

CANCELLED ELECTIVE GENERAL SURGICAL OPERATIONS IN AYUB TEACHING HOSPITAL

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Background: Cancellation of operations in hospitals is a significant problem with far reaching consequences. This study was planned to evaluate reasons for cancellation of elective surgical operation on the day of surgery in Ayub Teaching Hospital, Abbottabad. **Methods:** From July 2006 to June 2007 the medical records of all the patients who had their operations cancelled on the day of surgery in all the three General Surgical units of Ayub Teaching Hospital, Abbottabad were audited prospectively. The number of operation cancelled and reasons for cancellations were documented. **Results:** 3756 patients were scheduled for surgery during the study period. 2820(75%) patients were operated upon. 936 (25%) operations were cancelled out of which 338(36%) were cancelled due to shortage of time, 296(31.6%) were cancelled due to medical reasons, 152(16.2%) were cancelled due to shortage of beds while 55(5.8%) were cancelled due to shortage of anaesthetists. Three operation lists were lost completely. The Anaesthetist cancelled 43%, Surgeon 39% while 18% of operations were cancelled due organizational reasons. **Conclusion:** Cancellation of patients on operation lists occupy a substantial population (25%) of cases. Majority of cancellation were due to reasons other than patients medical conditions. Better management could have avoided most of these cancellations.

Keywords: Surgical Operations.

INTRODUCTION

Operation theatre is the heart of a hospital requiring considerable human resources and expenditure from hospital budget. However Operation theatres are underutilized and lie idle most of the time and many patients who are called for operation from waiting list are not operated upon¹. Planned operations that are cancelled reflect inefficiency in management². It increases theatre costs and decreases the efficiency³. It also cause emotional trauma to the patients as well as their families⁴.

This study was done to survey the rate and determinant causes of cancellation of planned general surgical operations in Ayub Teaching Hospital, Abbottabad and discuss solutions for more efficient use of operation theatres.

MATERIAL AND METHODS.

From July 2006 to June 2007, the medical records of all the patients who had their elective operations cancelled in all the three General Surgical Units of Ayub Teaching Hospital were surveyed prospectively. Each Surgical Unit has same two operation days per week using two operation tables. The elective Surgical Theatre is open continuously form 8am to 2pm from Monday to Thursday and on Saturday, and from 8am to 12 noon on Fridays. The emergency theatre works separately 24 hours a day. The Theatre maintenance day comes once a month

and rotates. The patients are assessed by Anaesthetist just before the operation and induction of anaesthesia is done in operating room.

The Performa was completed prospectively. The data recorded included the total number of operation performed in the study period, the number of operations cancelled and reasons for cancellation and who decided to cancel the operations.

RESULTS

The total number of general surgical operations performed form July 2006 to June 2007 was 2820. 3756 patients were scheduled for surgery during this study period. The operation theatre was functional for 285 days during the study period resulting in 9.8 cases per day. 936 (25%) operations were cancelled in the hospital. 338 (36%) operations were cancelled due to insufficient operating time. 296 (31.6%) were cancelled due to medical reasons. Shortage of beds resulted in cancellation of 152(16.2%) operations. Three scheduled lists were completely lost due to strikes and unannounced public holidays. The other reasons why the patients failed to have operation during the study period shown in table-1. The anaesthetist cancelled the operations in 399 (43%) and surgeons in 367 (39%) patients. 170(18%) operations were cancelled due to organizational reasons. 42% patients whose operation was cancelled were in-patients and 58% were out-patients.

Table 1. Reasons for postponement of general surgical operations(n = 936).

Shortage of time.	338 (36%)
Medical Reasons. Hypertension. Diabetese. Respiratory Tract Infections. Jaundice. Anemia. Ischaemic heart disease.	296 (31.6%)
Shortage Of Beds	152 (16.2%)
Shortage Of Anaesthetists.	55 (5.8%)
Strikes/ Unannounced Public Holidays	20 (2.1%)
Inadequate Preparation Of Patients. Medicines /Blood not arranged. Recent intake of food. Poor gut preparation. Patient not Euthyroid.	18 (1.9%)
Operation Not Needed.	12 (1.2%)
Power Breakdown.	12(1.2%)
No Water Supply.	11(1%)
Equipment Failure.	5(0.5%)
Delay In Transport Of Patient to Theatre.	5(0.5%)
No Informed Consent.	4(0.4%)
Non-Compliance Of Patient.	4(0.4%)
Failure To Administer Anaesthesia.	2(0.2%)
No Relative With Patient.	2(0.2%)

DISCUSSION

An efficient surgical service should have a low rate of cancellation of operations. If operations are cancelled, the Operation Theatres are underused, efficiency is jeopardized, waiting list increases and cost rises ⁵. It is a well known fact that if resources are not properly utilized, the general population suffers especially the lower income groups, who depend more on public or government services for most of their healthcare needs. The cost of facility and equipment which is underutilized adds to the cost of its services which ultimately passed on to patients. Avoiding cancellation is an essential step to reduce these. The National Audit Office in Britain examined five district health authorities in detail and concluded that Operation Theatres were being used half their capacity in spite of huge waiting lists ⁶.

The cancellation creates untold financial, logistic and psychological hardships for the patients and the relatives who plan their working and family lives around postponed date of operation. Most operations are cancelled at 24-hour notice ⁷. The patients and the relatives feel disappointed, frustrated, and anxious ⁸.

25% operations cancelled in this study are higher than many other studies ^{1,2,9}. It is higher than other studies in Pakistan ¹⁰. In UK 8% of scheduled elective operations are cancelled nationally within 24 hours of surgery¹¹. Shortage of operating time was the most important factor of cancellation of elective operation in this study. A lot of Operation Theatre time is wasted due to late starts, time between cases, preparation and cleaning operation theatres, and delayed transportation of patients to operation theatre. However this can be reduced by co-operations of all disciplines.¹² Improvement in late starts can be achieved by co-operation from anaesthetists and surgeons to arrive on time. The time interval between two surgical interventions can be longer when the patient takes long time to recover from anaesthesia. Because of the diversity of staff members who work in Operation Theatre can cause conflicts and lead to inefficiency, a team approach in presence of a good administrator can improve OT management.¹³ A good administrator can improve scheduling, reduce time spent preparing and cleaning and better handle resources. ¹⁴

Unplanned admissions and lengthy OT lists prepared by junior surgeons, who were not familiar with the procedure, was also a reason for cancellation of operations. Many patients did not need surgery or required further work up before surgery. Ensuring that only consultants book patients for surgery would also reduce the number of cancellation due to incorrect indication of surgery with significant impact on operating time available. We observed influence of surgeon experience in this study and found inexperienced surgeons add significantly to the operation time. Consultants were quicker and their presence reduced the likelihood of complications, thus reduced operative time. Moreover it was observed that if a consultant surgeon and consultant anaesthetist is present in OT, the list is likely to proceed with fewer delays.

Cancellations of operation due to inadequate work up of important medical conditions are avoidable. The medical problems could have been identified in time and the number of cancellations on medical grounds could have been avoided by establishing a formal liaison with the physicians. All the patients are assessed on the day of surgery by the anaesthetist in our hospital. Studies have shown that preoperative anaesthesia assessment in preanaesthesia clinics significantly reduces operative room delays and cancellations ¹⁵⁻¹⁷. Absence of separate facilities for day-case surgery was another factor in cancellation of operations because same

operation theatre was used for in- and out-patient surgery.

Shortage of beds as a result of mass casualties and emergency surgeries resulted in cancellation of a number of operations. Although emergency theatre in our hospital working 24 hours a day permits uninterrupted elective operations, yet patients are admitted in the same ward resulting in frequent shortage of beds. Surgical audit has demonstrated that urgent operations reduce the number of available beds, decrease the rate of treatment of elective patients and thereby reduce the efficiency of surgical service¹⁸. In addition unnecessary admissions in a surgical unit may cause cancellation of elective cases¹⁹.

Cancellations due to shortage of Anaesthetists can be avoided by staffing of anaesthetists and appropriate arrangements for their internal cover of annual leave or study leave. Cancellation of operations due to inappropriately prepared patients could be avoided by improving communication between patient and doctors and nurses. A disturbing finding was that no informed consent was taken and no communication whatsoever was received about nil per oral before surgery.

Many operations were postponed because there was no electricity or water. Several delays were due to equipment failure. Equipment breakdown is frequent in Pakistan because of poor maintenance. Most of sophisticated medical equipment is imported and in case of breakdown, engineering services and spares are not available.

This study shows that most causes of cancellation of operations are avoidable and steps must be taken to avoid these to enhance the utilization of operation theatre facility.

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