EVALUATION OF REASONS FOR DELAYS AND CANCELLATIONS OF SURGICAL PROCEDURES IN A NIGERIAN TERTIARY HOSPITAL

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Background: Delays/cancellations of operations, on the surgery day, in hospitals is a significant problem with far reaching consequences and particularly traumatizing emotionally to the patient as well as their families.

Objectives: This study was done to ascertain the determinant causes of delay/cancellation of planned surgical operations in Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife and discuss strategies for more efficient use of operation theatres.

Methods: Data on all patients scheduled to have elective and emergency surgeries during the period of 2 months from November 2009 to December 2009 were prospectively collected to determine proposed operation date, date operation was done, scheduled starting times, actual starting times, causes of delays & / or cancellation. Data was analyzed using SPSS version 16

Results: During the 2 months period of study, 506 cases were booked, 121(23.9%) of the cases were cancelled. The commonest cause of cancellation was poor patient preparation 82 (67.8%). Orthopaedics & Traumatology had the highest overall case cancellation (19 out of 48 cases 15.7% case cancellation. However, ENT had the highest percentage of cancelled cases (71.4%). The Day-case facility had 149 (29.5%) cases booked but 42(28.2%) were cancelled. There was 50 to 480 minutes delay in 22.3% of the procedures done. The commonest cause of delay was delayed transport to the operating theatre.

Conclusion: Delays of surgical procedures was 22.3% while cancellation of patients on operation lists make up 23.9% of booked cases. Majority of the delays/cancellations were due to reasons other than patients' medical conditions and they are preventable. Better management could have avoided most of these delays/cancellations.

Keywords: Surgical procedures, Delays/cancellations, Causes, Cost-effectiveness.

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INTRODUCTION

The cost of healthcare delivery in Nigeria is increasing daily; unfortunately, the financial resources of our patients continue to dwindle due to the current global economic meltdown. It has been said that the Physician who refuses to examine the economic consequences of his/her medical practice does not protect the welfare of his/her patient.¹

Operation theatre is the heart of a hospital requiring considerable human and material resources and thus considerable part of expenditure from hospital budget.² 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 upon.³ Planned operations that are cancelled reflect inefficiency in management.⁴ Cancellation of cases on the scheduled day of surgery leads to inefficient utilization of manpower and resources.⁵ It increases theatre costs and decreases the efficiency.⁶ It also leads to prolonged hospital stay, and in many cases, repetition of the various aspects of preoperative preparation and management.² All of these increase patients' treatment expenses.¹ It also causes emotional trauma to the patients as well as their families.⁶

Hence there is need for the health care team to encourage cost-effectiveness in every aspect of patient care. This study was carried out with the

Table I: Specialty distribution of cases (booked and cancelled)

Specialty	No of cases booked (%)	No of cases cancelled (%)
General surgery	58 (11.46)	3 (02.5)
Orthopaedics	48 (09.49)	19 (15.7)
Ophthalmology	28 (05.53)	8 (06.6)
Paediatric surgery	23 (04.54)	6 (05.0)
Urology	25 (04.94)	9 (07.4)
Ear, Nose & Throat	7 (01.38)	5 (04.1)
Cardiothoracic	17 (03.36)	2 (01.7)
Plastic & Burns	12 (02.37)	3 (02.5)
Maxillofacial	9 (01.79)	2 (01.7)
Neurosurgery	17 (03.36)	9 (07.4)
Obs & Gyn	113 (22.33)	13 (10.7)
Day case	149 (29.45)	42 (34.7)
Total	506 (100)	121(23.9)

Table II: Cases cancelled as a percentage of booked by specialty

Specialty	No. booked	No. cancelled	% of booked cases
Orthopaedics	48	19	39.6
Paediatric surgery	23	6	26.1
Cardiothoracic	17	2	11.8
Ear, Nose & Throat	7	5	71.4
Ophthalmology	28	8	28.6
Urology	25	9	36.0
General surgery	58	3	05.2
Plastic & Burns	12	3	25.0
Maxillofacial	9	2	22.2
Neurosurgery	17	9	52.9
Obs & Gyn	113	13	11.5
Day case	149	42	28.2
Total	506	121	

objective to determine the incidence and causes of delay/cancellation of planned surgical operations in Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife and to discuss possible solutions for more efficient use of operation theatres.

MATERIALS AND METHODS

Over a 2 month period (November 2009 to December 2009), record was taken of all patients whose names appeared on the routine elective/emergency surgical operations lists, but who could not have their surgery done when scheduled and cancelled for some reasons. However, the study period coincided with when the main theatre was under repairs, by VAMED engineering company, as part of the Federal Government of Nigeria efforts to upgrade facilities in some teaching hospitals in the country.

The hospital number, gender, surgery type, indication for surgery, classification of surgery, specialty of surgery, proposed surgery date, date surgery was done, proposed starting time, actual starting time and reasons for delays/cancellation were documented for analysis. The analysis was done as frequencies and percentages for the delays and cancellations while time in minutes, hours or days was recorded for the delays. The delays and cancellations were also analyzed along specialty divides and whether procedures were electives or emergencies.

RESULTS

During the 2 months period of study, 506 cases were booked, 415 were elective procedures, out of which day cases were 149, while 91 were emergencies; 121(23.9%) of the cases were cancelled for various reasons. Three hundred and Eighty five cases were done. Table 1 illustrates the number and percentage of cases booked with the number and percentages cancelled by the various surgical specialties and subspecialties. The most common causes of case cancellations were poor patient preparation (67.8%), which include patient did not show up, no blood ready

Table III: Classification of cases (booked & cancelled)

Specialty	Electives (Cancelled)	Emergencies (Cancelled)
Orthopaedics	35(15)	13(4)
Ophthalmology	27(7)	1(1)
Paediatric surgery	13(2)	10(4)
Urology	21(8)	4(1)
Ear, Nose & Throat	6(4)	1(1)
Cardiothoracic	14(1)	3(1)
Plastic & Burns	9(2)	3(1)
Maxillofacial	9(2)	-
Neurosurgery	11(6)	6(3)
Obstetrics & Gynaecology	70(11)	43(2)
Day case	149 (42)	-
Total	415(102)	91(19)

Table IV: Specialty distribution of cases delayed

Specialty	Electives (%)	Emergencies (%)
Orthopaedics	13(15.12%)	1(01.16%)
Ophthalmology	1(01.16%)	-
Paediatric surgery	1(01.16%)	6(06.98%)
Urology	5(05.81%)	1(01.16%)
Ear, Nose & Throat	2(02.33%)	-
Cardiothoracic	2(02.33%)	1(01.16%)
Plastic & Burns	3(03.49%)	-
Maxillofacial	4(04.65%)	-
Neurosurgery	-	3(03.49%)
Obs & Gyn	15(17.44%)	11(12.79%)
Day case	3(03.49%)	-
Total	59(65.12%)	27(31.40%)

for the patient, electrolyte imbalance, and poorly controlled medical condition. Of the 385 cases done 22.3% of the procedures including emergencies did not start on schedule as there was a delay of 50 – 480 minutes. The main causes of delays were due to delayed transportation to the operating theatre, late arrival of the anaesthetists, lack of theatre space, late arrival of the surgeons,

intermittent lack of electricity/water supply to the theatre and lack of sterile supplies/ theatre wears.

DISCUSSION

Case cancellation is still high in our centre (23.9%) which is similar to findings from previous works done in Lagos and Ilorin ranging from 19.3% to 23.2% between 1996 and 1999.⁷ The causes of cancellation of operations borders on poor attention to details in patient preparation which may also be a pointer to overwork as a result of inadequate manpower. There was a 50 – 480 minutes delay in 22.3% of the cases done; mainly due to reasons that can be explained by inadequate manpower as the available personnel will have to function per time at different duty posts before getting to the operating theatre. Dearth of personnel: anaesthetists, peri-operative nurses, surgeons and porters may explain some of the delays/cancellations. Most of the causes are preventable and peculiar to third world countries.

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.⁸ 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 is ultimately born by the patients. Avoiding cancellation is an essential step to reduce these.

Cost containment through effective and efficient utilization of resources has become a necessary part of healthcare delivery worldwide.^{9, 10} This is due to the rising cost of healthcare and increasing financial pressure on the healthcare system. Efficient utilization of operating theatre space and time is one area, which has been shown to assist in cost containment.¹⁰

The cancellation creates untold financial, logistic and psychological hardships for the patients and their relatives who plan their working and family lives around postponed date of operation. Most operations are cancelled at 24-hour notice.¹¹ The patients and the relatives feel disappointed, frustrated, and anxious.¹²

Attention should be paid to details in patient preparation including explanation of financial implications to the patients and their relatives. Preparation of realistic operation lists, employment of more personnel and making laboratory back up readily available will go a long way to reduce late cancellations. In case patient did not show up, the theatre should be informed on time so that the theatre space can be reallocated.

A follow up study is already designed and ready to commence. This will give us the opportunity to compare the post theatre repair period results with that of this study.

CONCLUSION

Delay of surgical procedures was 22.3% while cancellations of patients on operation lists make up 23.9% of booked cases. Majority of the delays/cancellations were due to reasons other than patients' medical conditions and they are preventable. Better management could have avoided most of these delays/cancellations.

Therefore, efforts should be made to prevent delays/cancellation of elective/emergency surgeries by careful planning, bearing in mind the local constraints in human and material resources. There is no point in preparing an ambitious operation list, which the available manpower and logistics cannot accomplish. Operation lists should be efficiently prepared and distributed to avoid under or over-utilization of theatre facilities.

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