SUSPENSION OF ELECTIVE SURGERIES IN A PUBLIC HOSPITAL IN PERNAMBUCO: CRITICAL VIEW OF THE PATIENT
SUSPENSÃO DE CIRURGIAS ELETIVAS EM HOSPITAL PÚBLICO DE PERNAMBUCO: VISÃO CRÍTICA DO PACIENTE
SUSPENSIÓN DE CIRUGÍAS ELECTIVAS EN UN HOSPITAL PÚBLICO DE PERNAMBUCO: VISIÓN CRÍTICA DEL PACIENTE

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ABSTRACT

Objective: to assess patients' perception of surgery cancellation and estimate the frequency of surgical suspension in the last three years. Method: descriptive and exploratory study with a quantitative and qualitative approach, in a public hospital in Recife-PE. Data were collected between May and September 2019. In the first stage, records of surgeries were collected, and in the second, a semi-structured interview with patients. Results: from January 2016 to December 2018, 18432 procedures were scheduled, with 5707 (31%) suspended. Among specialties, neurology with 41% (2018), and urology with 38% (2016), had higher percentages of cancellation. The most evident reason was the extension of the previous surgery, reaching 46% (2016-2017), and 41% (2018), followed by reasons related to the patient (12% to 15%). After analysis, four categories emerged: Communication of the surgical suspension by the professional to the patient; The patient's lack of knowledge about the reason for the suspension; Feelings of the patient regarding the surgical suspension, and Improvement in the planning of the surgical map. Conclusion: this research made it possible to analyze the number and reasons involved in the suspension of surgeries over the last three years, as well as patients' reports regarding surgical cancellation.

Descriptors: Perioperative nursing; Elective surgical procedures; Treatment suspension.

RESUMO

Objetivo: buscou-se avaliar a percepção dos pacientes sobre o cancelamento de cirurgia e estimar a frequência de suspensão cirúrgica nos últimos três anos. Método: trata-se de estudo descritivo e exploratório de abordagem quantitativa e qualitativa, em um hospital público do Recife-PE. Reuniram-se os dados entre maio e setembro de 2019. Na primeira etapa, coletou-se o registro das cirurgias e, na segunda, uma entrevista semiestruturada com os pacientes. Resultados: verificou-se que, de janeiro de 2016 a dezembro de 2018, programaram-se 18432 procedimentos, com 5707 (31%) suspensos. Entre as especialidades, a neurologia, com 41% (2018), e a urologia, com 38%
(2016), presentaron mayores porcentajes de cancelamiento. Obteve-se como motivo más evidenciado el prolongamiento de la cirugía anterior, alcanzando 46% (2016-2017) e 41% (2018), seguido por motivos relacionados al paciente (12% a 15%). Después de la análise, surgirán cuatro categorías: Comunicación de la suspensión quirúrgica por parte del profesional al paciente; Falta de conocimiento del paciente sobre el motivo de la suspensión; Sentimientos del paciente en relación con la suspensión quirúrgica; y Mejora en la planificación del mapa quirúrgico. **Conclusión:** constató-se que esta pesquisa possibilitou analisar os últimos tres años de la cantidad e motivos envolvidos na suspensão de cirurgias, además de los relatos de los pacientes en relación con el cancelamiento quirúrgico. **Describieron:** Enfermagem Perioperatoria; Procedimientos Cirúrgicos Eletivos; Suspensão de Tratamiento.

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**RESUMEN**

**Objetivo:** evaluar la percepción de los pacientes sobre la cancelación de la cirugía y estimar la frecuencia de suspensión quirúrgica en los últimos tres años. **Método:** estudio descriptivo y exploratorio con abordaje cuantitativo y cualitativo, en un hospital público de Recife-PE. Los datos se recolectaron entre mayo y septiembre de 2019. En la primera etapa se recolectaron informes de cirugías y en la segunda una entrevista semiestructurada a los pacientes. **Resultados:** de enero de 2016 a diciembre de 2018, se programaron 18432 procedimientos, con 5707 (31%) suspendidos. Entre las especialidades, neurología con 41% (2018) y urología con 38% (2016), presentaron mayores porcentajes de cancelación. El motivo más evidente fue la extensión de la cirugía previa, alcanzando el 46% (2016-2017) y el 41% (2018), seguido de los motivos relacionados con el paciente (12% a 15%). Tras el análisis, surgieron cuatro categorías: Comunicación de la suspensión quirúrgica por parte del profesional al paciente; La falta de conocimiento del paciente sobre el motivo de la suspensión; Sentimientos del paciente respecto a la suspensión quirúrgica, y Mejora en la planificación del mapa quirúrgico. **Conclusion:** esta investigación permitió analizar el número y las razones involucradas en la suspensión de cirugías en los últimos tres años, así como los informes de los pacientes sobre la cancelación quirúrgica. **Describieron:** Enfermería perioperatoria; Procedimientos quirúrgicos electivos; Suspensión de tratamiento.

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Countries such as Australia, Ireland, Mexico, the United States, and the United Kingdom have a high rate of cancellations due to organizational issues of health institutions. In Brazil, the data are worrying with rates ranging from 14.14 to 27.4%.\(^1\)

Elective surgery is characterized when the approximate time to be performed coincides with the convenience of the patient and/or surgical team, that is, when it can be performed with a fixed date.\(^2\) Suspension of the surgical procedure is an indicator in the process of evaluating the quality of care provided by the hospital service and can signal failure in administrative planning.\(^3\)

When the surgery is canceled on the scheduled day, there is a series of disorders in the patient, ranging from psychological shocks due to the high level of emotional involvement before the surgery, to the triggering of negative feelings of the individual and family with the institution and the professionals involved.\(^4\)

From an institutional perspective, surgical programming requires the mobilization of a considerable number of specialized human resources, in addition to a significant amount of highly complex materials and equipment. Thus, the suspension of the procedure has implications for the operational and financial cost, while negatively reflecting on patient care.\(^5\)\(^6\)

Within the routine of the operating room, its operation involves several processes that are directly or indirectly linked to the production of surgeries, both in the environment and in others in the hospital and even outside it. We can point out, for example, the processes related to diagnostic imaging support services; clinical pathology; pathologic anatomy; material sterilization; logistics of supplies, materials, and medicines; blood bank; post-anesthetic recovery room, among others.\(^7\)
The surgical treatment proposed for the individual has a fundamental value and must be provided by the responsible team with maximum safety, competence, and zeal. By understanding the involvement of stressors related to the surgical process, surgical suspension, often unexpected, destabilizes previous planning and wears out the professionals involved.

Among health professionals, nurses play an essential role in the structure and functioning of the Surgical Center. The performance of any surgical procedure requires prior preparation for receiving the patient and, therefore, this professional must ensure that the surgeries are correctly scheduled and that the necessary conditions for their execution are met, through the appropriate allocation of resources.

In our experience of a large number of suspended surgeries and the low patient satisfaction, this study shows its relevance in presenting suggestions for improving the picture exposed, avoiding canceling surgeries by assisting qualified nursing together with other professionals from the health team, through the creation of an efficient administrative plan, which enables an adequate control with psychological protection for the patient.

**OBJECTIVE**

To evaluate the perception of patients about canceling their surgery and estimate the frequency of surgery suspension in the last three years in a public hospital.

**METHOD**

This is a quantitative-qualitative, descriptive, exploratory study, carried out in a large hospital, located in the city of Recife - PE, from May to September 2019 and divided into two stages:

In the first one, all elective surgeries suspended in the period from 2016 to 2018 were quantified, through the collection in the Surgical Center's registry book, which is filled in daily by the sector's nurse. It contains the date and time, patient's name, ward and bed, record, surgeon's name, anesthesiologist's name, name of the surgery if it was performed or suspended, and, finally, the reason for the suspension of the surgery.

In the next step, the study participants were selected according to the following criteria: patients of both genders, 18 years old or over, admitted to the Surgical Clinic to undergo elective general surgery, and that they had them canceled from June to November 2019. We excluded individuals who underwent the surgical procedure.

The convenience sample totaled eight patients, who underwent a semi-structured interview and consisted of the following questions: 1) How did you know that your surgery had been suspended and by whom? 2) What was the reason for this cancellation? 3) How did you feel about the suspension of your surgery? and 4) How could the suspension of surgery be avoided?
The tabulation of quantitative data was carried out in the electronic spreadsheet of the Microsoft Office Excel software, while the interviews were carried out in a private place, without interruptions, and recorded in digital audio with consent. The sample closure was due to data saturation, that is when there is no new information in the testimonies.11

To ensure anonymity, participants were identified by the letter P, followed by the Arabic numerals in the order of the interviews (P1, P2, P3...). The data were transcribed in full and evaluated using the thematic, cross-sectional content analysis technique, which is based on the exploration of the material in search of units of meaning in the speeches of the participants that gave rise to the categories.12

The research was conducted within the standards of Resolution 466/12, of the National Research Ethics Commission - CONEP and the project was approved by the Research Ethics Committee (CEP) of the CCS/UFPE under the protocol CAAE: 09565119.0.0000.5208 and opinion 3,243,784.

RESULTS

Figure 1. Distribution of surgical suspensions according to the months of the year. Recife (PE), Brazil, 2021.

Figure 2. Distribution of surgical suspension rate according to specialties. Recife (PE), Brazil, 2021.
The second stage of this research revealed the patient's critical view of the surgical suspension. After analysis, four categories emerged: “Communication of the surgical suspension by the professional to the patient”; “The patient's lack of knowledge about the reason for the suspension”; “Patient's feelings regarding the surgical suspension”, and “Improvement in the planning of the surgical map”, which will be presented below:

During the period of surgical nursing residency, working with surgical patients, some facts were observed that led to the perception of situations through the lived experience in which they corroborated for the construction of the categories discussed. In the consultations with preoperative patients, an absence of the professional nurse in the communication of the surgical suspension was noted, leading to the interest in deepening and knowing which professionals were involved in these communications, bringing the questioning of the first category.

Communication of the surgical suspension by the professional to the patient

_It was the doctor who came by and said I was off, was discharged, was going to call, and told me to come back on Monday. Then (he said) only when (the doctor) called that he would let me know what day the surgery will be. (P1)_

_Everything was fine for the surgery to be today, they told me that night, that I was under observation without a diet, and then the doctor came and said that I would be suspended. (P2)_

_The doctor said it would be on Tuesday, told the team on Friday, and said it would be on Tuesday. Then they sent me home on Friday, after a month I was here. On Tuesday I didn't do it, I didn't eat all day and I didn't do it, then on Wednesday it was scheduled, then I couldn't do it on Wednesday either, then on Thursday there was nothing, and on Friday_
there was nothing either, it's 4 days (with suspended surgeries). (P4)

It was the nurse who came to speak and said I could eat because the surgery was not going to be done today. It's the second time because it stayed for yesterday, I fasted all night yesterday to have surgery and they didn't do it. (P8)

There was a need to prove whether the patients knew the real reason for the suspension of their surgical procedures, in which they were perceived to not know the reasons for the surgical suspensions, leading to the second questioning of the category.

The patient's lack of knowledge about the reason for the suspension

I don't know the reason, why I was suspended, spent the day without eating, and I was not told. (P1)

They didn't give a reason; they did not indicate any reason for this. Then I don't know if it's because of this ultrasound or because something is missing. (P2)

They didn't say the reason. He said it was just suspended and wait because tomorrow or Friday it could be held. (P6)

Upon learning that his scheduled surgery would be canceled, the patient showed feelings such as very definite facial expressions and sometimes through speeches, which led to the interest in investigating in detail what these feelings were after the suspension of the surgery, leading to the third category.

Feelings of the patient regarding the surgical suspension

Devastated, stressed... I felt down there as if I were rubbish, a nobody...
You're waiting for one thing and there's another; we get angry. (P3)

Because the guy is waiting, Tuesday was still the first day; on Wednesday the guy is already discouraged. Is it today? On the fourth, nothing, on the fifth, nothing; on Friday, nothing. Then, it gets complicated. (P4)

I was nervous because I wanted to go straight to surgery so I could go home, eat good food, recover better at home. I'm sure because here, it weakens much more. (P5)

I was waiting because everything is in God's time; if it wasn't done today, it's because it wasn't in God's time, it wasn't the day. It could be tomorrow, but it could also be later. I'm waiting, I've been hospitalized since Thursday (7 days). (P6)
The person is sad because until then they treat us like a dog. Because nobody comes to say anything, nobody says anything. Just yesterday I stayed from the morning until 7:00 pm and I only came to know that I could eat, because the food was already beside my bed, the food was already beside me. The roommate who talked about my food, and waiting for surgery and food came, only today they came to say why it was canceled; it's a boring thing, nobody says anything. (P7)

I was sad because I'm dying to leave. I am not from here; I came from a long way here, and they said: let's do it today. And then it was for tomorrow, the next day comes and it doesn't. (P8)

We also observed that the patients were aware of what could be done to improve and avoid these surgical suspensions, creating the last category to explain what these suggestions were in favor of their benefits.

**Improved surgical map planning**

*It could be up to the responsible physician to do what: how many surgeries do they perform in a day? I don't know how many surgeries they do, but let's say they do 5 surgeries, so they know who the people are. So, if there is a fit of one or two, we know we can go or not. But, if there are 5 surgeries, and they only do 5, then there was no fit. So, that one over there can release food, there won't be surgery for him; or they could send them home too. Do what? Go home when we have a certain surgery, on that day, that's it, come here.* (P4)

**DISCUSSION**

The suspension index has its relevance for hospital managers, as long as it is used rationally in terms of its analysis and comparison, followed by strategic planning aimed at reducing the indicator. However, there is still difficulty in comparing the overall rate of surgical cancellation, since there is no known acceptable standard for the indicator, as it must be evaluated according to similar characteristics between hospitals, such as type and size, for example.\(^{13}\)

From January 2016 to December 2018, 18432 (100%) anesthetic-surgical procedures were scheduled. Of these, 12725 (69%) were performed and 5707 (31%) were suspended, which showed a high rate of surgery cancellation.

The rate of surgical suspension found in this study was higher than in some public hospitals, set at 27.4% in a university hospital in Minas Gerais in 2014\(^{14}\); 19.5% in a teaching hospital in northeastern Brazil from January to September 2013\(^ {15}\); and 18.45% in a public teaching hospital in the interi-
or of Paraná between April and November 2013\textsuperscript{13}. In the university hospital in Rio de Janeiro, from April to June 2018, the cancellation rate was 16.9\%\textsuperscript{16}.

By separating the data by years, we found that in 2016 of the 6348 scheduled surgeries, 2161 (34\%) were suspended; in 2017, 5894 surgeries were scheduled and 1648 (28\%) were not performed. Finally, in 2018, of the 6190 scheduled procedures, 1898 (31\%) were canceled. Figure 1 shows the distribution of surgical suspensions according to the months of the year, with a variation in the percentage between 2016 and 2018, ranging from a minimum of 20\% in August 2017 to a maximum of 44\% in February 2016.

Regardless of the variation between institutions, the cancellation rate in this sample remained high and suggests the need for improvement in hospital management to obtain a decrease in the coming years. This one indicator must be evaluated from a proactive managerial point of view, incorporating the organization's principles and profile, otherwise, perhaps, measuring this and other indicators may result in bureaucratic rather than strategic input.\textsuperscript{13}

Among the specialties involved in this series, neurology with 41\% in 2018 and urology with 38\% in 2016 had higher percentages of cancellation of their procedures, while the smallest percentage was in vascular surgery, obtaining 17\% in 2018 and 18\% in 2017 (Figure 2).

Another study in northeastern Brazil carried out between January 2014 and December 2015 compared a public-private institution with a surgical suspension rate of 23.3\%, while in a public hospital it obtained 42.7\%\textsuperscript{17}, which exceeded the rates found in this survey. This difference may be related to the number of appointments/day of surgeries, type of patients and associated pathologies, cleaning time between surgeries, and setting up the room, among others, and which should be analyzed in greater depth as to the cause of the cancellation.

The most evident reason for the cessation of elective surgical procedures was the extension of the previous surgery (lack of time), with 46\% in 2016 and 2017, and 41\% in 2018. Then, the determinants related to the patient that lead to surgical suspensions were from 12\% to 15\%.

The lack of a surgeon or surgical resident and anesthesiologist also caused a significant portion of cancellations, with rates ranging from 7\% to 13\%. We also observed an alternation of 1\% to 5\% of problems related to the institution such as lack of space in the intensive care unit, lack of materials, lack of exams, absence of concentrates in the blood bank.

The extension of the previous surgery was the reason for the surgical suspensions that had the greatest prominence in these results and which may suggest a deficit in the organization and/or planning of the surgical map due to an excess of patient scheduling on the day. When surgery is prolonged for any reason, called "lack of time", the change reverts to delay or suspension of other deadlines.\textsuperscript{17}
This finding was similar in a university hospital in southern Minas Gerais called “at the surgeon’s discretion”, reaching 56.7% of the reasons for the surgical suspension. However, it raised the question of whether this can hide the real reason for suspension. This justification for cancellation corroborated the results of this sample, which was also the most used by all clinical specialties.

Regarding surgical suspensions due to the patient’s clinical status, most of these cases could have been avoided with the practice of the preoperative visit by the nurse or the inpatient unit and by the pre-anesthetic evaluation performed by the anesthesiologist, who can identify the actual psychological and clinical conditions of the patient. Research in a public hospital in Pedreira-SP showed that the most frequent cause was related to the unfavorable preoperative state of patients with suspended surgeries. Also, problems can occur in the patient’s condition, such as those related to imbalances caused by preexisting conditions.

The difficulties found in the hospital institution that led to surgical cancellations may be related to the work of nurses, concerning the forecast and provision of resources to meet the scheduled surgical planning. When verifying these impossibilities, the nurse must communicate with the surgical unit so that the patient is not subjected to unnecessary preoperative preparation.

The absence of a surgeon or anesthesiologist was considered a high indicator when compared to the 3.5% found in a teaching hospital in the interior of São Paulo, whose objective was to assess the hospital costs generated by their suspension.

There were no cancellations of surgeries due to lack of circulating equipment, whether nursing assistants or technicians, which showed an effort exerted by the nursing staff to benefit from the scheduled surgeries.

A greater role of the medical profession in communicating the surgical suspension to the patient was observed and, in only one respondent, the nurse was mentioned in this participation. Based on the statements, the patients complained of a lack of knowledge about the reason for canceling the surgery, with an increase in the time spent on a zero diet and the uncertainty of when the surgical procedure will be performed, making them restless.

Each person reacts individually to the same situation, depending on their personal history. There are some feelings in the patients' reports, such as stress, discouragement, nervousness, and the desire to go to their home, feelings that are entailed by the scheduled surgical suspension.

One participant mentioned feelings of conformation and impotence caused by the dependence of the team and institution, and for not recognizing their right to health insured by the Brazilian Constitution of 1988 in its art. 196, which shows that:

“Health is everyone's right and the State's duty, guaranteed through social and economic policies aimed at re-
ducing the risk of disease and other health problems and at universal and equal access to actions and services for its promotion, protection and recovery”.

The religiosity described by the sixth respondent, an elderly man who lived in the interior of the state of Pernambuco, was also present in the statements of patients in similar studies, which shows the trust in divine power.

A feeling of sadness highlighted in the patients’ statements was perceived, in addition to feeling abandoned by health professionals. They also emphasized the inconveniences caused by going to the hospital in the hope of undergoing surgery, in modifying their routine of life, in impaired work, among others. These negative feelings were observed in a study in the interior of São Paulo, which aimed to identify the feelings caused by mothers when they knew about the cancellation of their children’s surgery.

Some participants showed the ability to understand the individual who is waiting for surgery, who is aware of the difficulties and demands on the waiting list of public health institutions, that there may be emergencies to change the forecast of the day at any time.

A study carried out to identify the reasons and effects on the perception of mothers and/or guardians of the child who had the surgery canceled raised the possibility of the nurse prioritizing some administrative activities that can lead to a distance from comprehensive patient care.

However, they highlighted the importance of identifying the professional responsible for the information/guidance to demonstrate a closer link between the professional, the patient, and the mother and/or guardian. This bond established between the health team and patients/relatives becomes beneficial to the proposed treatment, as it reinforces bonds of security, trust, and credibility both by professionals and the institution, who can also pay attention to body language, especially in the proximity, posture and eye contact.

We highlight some reports of patients who mentioned having their surgery canceled more than once, which may refer to the importance of the role of health professionals, with the inclusion of nurses, in the planning and management of the operating room, for the control of surgeries scheduled for the same day and those suspended be rescheduled as close as possible to avoid harm to patients.

Regarding the patient’s lack of knowledge about the reason for suspending surgery, efficient communication, assessment, and guidance would reduce the strain on the patient and the institution. For this, the role of the nurse contributes with measures and strategies that provide quality and humane care.
Effective communication between surgeons, anesthetists, nurses, and other professionals involved in the preparation and performance of surgery can minimize surgical cancellation. This must occur not only among the health team but also for users to be properly guided.\textsuperscript{20}

Among the feelings after the cancellation of the surgical procedure observed in the patients' statements, stress can be identified as something negative. It can harm the individual and generate feelings such as anxiety, tension, fear, or threat. In this way, anguish is understood, by psychoanalysis, as something experienced in the order of displeasure and conceptualized as a state of affection caused by an increase in the excitement that would tend to relief through the action of discharge.\textsuperscript{23}

The sadness seen in the reports of patients seven and eight is a feeling that constitutes a human response to situations of loss, defeat, and disappointment. Such a consequence has an adaptive value; on the other hand, it should be a warning, as the person needs help and companionship.\textsuperscript{23}

In the search for improvement in the planning of the surgical map, nursing needs to play an essential role in the construction of measures that promote improved control over the surgical map, such as maintaining the organization of the sector by material and human resources; monitor the surgical team and schedule, avoiding suspensions.\textsuperscript{16, 17}

To reverse the data obtained in the research, the example found in the experience in the United Kingdom, which used auditing as an intervention process, revealing promising results, can be followed. An audit raised the causes of suspensions and then took action on the issue. Fifteen months later, in a second evaluation, we observed a 42.9% reduction in the cancellation rate.\textsuperscript{19}

Quality management tools must be used to promote increased management quality, care, and humanization of relationships with patients. Nursing actions can improve patient care, establishing individualized planning and monitoring from admission to hospital discharge. Through the evaluation of indicators, surgical cancellations can reduce and, thus, prevent damage to the health of individuals admitted to hospitals.\textsuperscript{16, 17}

In the research process, there were some limitations, such as the difficulty in collecting data in the surgical center's registry and in addition to the impasse in accessing the hospital files. This reveals that to reduce the levels of surgical suspensions, it is necessary to improve the management of actions, in addition to improving the holistic view of the patient, who is the most affected by the cancellation of the procedure.

\textbf{CONCLUSION}

This research allowed an analysis of surgical schedules in the last three years in a public hospital, through the identification of the quantity, specialties, and reasons involved in the suspension of surgeries, in addition to providing patients' reports regarding surgical cancellation. In this way, it
provided important data to monitor and promote changes in the management of health units, leading to an improvement in the quality of care and less loss of financial resources.

The study also allowed us to identify the factors that generate feelings in patients undergoing surgical cancellation, which indicates an important aspect to be considered by the institutions in their planning. We also emphasize that to improve hospital care, big expenses will not always be necessary, given that often what most emotionally unbalances patients is the lack of information and/or attention by the team. By providing humanized care, health professionals can minimize this aspect.

We suggest that further studies be carried out with actions that assess measures taken so that these problems with surgical suspensions are improved or overcome.

**CONTRIBUTIONS**

We inform that all authors contributed equally in the design of the research project, data collection, analysis, and discussion, as well as in the writing and critical review of the content with intellectual contribution and the approval of the final version of the study.

**CONFLICT OF INTERESTS**

Nothing to declare.

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