

Impact of COVID-19 on Operation Room utilization efficiency and cardiac surgery care pathway Submission category – Original article

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Abstract

Introduction The COVID-19 pandemic has severely impacted theatre utilization and patient care in cardiac surgery. This study assesses impact on theatre utilisation efficiency and cardiac care pathway during Covid compared to preCovid period. **Method** OR data for preCOVID period (1st Jan to 23rd Mar 2020) for major cardiac cases were compared to COVID period for predefined indices of OR utilisation and efficiency. Categorical variables were compared with Chi-squared and continuous variables with Man Whitney U test. P value<0.05 was considered significant. **Results** Total 363 surgeries were logged (304; preCovid, 59; COVID). There was significant reduction in cases/day (median 5 cases/day preCovid to 1 case/day during Covid, p<0.001). OR utilization capacity was less than 50% for 36/65 (55.4%) Covid days versus 5/59 (8.5%) preCovid days (p<0.001). Almost half the Covid days (43.1%) had no operations. Patients during Covid were younger (median 62 years vs 69 years, p<0.01) but higher risk (logEuroscore 6.6 vs 4.7, p<0.01). Index of operational efficiency (InOE) remained unchanged (preCovid;78.8% vs COVID;79%, p=0.90). Covid adversely affected Surgical efficiency (preCovid;74% vs COVID; 68.5%, p<0.001). **Conclusion** There was significantly decreased workflow due to reprioritization of resources. Operational service could be delivered to high efficiency despite significant changes in patient care pathways.

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