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# Factors Influencing Delay Or Cancellation Of Surgeries In UCH Operating Theatres

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## ABSTRACT

This study assessed the factors influencing delay or cancellation of surgeries in UCH operating theatres. This was a descriptive cross-sectional design. A simple random sampling technique was employed to select 89 respondents. A self-designed questionnaire that was validated and reliability index of 0.9 was used to collect data. Data was entered in to SPSS version 26. Four hypotheses were raised and answered using frequency tables and Chi-Square. The result revealed that educational status, surgical related factors, administrative factor and patients' related factor were responsible for the delay or cancellation of surgeries in UCH operating theatres. The study revealed that delayed or cancellation of surgery is a serious disaster for the patients due to tension, economic and financial factors on the part of the patients. In conclusion, the study recommends that Government should address financial barriers to accessing necessary care and support services by advocating for increased funding for disability services and that issue of delay or cancellation should be avoided at cost by the parties involved.

**Keywords:** Delay, Cancellation, Surgeries, Surgical Operation, Theatre

## INTRODUCTION

Surgical delay or cancellation is considered to be one of the most upsetting problems affecting patient satisfaction, and it is considered an important, challenging issue at most of the public hospitals as the length of time a patient will wait after being booked in and registered on the waiting lists until the surgery is finally done sometimes reaches more than one year. According to Amani and Omar (2018), delay in starting scheduled surgical procedure is a reflection of operating room inefficiency.

Previous work has reported cancellation rates for elective surgeries to range from 1.96% to 49%. In Western countries, about 20% of elective surgeries are canceled on the day of surgery. However, in low-income countries, cancellation rates are as high as 48.5%. Cancellation can be avoidable and non-avoidable and the latter is seen as the commonest in developing countries with a range of 10-45% and 0.37-28% in developed countries. Abrupt cancellation of elective surgery leads to emotional trauma and financial loss for such patients and their families (Vahwere, Sikakulya, Ssebuufu, Jorge, Okedi, Abdullah and Kyamanywa 2021).

The operating room is a very important component of any tertiary health-care institution. An adequately managed operating room results in increased surgical turnover as well as patient satisfaction. Delay in surgery start time is surgery starting later than the scheduled time. Delay in starting scheduled surgical procedure is a reflection of operating room inefficiency. It has negative financial implications for the institution and can cause frustration for the surgeons, anesthetists, and other support staff. More importantly, patients end up being dissatisfied with this delay.

There are various factors responsible for delay in starting surgical operations among which are unavailability of the surgeon, which is the most common preoperative system delays, while non-availability of instrument is the second most commonly recorded reason for delay in operating room. First cases probably have higher incidence of delay than subsequent cases because of preparation to start the operation. The increase demand on the service of the clerks at registration, the imaging department, and the nurses in the holding area and hospital porters contributed to delay in surgery according to Adamu, Jibril and Ngbale (2018).

Causes of delay in surgery were classified into patient-related factors which included lack of funds, failure to procure materials for surgery, refusal of consent, and inability to provide blood for surgery. Surgeon-related factors included failure to obtain consent before a patient

gets to the theater, late arrival of surgeon, and failure to identify/or control comorbidities. Hospital/system-related factors included lack of drapes, gowns, and boots; nonfunctional equipment; lack of theater space; and unavailability of light, oxygen, and water.

Anesthetist-related factors included difficult intubation, difficult induction of spinal or epidural anesthesia, and unavailability of anesthetists. Nurse-related factors included failure to prepare the instruments for surgery. Okeke, Okorie, Ojewola, Omoke, Obi, Egwu and Onyebum (2020) and Kaderali (2019) observed that delay in the operating room negatively affect both patient and health care workers, and it often increase anxiety for patients and their relations and source of frustration for the surgical team members. The type of delays commonly considered by Kaderali (2019) include delays getting the patient into the theatre later than 8:10am for first case of the day and more than 1hour between cases; frozen section delay and intra operative radiography delay. Findings revealed that first cases had significant delay than subsequent cases.

Surgery delays or cancelations actually cost hospitals, the waste of disposable equipment opened for surgeries that never take place, and overtime pay in the form of extra working hours for surgeons and nurses for extra surgery dated in a way to control the over demanding patients. Surgical delay or cancelation after the patient and operating room have been prepared for surgery causes definite financial loss to the institution, while cancellations at earlier times may cause less to no real financial loss. Also, some reasons for earlier cancellations are not pertinent to very late cancellation. In addition, in one study, the main reasons for operative delay were almost the same. Lack of proper planning, lack of team work and communication gap and limited availability of trained supporting staff were the common reasons of start time operative delay. (Amani and Omar 2018)

### **Statement of Problem**

Delay in surgical operation has significant consequences on the perioperative system and the patient cancellations are associated with wide-ranging clinical, psychological, and economic consequences to the patients, hospitals, and health care providers. Although patients are the most affected. Delay in the operating room negatively affect both patient and health care workers, and it often increase anxiety for patients and their relations and source of frustration for the surgical team members. Delay of surgery frequently occurs in the operating theatre and has a major effect on patient flow and resources utilization and as such thorough documentation of perioperative delays is necessary. This will provide a basis for development of solutions that will improve operating theatre efficiency. It is an established fact that delays in the care of patient is a serious lassitude that remains unacceptable in the health care delivery system. Adamu Jibril and Ngbale (2018), it has been noticed that University College Hospital theatres face surgery delay and some surgeries are cancelled which affect the outcome of care being rendered to patients.

The crux of the matter is that complications resulting from these delays in surgery are often been overlooked by the stakeholders in the health institutions. It is therefore important to assess the perioperative nurses about awareness about the factors influencing delays or cancellations of surgeries in University College Hospital operating theatres.

### **Purpose of the Study**

To assess factors influencing delay or cancellation of surgeries in UCH operating theatres among perioperative nurses. The specific purpose of the study (1) to assess awareness of surgery delay or cancellation in operating theatre among perioperative nurses (2) to know if surgical team members contributes to delay of surgeries (3) to identify if administrative factors influence to delay and cancellation of surgeries and (4) to assess if patient related factors lead to delay and cancellation of surgeries

### **Hypotheses**

**Hypothesis One:** There is no significant association between educational status of the perioperative nurses and awareness of delay of surgeries.

**Hypothesis Two:** There is no significant association between surgical related factors and surgery delay

**Hypothesis Three:** There is no significant association between administrative factors and surgery delay.

**Hypothesis Four:** There is no significant association between patient related factors and surgery delay

## **RESEARCH METHODOLOGY**

### **Research design**

This study is a descriptive cross-sectional study, which was used to assess awareness of factors influencing delay or cancellation of surgery among perioperative nurses in University College Hospital Ibadan.

### **Research Setting**

This study was conducted in University College Hospital, Ibadan, Oyo state. This institution serves as the higher centre of health care delivery in Nigeria and a referral centre for critically and terminally ill patient. There are five operating theatres in University College Hospital, these theatres include: main theatre, obstetrics and gynecology theatre, private suite theatre, surgical out-patient theatre and emergency theatre. The main operating theatre is located on the first floor of the building and the operating department consists of ten suites with ancillary rooms, there are two suites on the second floor for ophthalmology surgeries, there are two operating rooms in emergency department, Gynecology theatre has two suites and two suites in labour ward

### **Target Population**

The target population for this study is perioperative nurses in University College Hospital Ibadan working in operating theatre.

### **Sample and Sampling Technique**

Convenient nonprobability sampling technique method was utilized.

### **Instrument for data collection**

Structured questionnaire was developed based on the objectives, literature review, and the empirical findings; which covered all the contents of the study to assess factors contributing to delay or cancellation of surgeries. A self-structured questionnaire was used. It consisted of four sections. Socio-demographic data of the participants, awareness of surgery delay or cancellation in operating theatre, surgical team related factors contributing to surgery delay or cancellation, and Administrative related factors contributing to surgery delay or cancellation and Patient related factors contributing to surgery delay or cancellation. Validity of instruments is often defined as the extent to which an instrument measures what it is designed to measure. In order to validate the instrument, the researcher ensured that the item on the questionnaire correlated with the objectives of the study so as to ascertain the content validity of the instrument. The content was written in simple language and logically in terms of relevance to subject matter. The questionnaire was developed based on the information obtained from recent literature review and the empirical findings and also in relation to the objectives of the study and the hypothesis of the study. The construction, content and face validity was assessed by the project supervisor for corrections, clarifications and approval. Reliability of instrument refers to the extent that the instrument yields the same results over multiple trials; the instrument was subjected to empirical validation using Cronbach

Alpha correlation method to determine the reliability. The reliability of the instrument was pre-tested to ensure the instrument correctly assessed the variables of the study. This was done in order to measure the degree of accuracy with which the instrument was measured. Pretest was done among nine perioperative nurses working in Oluyoro Catholic Hospital Ibadan. Nine questionnaires were distributed and analysed. The result of the pretest is 0.9

**Method of data collection:** The researcher collected the necessary data with the use of self-administered questionnaire. This was administered among perioperative nurses to fill after the purpose of the study was explained and consent was sought for this purpose and the questionnaire was retrieved.

**Method of data analysis:** The analysis involved checking the quality information that was collected by the researcher in the field. The results were collected, analyzed and presented using frequency counts. Data entry and analysis was carried out using Statistical Package for Social Science (version 26). Quantitative data was analyzed using descriptive statistics and Chi Square test with level 0.5 significance.

**Ethical Consideration**

A letter of permission was collected from the school coordinator and then taken to University College Hospital ethical committee for collection of the approval for the project among the perioperative nurses in University College Hospital. An explanation was given to the entire subjects on the research work. The respondents were duly informed that there will be no penalty for anyone who refused to participate in the study and at will not be coerced to participate in the study.

**RESULTS**

**Hypothesis 1** There is a no significant relationship between educational status and delay of surgery.

**Table 1: Chi-Square Showing Between Educational Status and Delay of Surgery**

<b>Educational Status</b>	<b>Surgery delay</b>		<b>Total</b>	<b>Degree of freedom</b>	<b>X<sup>2</sup></b>	<b>P- value</b>
	<b>Good awareness of surgery delay</b>	<b>Poor awareness of surgery delay</b>				
<b>Double qualification</b>	21	13	34	3	0.351	3.205
<b>Degree Holder</b>	24	12	26			
<b>Master</b>	2	0	2			
<b>Others</b>	14	3	17			
<b>Totals</b>	28	61	89			

**P>0.05**

There was a significant relationship between educational qualification and cancellation of surgery. Educational qualification brings about good awareness of surgery delay and cancellation. We therefore reject the null hypothesis

**Hypothesis 2:** There is no significant association between surgical team factors and delay of surgery.

**Table 2: Chi-Square Showing Between Surgical Team Factors and Delay of Surgery**

Surgical Team Factors	Surgery delay		Total	Degree of freedom	X2	P- value
	<b>Good awareness of surgery delay</b>	<b>Poor awareness of surgery delay</b>				
2000	3	1	4	3	0.351	3.205
3000	24	14	38			
4000	32	13	47			
Totals	61	28	89			

**P<0.05**

There was no significant relationship between surgical team factors and delay of surgery among the respondents. We therefore accept the null hypothesis.

**Hypothesis 3:** There is a no significant relationship between administrative factors and delay of surgery.

**Table 3: Chi-Square Showing Between Administrative Factor and Delay of Surgery**

Administrative Factors	Surgery delay			Degree of Freedom	X2	P-value
	<b>Good awareness</b>	<b>Poor awareness</b>	<b>Total</b>	2	0.404	1.183
20,000	2	2	4			
30,000	18	5	23			
40,000	41	21	62			
Total	61	28	89			

**P>0.05**

There was a significant relationship between administrative factors and delay of surgery. We therefore reject the null hypothesis.

**Hypothesis 4:** There is a no significant relationship between patient related factors and delay of surgery.

**Table 4: Chi-Square Showing Between Patient Related Factor and Delay of Surgery**

<b>Patient Related Factors</b>	<b>Good awareness of surgery delay</b>	<b>Poor awareness of surgery delay</b>	<b>Total</b>	<b>Degree of freedom</b>	<b>X<sup>2</sup></b>	<b>P- value</b>
300	17	7	24	1	1.000	0.080
400	44	21	65			
Total	61	28				

**P > 0.05**

There was a significant relationship between patient related factors and cancellation of surgery. Patient related factors bring about surgery cancellation. We therefore reject the null hypothesis.

**DISCUSSION OF FINDINGS**

**Hypothesis 1:** There is no significant relationship between respondents’ educational status and awareness of surgery delay.

**Decision:** Table 1 Showed that P-value is more than 0.05. we thus reject the null hypothesis and then conclude that is a relationship between the respondents’ educational status and their awareness of surgery delay and cancellation (x<sup>2</sup> value=0.351, df=0.351, p-value=3.205) This implies that the higher the educational status the more the respondents are aware of surgery delay.

**Hypothesis 2:** There is no significant relationship between surgical team related factors and surgery delay.

**Decision:** Table 2 showed that P-value is more than 0.05. we thus reject the null hypothesis and then conclude that the relationship between surgical team related factors and surgery delay (x<sup>2</sup> value=0.637, df=3, p-value= 0.093) This implies that surgical team related factors will bring about surgery delay.

**Hypothesis 3:** There is no significant relationship between administrative related factors and surgery delay.

**Decision:** Table 3 showed that P-value is more than 0.05. we thus reject the null hypothesis and then conclude that there is relationship between administrative related factors and surgery delay (x<sup>2</sup> value=0.404, df=2, p-value=1.183) This implies that administrative related factors will bring about surgery delay.

**Hypothesis 4:** There is no significant relationship between patient related factors and surgery delay.

**Decision:** Table 4 showed that P-value is more than 0.05. we thus reject the null hypothesis and then conclude that there is relationship between patient related factors and surgery delay (x<sup>2</sup> value=1, df=1, p-value=0.08) This implies that patient related factors will bring about surgery delay

**CONCLUSION**

This study revealed that the respondents understood fully the meaning of surgery delay or cancellation. Various factors were identified by the perioperative nurses. Conclusively, surgical delay has a negative impact on the patients and the health care facility.

## RECOMMENDATIONS

The following recommendation are made based on the findings of this study:

- Continuous seminar on factors influencing surgery delays and cancellations should be more emphasized
- Hospital management should review guidelines on surgical operation
- Every surgical personnel who erred should be punished in accordance with the laid down rules of the hospital.

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