

## APPENDIX

Table 5: Study concepts, their theoretical and operational definitions, and exemplar(s)

Concept	Theoretical Definition & Exemplar	Operational Definition/Measurement
Observed Length of Operation	Actual time of the operation observed from application of skin preparation solution to application of final wound dressing. Includes application of skin preparation solution to application of final surgical wound dressing.	<ul style="list-style-type: none"> <li>Measured as a continuous variable, in minutes.</li> </ul>
Expected Length of Operation	<p>Standard or average time taken from application of skin preparation solution to application of final wound dressing.</p> <ul style="list-style-type: none"> <li>Based on data obtained from senior surgeons' estimate of the anticipated (as planned) length of operation under ideal conditions.</li> </ul>	<ul style="list-style-type: none"> <li>Measured as a continuous variable, in minutes.</li> </ul>
Deviation in Length of Operation	Time in minutes based on the difference between the observed and the expected length of operation.	<ul style="list-style-type: none"> <li>Measured as a continuous variable, in minutes.</li> </ul>
Out of Hours	Semi-elective or emergency surgery that is not booked within the routine office hours. This surgery often occurs during evenings and overnight, and on weekends when there is fewer staff.	<ul style="list-style-type: none"> <li>Measured as a categorical variable,</li> <li>0 = no, 1 = yes</li> </ul>
Established Team / Team Familiarity	<p>A dedicated team comprising of a anaesthetic consultant and/or registrar, a surgical consultant and/or registrar, circulating nurse, instrument nurse, and an anaesthetic nurse, aware of each other's limitations through regularly working together, for instance;</p> <ul style="list-style-type: none"> <li>Worked together for at least 6 months or more on a weekly or fortnightly basis (not assembled ad hoc).</li> </ul>	<ul style="list-style-type: none"> <li>Measured as a categorical variable,</li> <li>0 = no, 1 = yes</li> </ul>
Prebriefings	<p>A deliberate and concise discussion performed by surgeons, anaesthetists, nurses and technicians to facilitate person-to-person transfer of relevant information in real time.<sup>8</sup> For example;</p> <ul style="list-style-type: none"> <li>The anaesthetist/surgeon discusses anaesthetic/surgical challenges during prebriefing.</li> <li>During the team prebriefing, the instrument nurse clarifies whether a certain piece of</li> </ul>	<ul style="list-style-type: none"> <li>Measured as a categorical variable,</li> <li>0 = no, 1 = yes</li> </ul>

equipment is required for the case with the surgeon.

Interruption	<p>A human experience, discontinuity in task performance, an intrusion of a secondary, unplanned and unexpected task, and externally or internally initiated.<sup>9</sup></p> <ul style="list-style-type: none"><li>• Classified according to its origin: procedural or conversational.<sup>32</sup></li><li>• Interruptions hinder work performance and concentration in surgery, and impose added workload for team members.<sup>3 4</sup></li></ul>	
Procedural Interruption	<p>A break in the flow of the operation as a result of Where an item of equipment was unavailable or not working, and the sub-team waiting for assistance from the circulating nurse were classified as procedural interruptions.<sup>32</sup></p> <ul style="list-style-type: none"><li>• Radiographer not present when required.</li><li>• Equipment failure.</li><li>• Circulating nurse teaching instrument nurse.</li><li>• Equipment not available in the room.</li></ul>	<ul style="list-style-type: none"><li>• Number of procedural interruptions tallied per procedure and analyzed as a continuous variable.</li></ul>
Conversational Interruption	<p>An occurrences that involved communication using mobile phones or the OR phone (located within the room), beepers, or conversation that was not related to the case being undertaken (case irrelevant conversation).<sup>32</sup></p> <ul style="list-style-type: none"><li>• Mobile phone ringing during surgery, surgeon request to verbally respond to call.</li><li>• Surgeon from an adjoining theatre discussing another patient with the surgeon who is operating.</li></ul>	<ul style="list-style-type: none"><li>• Number of procedural interruptions tallied per procedure and analyzed as a continuous variable.</li></ul>
Miscommunication	<p>An exchange where information was either incomplete, inconsistent, or key personnel were not included.<sup>17, 26</sup></p> <ul style="list-style-type: none"><li>• Miscommunications are classified according to taxonomy of communication episodes related to <i>audience, purpose, occasion, content, and experience</i>.<sup>17, 24, 25, 27</sup></li></ul>	<ul style="list-style-type: none"><li>• Number of communication failures in each classification tallied per procedure and analyzed as a continuous variable.</li></ul>

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