

Preanesthetic Clinic Services: A Comparative Assessment of three Hospitals in Nigeria

Job Gogo Otokwala¹, Oluwaseun Adebayo Kehinde²

¹Intensive Care Unit, Department of Anaesthesiology, University of Port Harcourt, Choba, Port Harcourt, Nigeria.

²Department of Anaesthesia, University College Hospital, Ibadan, Nigeria

Received: 04.03.2025 / Accepted: 12.03.2025 / Published: 12.03.2025

*Corresponding Author: Job Gogo Otokwala

DOI: [10.5281/zenodo.15387122](https://doi.org/10.5281/zenodo.15387122)

Abstract

Original Research Article

Background: Preoperative assessment of surgical patients is the most vital aspect of the anaesthetist's contributions to perioperative safety of the care of the surgical patient. In most developing countries, patients are evaluated by the anaesthetists few days or a day before the scheduled elective surgery and often at the bedside. The tendency to limit adequate assessment of all organ-systems, drug history or functional status is obvious and this is often corrected at a predetermined pre-operative clinic.

Aim: This study aims to evaluate the impact of preanesthetic clinics on patient safety and satisfaction in three hospitals in Nigeria.

Methods: This retrospective cross-sectional study analysed the records of 360 surgical patients who attended Preanesthetic Clinics (PACs) at three healthcare institutions in Nigeria: The University of Port Harcourt Teaching Hospital (UPTH), Port Harcourt; the University College Hospital, Ibadan; and a high-volume private hospital in Port Harcourt. The study covered a five-year period from January 2020 to December 2024 and was conducted in accordance with ethical standards. Ethical approval was obtained from the State Ministry of Health and the respective institutional ethics committees prior to data retrieval. Quantitative data were analysed using IBM SPSS Statistics version 25.0 (IBM Corp., Armonk, NY, USA).

Results: Data for three hundred and sixty (360) patients were retrieved from the three hospitals as follows private hospital in Portharcourt (110) 30.6%, the UCH Ibadan (150) 41.7% and the UPTH (100) 27.8%. Mean age was (range 3years.5mo – 82years). Females(68.1%): male(31.9%). The commonest comorbidities identified were hypertension, diabetes and bronchial asthma. Commonest antiplatelet medication identified was clopidogrel. The implementation of PACs led to marked improvements in patient outcomes. Anxiety levels decreased significantly from 45% to 15%. Identification of risk factors increased from 20% to 80%. The incidence of surgery rescheduling dropped from 15% to 5%, while patient satisfaction rose from 50% to 90%.

Conclusion: The findings demonstrate that PACs are effective in enhancing surgical patient care. They contribute significantly to improving patient safety by reducing complications and anxiety, and increasing overall satisfaction. Therefore, the integration and expansion of PACs in surgical pathways are strongly recommended.

Keywords: Preanesthetic Clinics, Patient Safety, Satisfaction, Private, Public Hospitals.

Citation: Otokwala, J. G., & Kehinde, O. A. (2025). Preanesthetic clinic services: A comparative assessment of three hospitals in Nigeria. *GAS Journal of Clinical Medicine and Medical Research*, 2(3), March, 110-114. ISSN: 3049-1568

INTRODUCTION

Anaesthesia is a critical component of surgical procedures, yet it can provoke physiological changes that elevate the risks of morbidity and mortality, particularly in relation to a patient's preoperative health status and age. Hospitals often care for patients presenting with complex comorbid conditions who are scheduled for increasingly extensive surgeries and interventions¹. Ensuring the safety and quality of anaesthesia and surgical care require thorough

understanding of each patient's clinical characteristics for effective perioperative management².

Over the past five decades, perioperative mortality—especially anaesthesia-related deaths—has significantly declined in developed nations. This improvement is largely credited to the advent of newer anaesthetic agents, enhanced monitoring systems and training, access to recovery facilities, and improved airway management³. Nevertheless, elevated rates of morbidity and mortality are still observed in non-operating room anaesthesia, often due to insufficient

preoperative evaluation. Furthermore, strong associations have been identified between perioperative mortality and factors such as age, the American Society of Anesthesiologists Physical Status Classification, emergency case status, and the timing of surgical procedures⁴. In Nigeria, it is expedient for anaesthetists to review their surgical patients a day before surgery except for major and complex procedures. The relevance of the pre-anaesthetic clinics in reducing cancellation rate was espoused by Yakubu et al⁵

Pre-anaesthesia assessment clinics (PACs) have become increasingly relevant in helping hospitals worldwide manage the growing volume and complexity of surgical cases^{6,7}. These clinics serve as a collaborative platform for surgeons, patients, and anaesthesia teams, aiming to optimize patients' medical status prior to surgery and anaesthesia. The PAC consultation is a globally accepted evaluation approach that identifies anaesthesia-related risk factors, flags high-risk patients, improves clinical outcomes, and prepares patients both physically and psychologically for anaesthesia and surgery⁸.

Empirical evidence indicates that PACs can lead to reductions in surgical cancellations, hospital length of stay, unnecessary laboratory investigations, and mortality rates⁹. Patients who undergo pre-anaesthesia evaluations also tend to exhibit reduced anxiety and report high levels of satisfaction with the care provided¹⁰. Despite these well-documented benefits, limited research has been conducted on the impact of PACs in Nigeria, particularly within hospitals in Rivers State.

RESULTS

Table 1: Patient Demographics

Variable	Frequency (%)
Gender (Female)	245 (68.1%)
Gender (Male)	115 (31.9%)
Age Group (18–30)	108 (30%)
Age Group (31–50)	173 (48%)
Age Group (51–82)	79 (22%)

The sample population consisted of 68.1% females and 31.9% males. The highest representation was from the 31–50 age group (48%), followed by 30% in the 18–30 age group. This

This study seeks to evaluate the effectiveness of PACs in enhancing patient safety and satisfaction in Rivers State.

METHODS

This retrospective cross-sectional study analysed the records of 360 surgical patients who attended Preanesthetic Clinics (PACs) at three healthcare institutions: the University of Port Harcourt Teaching Hospital (UPTH), Port Harcourt; the University College Hospital, Ibadan; and a high-volume private hospital in Port Harcourt. The study covered a five-year period from January 2020 to December 2024 and was conducted in accordance with ethical standards. Ethical approval was obtained from the State Ministry of Health prior to data retrieval.

A stratified random sampling technique was employed to ensure representative inclusion from each participating facility. Data were extracted from patients' clinical records and structured satisfaction questionnaires archived in the PACs. Key variables collected included demographic characteristics, identified perioperative risk factors, anxiety levels (as documented before and after PAC counselling), perioperative complications, and overall patient outcomes. Quantitative data were analysed using IBM SPSS Statistics version 25.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics such as frequencies and percentages were used to summarise the data. Inferential analyses were conducted to identify statistically significant associations, with a significance threshold set at $p < 0.05$.

demographic spread reflects typical surgical trends in the selected hospitals as shown in figure 1.

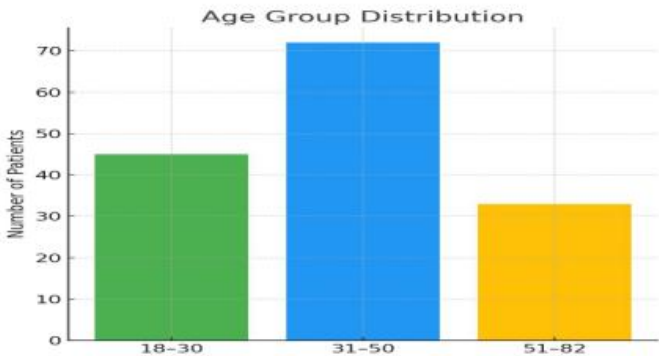


Figure 1: Age group distribution

Table 2: Distribution of Diseases Among the Sample Population

Disease	Frequency	Percentage (%)
Hypertension	100	27.78%
Diabetes	80	22.22%
Hypertension & Diabetes	70	19.44%
Asthma	40	11.11%
Thyroid Disease	35	9.72%
Upper respiratory tract Infection	35	9.72%
Total	360	100%

The table presents the distribution of 360 patients across six disease categories, with emphasis on hypertension, diabetes, and their combination. Hypertension was the most prevalent condition, affecting 100 patients (27.78%), followed by diabetes in 80 patients (22.22%). A combination of

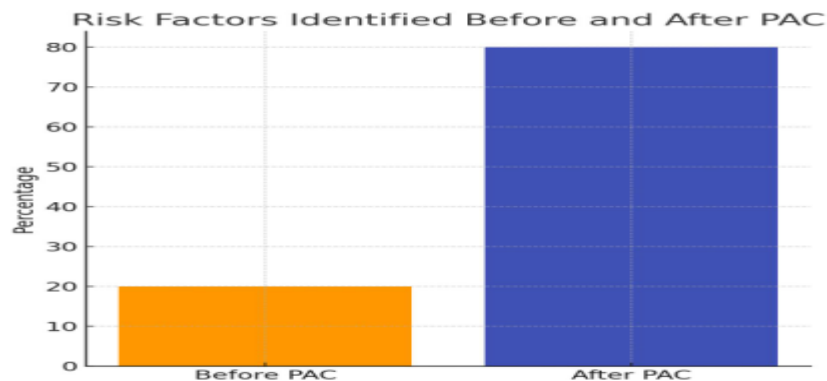
hypertension and diabetes was observed in 70 patients (19.44%). Other conditions included asthma (11.11%), thyroid disease (9.72%), and upper respiratory tract infections (9.72%). This distribution highlights a higher burden of non-communicable diseases among the sample population.

Table 3: Impact of PAC Interventions on Outcomes

Outcome Variable	Before PAC	(%)	After PAC	(%)
Patients reporting high anxiety	162	45	54	15
Risk factors identified	72	20	288	80
Perioperative complications	54	15	18	5
Patient satisfaction (>80%)	180	50	324	90

The results show that PAC interventions contributed to significant reductions in anxiety, improved identification of risk factors, decreased perioperative complications, and increased patient satisfaction. Anxiety levels decreased from 45% to 15%,

risk factors were identified in 80% of patients, complications dropped from 15% to 5%, and patient satisfaction increased from 50% to 90% as shown in figure 2.

**Figure 2: Ricks factors identified before and after PAC****Table 3: Types of Perioperative Complications**

Type of Complication	Before PAC (%)	After PAC (%)
Cardiovascular instability	7	2
Respiratory issues	5	1
Postoperative infections	3	2

This table illustrates a clear reduction in all types of perioperative complications. Cardiovascular instability showed the greatest improvement, from 7% to 2%, followed by

respiratory issues (5% to 1%). Postoperative infections dropped from 3% to 2%, further emphasizing the positive impact of PACs as shown in figure 3.

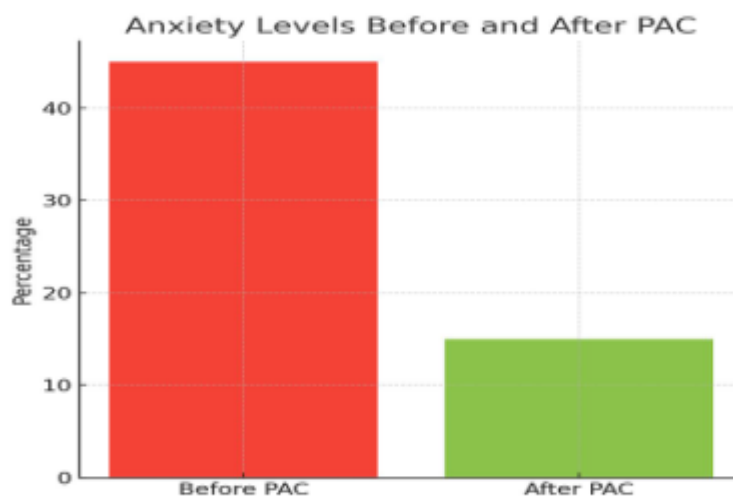


Figure 3: Anxiety levels before and after PAC

DISCUSSION

The findings of this study provide compelling evidence of the significant positive impact of Preanesthetic Clinics (PACs) on patient safety and satisfaction in surgical settings. The demographic distribution of the study population, as illustrated in Table 1, revealed a higher proportion of female patients, with the majority aged between 31 and 50 years. This trend mirrors global patterns in surgical patient demographics, thus reinforcing the generalizability of the study's outcomes across diverse healthcare settings^{5,7}.

One of the most noteworthy outcomes observed was the marked reduction in patient anxiety following PAC consultations. Prior to counselling, 45% of hypertensive coming for major surgery reported elevated levels of anxiety concerning their surgical procedures. However, this figure decreased substantially to 15% post-counselling. This reduction underscores the psychological benefit of PACs, where patients are thoroughly informed about the anaesthetic process, their concerns are addressed, and their confidence in the surgical team is enhanced by alleviating fear and uncertainty, PACs play a central role in improving patients' emotional preparedness for surgery⁸ and drug management especially patients on clopidogrel.

Moreover, the PACs significantly enhanced the identification of preoperative risk factors. The rate of risk factor identification increased from 20% to 80% following PAC evaluations. This finding stressed the effectiveness of structured, clinician-led assessments conducted in PACs. These evaluations allow anaesthetists to review patients' medical histories comprehensively, conduct relevant investigations, and identify potential complications that may arise during or after surgery^{9,11} and detecting conditions such as hypertension, diabetic patients, asthma, haemoglobinopathy, past surgeries, and associated

complications and period is used to alleviate anxiety and describe anaesthetic technique.

A critical finding was the substantial decline in perioperative complications from 15% to 5%—after patients underwent PAC evaluation. This decline reflects the PACs' capacity to optimise patients' physiological status and develop anaesthetic plans tailored to individual needs. The observed reductions in cardiovascular instability, respiratory complications, and postoperative infections (as outlined in Table 3) are in line with international studies that support PACs as a cornerstone of perioperative safety management^{1,10}. Such outcomes affirm the importance of early risk stratification, multidisciplinary collaboration, and patient optimisation strategies in improving clinical outcomes.

Importantly, the study also demonstrated a dramatic increase in patient satisfaction, rising from 50% to 90%. This surge can be attributed to the patient-centred nature of PAC services, which prioritise clear communication, shared decision-making, and comprehensive education regarding surgical and anaesthetic procedures. Patients who feel informed and involved in their care process are more likely to express satisfaction and trust in the healthcare system^{2,12}. High levels of satisfaction have been associated with better compliance, reduced litigation, and improved recovery rates. Furthermore, the study reinforces the growing international recognition of PACs as a vital component of modern surgical care.

CONCLUSION

The study provides strong empirical support for the integration and expansion of PACs in Nigerian hospitals and similar healthcare environments. Their role in enhancing patient safety, reducing complications, improving risk management, and boosting satisfaction levels positions them as essential for quality perioperative care. The results of this study

call for sustained investment in PAC infrastructure, staff training, and public awareness to fully harness their potential in surgical practice.

REFERENCES

- Davidson S, McKendrick D, French T. Preassessment clinic interview and patient anxiety. *Saudi J Anaesth.* 2016;10(4):402–8. doi:10.4103/1658-354X.177339
- Emanuel A, Macpherson R. The anaesthetic pre-admission clinic is effective in minimising surgical cancellation rates. *Anaesth Intensive Care.* 2013;41(1):90–4. doi:10.1177/0310057X1304100115
- Fischer SP. Development and effectiveness of an anesthesia preoperative evaluation clinic in a teaching hospital. *Anesthesiology.* 1996;85(1):196–206. doi:10.1097/00000542-199607000-00025
- Goldenberg E, Saffary R, Schmiesing C. New role for the anesthesia preoperative clinic: Helping to ensure that surgery is the right choice for patients with serious illness. *Anesth Analg.* 2019;129(2):311–5. doi:10.1213/ANE.00000000000004178
- Yakubu SY, Amponsah G, Eguma SA. Pre-anaesthesia Assessment Clinics: A look at the practice in Ghana and Nigeria. *J Med& Bas Sc Res* 2022;3(1):29-35. Doi:10.5281/zenodo.6342067
- Gupta A, Gupta N. Setting up and functioning of a preanaesthetic clinic. *Indian J Anaesth.* 2010;54(6):504–7. doi:10.4103/0019-5049.72638
- Hariharan S, Chen D, Merritt-Charles L. Evaluation of the utilization of the preanaesthetic clinics in a university teaching hospital. *BMC Health Serv Res.* 2006;6:59. doi:10.1186/1472-6963-6-59
- Hines S, Munday J, Kynoch K. Effectiveness of nurse-led preoperative assessment services for elective surgery: A systematic review update. *JBI Database Syst Rev Implement Rep.* 2015;13(10):279–317. doi:10.11124/01938924-201513060-00016
- Kristoffersen EW, Opsal A, Tveit TO. The effect of preanaesthetic assessment clinic: A systematic review of randomised and non-randomised prospective controlled studies. *Prospero CRD42019137724.* 2019. doi:10.15124/CRD42019137724
- Møller AM, Myles PS. What makes a good systematic review and meta-analysis? *Br J Anaesth.* 2016;117(3):428–30. doi:10.1093/bja/aew264
- Santos ML, Novaes CdeO, Iglesias AC. Epidemiological profile of patients seen in the pre-anesthetic assessment clinic of a university hospital. *Rev Bras Anesthesiol.* 2017;67(4):457–67. doi:10.1016/j.bjan.2016.06.002
- Whitlock EL, Feiner JR, Chen LL. Perioperative mortality, 2010 to 2014: A retrospective cohort study using the National Anesthesia Clinical Outcomes Registry. *Anesthesiology.* 2015;123(6):1312–21. doi:10.1097/ALN.0000000000000882