

DETERMINANTS FACTORS FOR SUSPENSION OF ELECTIVE SURGERIES IN A HOSPITAL OF THE FEDERAL DISTRICT, BRAZIL

Fatores determinantes para suspensões de cirurgias eletivas em um hospital do Distrito Federal

Factores determinantes para suspensiones de cirugías electivas en un hospital del distrito federal

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ABSTRACT: Objectives: To identify the main determinant factors for suspension of elective surgeries in a public hospital of the Federal District, Brazil, and calculate the surgery suspension rate. **Method:** This is a quantitative, retrospective, and descriptive study carried out at the surgical center of a public hospital of the Federal District. **Result:** From January to October of 2015, 6,926 surgeries were scheduled, of which 4,587 were performed and 2,339 suspended, totaling a surgery suspension rate of 33.8%. The main reason for suspension was unjustified causes, with 30.1%. **Conclusion:** The determinants of surgery suspension should be strictly controlled and restricted. To that end, it is essential to raise awareness among all those involved to reduce the rates found. The findings allowed us to conduct a situational analysis of the care provided, identify weaknesses, improve performance, and adapt the work process to the needs of the patient and the area.

Keywords: Surgery. Elective surgical procedures. Surgical center.

RESUMO: Objetivo: Identificar os principais fatores determinantes para a suspensão de cirurgias eletivas em um hospital público do Distrito Federal e calcular a taxa de suspensão de cirurgias. **Método:** Trata-se de um estudo quantitativo, retrospectivo, descritivo, realizado no centro cirúrgico de um hospital público do Distrito Federal. **Resultado:** De janeiro a outubro de 2015 foram programadas 6.926 cirurgias, das quais foram realizadas 4.587 e suspensas 2.339, totalizando uma taxa de suspensão cirúrgica de 33,8%. O principal motivo de suspensão foram causas injustificadas, com 30,1%. **Conclusão:** Os determinantes para suspensão de cirurgias devem ser rigorosamente controladas e restringidas. Para isso, é essencial a conscientização de todos os envolvidos, com o intuito de diminuir os índices encontrados. Os achados permitem realizar uma análise situacional a respeito da assistência prestada e possibilitam identificar fragilidades, melhorar o desempenho e adequar o processo de trabalho às necessidades do paciente e do setor.

Palavras-chave: Cirurgia. Procedimentos cirúrgicos eletivos. Centro cirúrgico.

RESUMEN: Objetivo: Identificar los principales factores determinantes para la suspensión de cirugías electivas en un hospital público del Distrito Federal y calcular la tasa de suspensión de cirugías. **Método:** Se trata de un estudio cuantitativo, retrospectivo, descriptivo, realizado en el centro quirúrgico de un hospital público del Distrito Federal. **Resultado:** De enero a octubre de 2015 fueron programadas 6.926 cirugías, de las cuales fueron realizadas 4.587 y suspendidas 2.339, totalizando una tasa de suspensión quirúrgica del 33,8%. El principal motivo de suspensión, fueron causas injustificadas, con el 30,1%. **Conclusión:** Las determinantes para suspensión de cirugías deben ser rigurosamente controladas y restringidas. Para eso, es esencial la concientización de todos los involucrados, con la idea de disminuir los índices encontrados. Los hallazgos permiten realizar un análisis situacional al respecto de la asistencia prestada y posibilitan identificar fragilidades, mejorar el desempeño y adecuar el proceso de trabajo a las necesidades del paciente y del sector.

Palabras-clave: Cirugía. Procedimientos quirúrgicos electivos. Centro quirúrgico.

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INTRODUCTION

The surgical act provides parameters for evaluating the quality of care in surgical centers (SC) of hospital institutions and interferes directly with the productivity indicator. The efficiency evaluation criterion used was the suspension rate as an indicator of quality¹. The surgery suspension rate is calculated by dividing the number of suspended surgeries by the total number of scheduled surgeries, and multiplying it by 100, according to the Ministry of Health (MOH)².

Any procedure scheduled in advance is considered elective. In this case, patient and team have more time to prepare for the intervention, minimizing the risk of complications³.

Surgery is a therapeutic process that has multiple purposes and triggers numerous physiological and psychological reactions in patients. It also puts them at risk of death or loss of organs and can result in disabilities and completely transform their lives and those of the people who surround them^{3,4}.

The well-being of the person undergoing surgery should be the main focus of the health team⁵. When patients prepare themselves for a surgical procedure, many concerns and expectations about the future intervention automatically arise, and, if canceled, it can cause frustration^{1,6}.

The numerous problems caused by surgery suspension can be analyzed in two aspects: one based on the repercussions for the individual and his or her family, and another on the evaluation of consequences to the health institution and the professionals who work there⁷.

Some of the main reasons for suspension of surgical procedures found in the literature are: administrative and structural issues; inadequate clinical conditions; tardiness of the surgical team; communication problems among medical team, SC, and hospitalization units; lack of necessary material; preoperative failure; and absence of previously requested tests^{1,8}.

The losses of the institution are numerous, ranging from the preparation of a specific material and the operating room to the human resources mobilized^{1,9}. All these factors result in financial loss caused by deficiency of the process, as, in addition to the mentioned factors, patient length of stay rate increases, hospital rotation decreases, and risk of infection related to health care or other complications grows¹⁰.

Estimates point out that approximately 60% of elective surgical cancellations are potentially preventable¹. A planned and articulated multidisciplinary assistance, the elaboration of projects with efficient management, and constant evaluation of quality, productivity, and impact from the suggested actions are of extreme importance for the proper

operation of the SC unit. By adopting these measures, the detection of behaviors and actions that need reviewing become more efficient, preventing the accumulation of weaknesses to be solved^{1,4}.

Surgical procedures require complex preparation and, when suspended, they cause physical and emotional impact on patients, as well as organizational loss, and high financial cost for institutions. In this regard, it is essential to understand in greater detail the repercussions generated by analyzing the variables involved in surgical practice to minimize damage to patients and rationally use material, financial, and human resources for this activity.

OBJECTIVES

- To calculate the elective surgery suspension rate in a public hospital of the Federal District, Brazil;
- To identify the determinant factors for suspension of elective surgeries in a public hospital of the Federal District.

METHOD

This is a descriptive and retrospective research, with a quantitative approach, held in the SC of a public hospital of the Federal District. A quantitative study aims to observe, record, and describe the characteristics of a sample¹¹.

The sample consisted of data from 6,926 elective surgeries, included in the archive of surgery schedules of the institution, between January and October of 2015. The inclusion criterion was elective surgeries suspended from January to October of 2015 that had “no reason” as the reported justification for suspension. We excluded unclear and/or incorrectly filled data. This study does not include urgency and emergency surgeries, as the rotation of patients for these procedures is high.

The instrument used for data collection was built by researchers to facilitate data organization and analysis. Based on the justification for surgery suspension, data were recorded on a form and divided into determinant framework topics: care, administrative, structural, absence of patient, unsatisfactory clinical conditions, unjustified causes, non-authorized procedure, and others.

Surgeries that had “no reason” reported as the cause for suspension or the ones replaced were considered unjustified. The option “other” included delays in the previous surgery,

scheduling error, or patient withdrawal. Administrative reasons covered lack of medical records, absence of employees, emergency procedure for another patient at the same time, deficiency of material or equipment, prior surgeries, and patients without surgical indication. Absence of patient was the determinant for those who did not appear to undergo the procedure.

Structural reasons involved lack of beds (including intensive care units), lack of operating room, and failure of maintenance services in the SC. Unsatisfactory clinical conditions encompassed patients weakened in the preoperative period or who changed medical management. Among the care reasons, we have inadequate preoperative preparation (lack of fasting, administration of contraindicated drugs in the preoperative period, lack of blood supply and blood derivatives, lack of pre-anesthetic evaluation, and incomplete additional tests). Non-authorized procedures were those in which there was no hospitalization of the patient, due to the denial of the medical request, hospitalization report, or card from the Brazilian Public Health System (Sistema Único de Saúde — SUS).

We selected the surgery schedules in the hospital archive using the data collection instrument. Data were recorded and subsequently analyzed and compared through the frequency of the variables studied, with the aid of the software Statistical Package for the Social Sciences (SPSS) 22.0. To calculate the surgery suspension rates, we divided the number of suspended surgeries by the total of elective surgeries and multiplied it by 100².

Regarding ethical aspects, the project was submitted to the Research Ethics Committee of the Fundação de Ensino e Pesquisa em Ciências da Saúde (FEPECS) of the Federal District Department of Health, and approved under the Certificate for Ethical Assessment (CAAE) number 52294315.4.0000.5553, as advocates the Resolution no. 466/2012 of the National Health Council, which addresses the guidelines for research involving humans beings¹².

RESULTS

In the period evaluated (from January to October of 2015), 6,926 surgeries were scheduled, of which 4,587 were performed and 2,339 suspended, totaling a surgery suspension rate of 33.8%. Of the scheduled surgeries, 610 (8.8%) were replaced with no reason reported. Thus, they were included in the “unjustified” group.

The highest quantitative of surgery suspension occurred in June, July, and August, totaling together 38.5%, as shown in Figure 1.

In the surgery schedules, we found all suspensions and their corresponding reasons. Of the 584 suspended surgeries classified as “other,” 100.0% of them were caused by delays in the previous surgery. Based on this information, we classified the reasons in groups of determinants defined by the study, according to Table 1.

DISCUSSION

The studied hospital presented suspension rate of 33.8%, a number higher than those found in the literature, which range from 14.14 to 27.4%^{1,5,8,9}. The high rate could be a reflection of lack of action planning involving the whole

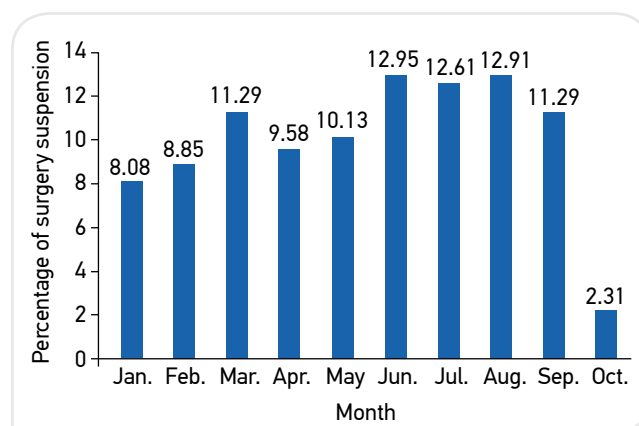


Figure 1. Percentage of surgeries suspended from January to October of 2015.

Table 1. Quantitative of surgeries suspended according to reason.

Reason	Absolute quantitative of surgery suspension	Percentage
Unjustified	703	30.1
Other	584	25.0
Administrative	510	21.8
Absence of patient	249	10.6
Structural	157	6.7
Unsatisfactory clinical conditions	82	3.5
Care	51	2.2
Non-authorized procedure	02	0.1

process of surgery scheduling. According to the literature, high rates are common in public hospitals⁹, representing a negative evaluation for the institution as it is a reference in the unity of federation.

During the research period, 610 surgeries were replaced, with no reason reported in the surgery schedules. Thus, procedures that did not occur were considered suspended and unjustified. This fact culminated in a high percentage, leading the unjustified suspensions to the first place with 703 procedures, which represents 30.1% of causes.

In regard to elective surgeries, reasons to not perform the procedure include failure in preoperative visits, inadequate construction of surgery schedule, such as the advance period of its construction, surgeon's lack of planning, scheduling of dummy patient to hold an operating room, and surgery scheduling error. All these factors can be solved, which would directly affect the reduction of surgery suspension rates. Likewise, correctly reporting the reasons for replacement could bring more reliability to data. This finding shows the need to raise awareness among professionals because the only way to propose measures to fix an issue is by knowing its causes¹.

The months with the highest surgery suspension rates were June, July, and August, which together totalize 38.4% of suspensions. The main determinant factor for surgery suspension was unjustified causes (30.1%), followed by other reasons (25.0%).

The result differs from data found in other studies, which mention among main factors unsatisfactory clinical condition of the patient and care reasons, for lack of tests^{1,5,9}. In the present study, these two reasons were in sixth and seventh places, with 3.5 and 2.2%, respectively, which may be due to lack of data that could characterize the real reasons to suspend surgery or the deficit of professionals in the institution.

Results for administrative reasons were significant, totaling 21.8% and deviating from a study carried out in a hospital in São Paulo, Brazil, in which the rate was of only 13.9%⁶. This cause could be associated with the incorrect distribution of professionals and scarcity of material in the institution.

Structural aspects represent 6.7% of surgery suspension; lack of beds was the most frequent justification in this group, corroborating the literature⁷. This factor can relate to failures in surgery planning, which could be solved by confirming the beds on the day before surgery.

Regarding the total quantitative, the average of surgeries canceled per month was 234. To minimize this rate, we suggest that the SC managers carry out a monthly situational

analysis to detect possible causes that prevent the correct workflow and design suitable actions to solve the problems found.

The main determinant of monthly surgery suspensions in February, April, May, June, and July was "unjustified." In January, March, and August, the main reason was "other," and in September and October, administrative problems.

This large number of administrative issues in September and October was due to the health workers strike that occurred in these months and greatly affected the running of the SC. Only emergency surgeries were performed in this period, causing the suspension of elective surgeries for lack of human resources.

Literature shows that 60% of the determinant factors for surgery suspension could be anticipated and avoided. To this end, the SC managers must redefine models, set goals, study the peculiarities of the area, and group weaknesses and capabilities so they can review the planning of surgery schedules, the preoperative visit, the management of material, and human resources^{5,6}. Obtaining proper control of these factors provides greater safety for the patient, decreases unnecessary hospitalization time, significantly reduces costs, and optimizes the productivity of the area⁴.

The health team is of great relevance to this study since it consists of professionals working in the system and responsible for the dynamics of the institution, with emphasis on the nursing staff, that has a fundamental role in preparing and managing the patient in the preoperative period. These professionals need to know the situation experienced and the existing problems in their working environment so that they can be more effective. This research provides the basis for knowledge and possible planning and execution of a better care organization, resulting in improvement for the patient and the institution.

Study limitations were lack of readable manuscripts and incomplete surgery schedules. Conducting a study about operationalization of the SC is pertinent, as it could allow the institution to analyze the productivity and performance of the area more accurately. Research on cost analysis of surgeries suspended and performed could favor the reflection of the team and SC managers.

CONCLUSION

The study allowed us to conduct a situational analysis of the care provided, making it possible to improve performance and adapt the work process to the needs of the patient and the SC.

The purposes of this research are to guide and help the management of the area and the professionals who work there, using the results obtained to minimize problems caused by surgery suspension for patients, relatives, and the institution.

The determinant factors for surgery suspension should be strictly controlled and restricted. The overall suspension rate found in this study was 33.8%. The main determinant factor was unjustified causes with 30.1%, followed by other

reasons (25.0%), administrative issues (21.8%), absence of patient (10.6%), and structural aspects (6.7%).

Lastly, it is worth emphasizing the need to raise awareness among the professionals involved, such as the medical team and the nursing staff, to correctly fill the data on suspended surgeries in the computerized system, offering training on the subject, and allowing them to plan actions with greater effectiveness.

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