

Assessment of Adherence to the WHO Surgical Safety Checklist during Obstetrics and Gynaecology Surgeries and its Immediate Post-Operative Risk Profiles in Selected District Hospitals in the Greater Accra Region

by

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ABSTRACT

Background

Surgical complications continue to be a major global health issue, especially in regions with limited resources. The WHO Surgical Safety Checklist (SSC) is essential for enhancing patient safety and decreasing surgical risks. Despite its demonstrated advantages, utilisation and effectiveness differ, particularly in Sub-Saharan Africa. In Ghana, data on how healthcare facilities implement and follow the checklist remain limited, and the few available studies indicate that adherence to the WHO surgical safety checklist is generally low.

Objective

This study aimed to assess adherence to the WHO surgical safety checklist, determine risk of postoperative complications, and identify factors influencing adherence and risk of postoperative complications in eight district hospitals in the Greater Accra.

Methods

This study employed an explanatory sequential mixed-methods design to gather and analyze data, including observations of 319 surgeries, questionnaires from 154 staff members, and 30 interviews with key informants. Quantitative data were analyzed descriptively. The WHO surgical safety checklist was the only tool used to measure adherence during obstetrics and gynecology, with adherence categorized as partial or complete. Surgical risk profiles were evaluated using the Surgical Apgar Score to classify the risk of postoperative complications as low, moderate, or high. Factors affecting adherence and risk outcomes were analyzed through multinomial logistic regression, with a p-value below 0.05 indicating significance. The

proportion of respondents whose responses aligned or did not align with reported factors was also determined. Qualitative data were analyzed deductively based on themes derived from the quantitative findings.

Results

Findings indicated that four district hospitals used the WHO surgical safety checklist with an overall adherence rate of 23%. Adherence declined across different phases of surgery: 75.2% during sign-in, 24.1% at time-out, and 22.9% at sign-out. Most risk profiles were moderate to high (81.8% and 15.4%), with 2.8% of surgeries showing a low risk of postoperative complications. Factors linked to adherence to the surgical safety checklist included elective surgeries [aOR = 3.702, $p = 0.001$] and prior surgical history [aOR = 2.577, $p = 0.037$]. Pre-existing conditions decreased the odds of adherence by 76% [aOR = 0.240, $p = 0.002$]. Both quantitative and qualitative data identified perceived enablers such as hospital leadership, ongoing training, structured monitoring, and positive team attitudes. Barriers included lack of training, staffing shortages, fatigue, high workload, emergency bypasses, communication problems, and infrastructure gaps. Medical errors caused by delays, omissions, and inadequate treatment were viewed as having a negative impact on postoperative complication risks.

Conclusion

Adherence to the WHO SSC in obstetrics and gynaecology was low across the region, with many surgeries at moderate to high risk of postoperative complications. This highlights the pressing need for strategies to enhance adherence and patient safety in resource-constrained settings. Addressing facility and system barriers, empowering leadership, and promoting a culture of safety and ongoing training are essential. Policymakers and practitioners should also utilise the Surgical Apgar Score to assess outcomes and develop targeted interventions to enhance obstetric and gynaecological outcomes.