

ORIGINAL ARTICLE

ASSESSMENT OF REASONS OF SURGERY CANCELLATION IN A MEDICAL INSTITUTE: A RETROSPECTIVE STUDY

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ABSTRACT:

Background: Surgery cancellation on the day of surgery is one of the significant drains on the health sources is the cancellation of surgery. Short-notice cancellation of scheduled operations at the last minute, even up to the day of surgery is one of the major persistent problems in most of the renowned hospitals. The late cancellation of scheduled operations is a major cause of the inefficient use of operating room time and is thus a waste of resources. Literature quotes very little data which highlights the reasons for cancellation of elective surgeries. Hence; we retrospectively analyzed the reasons for cancellation of elective surgeries in an institutional hospital. **Materials & Methods:** The present study was carried out in the department of surgery by analyzing the records of all patients from June 2012 to July 2014. Exclusion criteria included patients who underwent procedures that did not require an anaesthetist and those patients who received cancellation of the surgery from the ward. Those patients that were scheduled in the operative list, were shifted to the operation theatre but did not have the planned surgery on the intended date were included under the category of cancelled operations. All the results were summarized in the Microsoft excel sheet and evaluated. **Results:** A total of 3700 surgeries were scheduled in the study period out of which approximately 7% were cancelled on the day of surgery. All the valid reasons for cancellation of surgery were divided into four main groups.. These included surgeon related, administration related, work-up related and lastly failure due to reasons related to the patient. Surgeon related cancellation of the surgeries were the most common cause which accounted for over 40% of the total surgeries cancelled. **Conclusion:** Cancellation of surgical procedures on the day of surgery creates a significant problem for the hospital.

Key Words: Cancellation, Elective, Surgery

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INTRODUCTION

One of the significant drains on the health sources is the cancellation of surgery. In the maintainance of the operation theatres and staff for the appointed surgery, major hospitals invest considerable resources. Short-notice cancellation of scheduled operations at the last minute, even up to the day of surgery is one of the major persistent problems in most of the renowned hospitals. The late cancellation of scheduled operations is a major causes of the inefficient use of operating room time and is thus a waste of resources. For the patients, it is also potentially stressful and costly in terms of the working days lost and the disruption of daily life. Reports stressing on the depressive effect of cancellation on patients and of the high level of emotional involvement before surgery are present in the literature.^{1,2} Patient satisfaction, staff morale, hospital patient relationships and training, all are greatly affected by repeated cancellations. The under utilization of theatre time has self-evident repercussions for waiting lists. Literature quotes very

little data which highlights the reasons for cancellation of elective surgeries.³ Hence; we retrospectively analyzed the reasons for cancellation of elective surgeries in an institutional hospital.

MATERIALS & METHODS

The present study was carried out in the department of surgery of the medical institute by analyzing the records of all patients from June 2012 to July 2014. Exclusion criteria included patients who underwent procedures that did not require an anaesthetist and those patients who received cancellation of the surgery from the ward. In the Department of General Surgery, the operating schedule of the concerned units is prepared by the surgeons and sent to the operation theatre by 3.00 pm on each working day. Those patients that were scheduled in the operative list, were shifted to the operation theatre but did not have the planned surgery on the intended date were included under the category of cancelled operations. Following patients whose surgeries were cancelled were included under the study.

- Related to anaesthesia (Non-availability of anaesthetist and consultation is needed).
- Related to surgeons
 - Further evaluation of patient is required
 - Lack of time for surgery
 - Anticoagulants were not discontinued before surgery
 - The patient was discharged
 - The surgery was already done
 - Surgeon was not well.
 - Surgeon was unavailable
- Reasons related to administration
 - Lack of ICU bed
 - Absence of blood for the patient
 - Confusion in booking
 - Electric failure
- Reasons related to the patient
 - Presence of infection in patient
 - Surgery postponed due to request made by the family
 - Patient's refusal for the surgery
 - Patient not admitted
 - Patient had deranged coagulation
 - Patient was not prepared for the surgery

All the results were summarized in the Microsoft excel sheet and evaluated.

RESULTS

During the study period, a total of 3700 surgeries were scheduled. In 270 cases (approximately 7%), cancellation of the surgeries occurred on the day of surgery. All the valid reasons for cancellation of surgery were divided into four main groups as shown in **Table 1**. These included surgeon related, administration related, work-up related and lastly failure due to reasons related to the patient. Surgeon related cancellation of the surgeries were the most common cause which accounted for over 40% of the total surgeries cancelled as shown in **Figure 1**.

Table 1: Reasons for cancellation of surgeries

Variable	Reason for cancellation
Surgeon	Time constraints
	Non-availability of senior surgeon
	Other appointment of surgical team at same time
	Change in plan of surgery
Administrative issues	Wrong diagnosis
	Shortage of sterilized surgical equipments
	Absence of staff of surgical team
	Absence of adequate amount of blood
	Disruption of electricity
Work-up	Failure of surgical equipments
	Change in medical status of patient
	Abnormalities in the pre-surgical test reports
	Incomplete medical work-up
Causes related to patient	Refusal of patient to give consent
	Absence of patient on the day of surgery
	Non following of pre-operative instructions

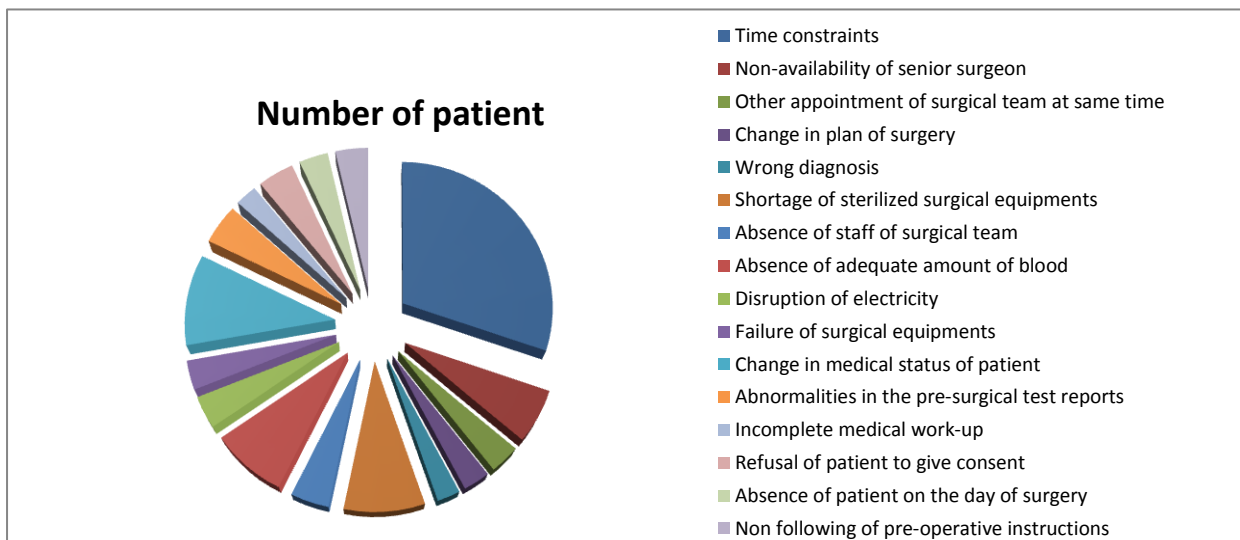


Figure 1: Distribution of patients according to different reasons for cancellation of surgeries

DISCUSSION

As a constant increase in the elective waiting lists is seen, efficiency of operation theatre is increasingly coming under the spotlight.⁴ Dissatisfaction for health care providers and patients alike are the common consequences encountered due to delays or interruptions during operating lists.⁵ A significant proportion of a hospital's revenue and an even larger fraction of its total expenses are provided by the operation theatre's lists.⁶⁻⁹ As operating theatre budgets are already stretched, increased case throughput must come from improved theatre efficiency rather than from more operating sessions. Prompt start times of the surgeries, an appropriately booked theatre case-mix, efficient patient turnover and finishing on time to reduce overtime costing, all these provide efficient use of theatre sessions.^{10, 11} Decreasing idle theatre time is the most efficient method to increase theatre case.^{12, 13} Hence; we retrospectively analyzed the reasons for cancellation of elective surgeries in an institutional hospital.

In the present study, potentially avoidable causes were the main reason for the cancellations of the surgery on the same day. The most common reason for the cancellation of the surgery in the present study was lack of availability of operation theatre time. On further observation, we noticed that this was due to overrun of previous surgery and over booking the schedule list. Literature quotes studies which show that improving the minor pre-surgical preparatory measures like reducing the room turn over time, on-time start of the first case of the day, set-up of anaesthesia equipment and setting of case trolleys performed in parallel decreases the cancellation rate of case cancellations due to overrun of previous surgery.^{14, 15} In contrast to observations found in our study, consultation between juniors and seniors is done before booking the operation theatres for surgical cases. Due to non availability of senior surgeons, cancellation of 15 cases took place. Most of the times this was due to a sudden leave on the day of surgery, important meetings which could not be ignored or other administrative commitments. Such circumstances could have been avoided by creating a good and effective communication within the surgical team. Handling of other emergency cases by the surgical team was responsible for cancellation of surgeries in 8 cases where 6 patients were cancelled because of the wrong/misdiagnosis made by junior doctors. Huda F retrospectively analyzed the reasons for cancellation of elective surgeries on day of surgery. They reviewed theatre records from 2009 to 2010 and found that approximately 7% of the total surgeries were cancelled on the day of surgery. They concluded that appreciation of the reasons for

cancellation on the day surgery can improve theatre utilization and will decrease the discomfort to the patients due to untimely cancellation of the surgery.¹⁶ Sultan et al performed an audit to evaluate the reasons for the cancellation of the cases on the day of surgery in cardiac theatres. They observed that out of all cancelled surgeries on the day of surgery, over 20% of them were potentially avoidable. Further, they concluded that for elimination of reasons for cancellation on the day of surgery, a lot of research work is still required to identify the potential reasons responsible for it.¹⁷

As suggested by Tait et al, last moment cancellations of surgery have both economic and emotional implication for family and patient.¹⁸ Apart from heavy economic distress, disappointment of the families of the patient also occurs along with increase in the anxiety levels. Reactions of patients and their families to the cancellation on the day of operation has been studied in western culture by Dadas et al and found that some patients expressed extreme negative feeling and some even shed tears while some concealed their sadness from the relatives.¹⁹ The difference in the rate of cancellation when patient was evaluated 2-3 days before surgery and those evaluated in the ward 24 hours before surgery were evaluated by Pollard and they concluded that it is difficult to define the optimal timing of the outpatient pre operative evaluation. However; we couldn't comment whether in our patients, evaluation time prior to the surgery had any impact on the day of surgery cancellation.²⁰

CONCLUSION

From the above results, it can be concluded that cancellation of surgical procedures on the day of surgery creates a significant problem for the hospital. Improvement in the efficacy of the facilities of the operation theatre can be done by identifying and resolving the cause.

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