

## ABSTRACT

More than 313 million surgical procedures are carried out annually worldwide, with surgical mortality and complications estimated to range in affluent countries between 0.4-0.8% and 3-17%, respectively as reported by World Health Organization. In Africa, surgical patients are twice as likely to die following surgery when compared to the global average for postoperative fatalities. In Kenya, a national system for tracking perioperative mortality rate and surgical volume has not been established although a surgical target 5000 procedures per 100,000 populations has been set. It is important to understand the perioperative risks and their prevention in order to reduce length of hospital stays and avoid suffering and loss of life that result from complications of surgical procedures. This study aimed at determining the perioperative risks associated with surgical outcomes among patients undergoing elective surgery at Chuka County Referral Hospital, Kenya. The study was guided by the following specific objectives; to determine how patient related perioperative risks influences surgical outcomes, to determine how procedure related perioperative risks influences surgical outcomes, to establish how health system related perioperative risks influences surgical outcomes among patients undergoing elective surgery at Chuka County referral hospital. The study adopted a descriptive cross-sectional design. The study targeted all the surgical patients that were undergoing elective surgery annually at Chuka County Referral hospital. Published reports from the hospital records during the year 2021 indicated that 2005 patients underwent elective surgery at the hospital. A sample size of 202 patients was achieved through systematic sampling method. Both structured questionnaire and interview schedule were used to collect data. Quantitative information for each variable under examination was described using frequencies and percentages. At a 5% level of significance, a Chi square was employed to evaluate the association between perioperative risks factors and surgical outcomes. The study concluded that risks factors such as obesity, malnutrition, presence of comorbidities as well as harmful alcohol consumption and cigarette smoking have adverse effects on surgical outcomes among patients undergoing elective surgery with a  $p\text{-value} < 0.05$ . Therefore, appropriate interventions for the surgical environment should be considered. Complexity of a surgical procedure and duration of procedure are firmly regarded to be risk factors for surgical outcome (pain levels, blood loss Post-operative nausea and vomiting) among patients undergoing elective surgery with  $p\text{-value} < 0.05$ . Thus, surgical team should use judgment to accurately determine the risks associated with the surgery's perioperative period and whether further testing is necessary. Also, prolonged hospital stay was attributed to slow wound healing, wound infections, elevated blood sugar and financial constraints. Out-of-pocket payment can result in high medical expenditure such as surgical charges and other associated cost. Thus there is need for emphasis on importance of enrollment of general population in NHIF scheme. It is anticipated that the findings of this study will provide necessary information useful to policy makers in policy formulation and implementation of vision 2023, health workers and patients undergoing elective surgery on perioperative risks and associated surgical outcome. This will guarantee patients' undergoing elective surgery positive surgical outcomes with minimal complications and reduced morbidity and mortality rates.