mandates, removing barriers to competition, and allowing consumers the maximum opportunity to purchase safe health services that meet their needs [26].

## 10. Consecuencias que traen pacientes

Cancellations bring several consequences to patients, Complications in their health conditions and changes in their social agenda are just two of them, In the study by Leslie et al.<sup>41</sup>, about 80% of the patients interviewed who had surgery postponed declared to believe that there was no deterioration of their state of health. Interviews show that communication between health professionals and family members is often inadequate, which makes the role of nurses as mediators quite important [27].

Patients want to participate in the scheduling process of their surgeries [which can result in lower cancellation rates], as well as receive individualized treatment and have a good relationship with the professional with whom they will be in contact at the institution [27]. Some professionals also reported the need for a well-defined policy to deal with specific cases such as the detection of medication used by the patient before surgery [28]

### 10.1 Why is it frequent to cancel scheduled surgeries?

The cancellation of scheduled surgical procedures is frequent in hospital institutions generating inconveniences for the patient, his family, the medical team and the institution itself, ultimately having an impact on the health system, 1-4 The cancellation of elective surgeries is related to administrative and care aspects among which the failures in the authorization of procedures stand out.

surgical by health care providers, poorly elaborated preoperative assessment and decompensation of each patient's own comorbidities [29]

## 11. Quality in health and patient safety services

Quality in health is an attribute of the care offered by institutions, which can be obtained to varying degrees and is defined as the achievement of the greatest possible benefits from medical care, Quality in medicine promotes, facilitates and guarantees the highest levels of health and well-being to the population so the concept of quality is inseparable from health itself and, therefore, the nursing professional, as a member of the health teams, must develop a culture of quality and join the continuous improvement programs with a proactive attitude[30]. The therapeutic processes of current medicine and its complexity demand a systematization and a continuous updating of knowledge based on the best available scientific evidence, which will help the various disciplines to provide services of higher quality and safety for patients [30]

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