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## **‘Theatre Comm’ – optimising communication in surgical theatres during COVID-19**

Despite the severe restrictions on NHS secondary care during the COVID-19 pandemic, patients continue to present with surgical pathologies requiring intervention. Surgical processes have employed comprehensive strategies to mitigate the risks (and effects) of viral transmission, including universal adoption of personal protective equipment (PPE). However, successful, safe surgery requires technical and non-technical skills which interact to guide overall performance and outcomes. We explored the experiences of surgical teams during the pandemic [1] and found that teams were having major problems with communication.

Good communication is critical for effective clinical practice and has a huge influence on teamwork in the operating theatre. Communication failures can have negative effects on system processes including inefficiency, undesirable patient experiences and procedural errors [2]. Although masks have always posed challenges to communication during surgery[3], COVID-19 has transformed the requirements for PPE. The cumbersome nature of enhanced PPE such as FFP3 increases communication challenges both within and between surgical, anaesthetic and scrub sub-teams. It can be difficult to hear others within theatre, adversely affecting the sharing of crucial information. Furthermore, those inside theatre are ‘cocooned’ from those outside, posing additional difficulties when communicating with key staff outside theatre such as runners. Some staff have highlighted the need to raise their voices, or even shout, meaning that communicating with patients is also affected. In addition, the inability to see the faces of healthcare professionals removes the verbal and non-verbal mechanisms normally used to provide reassurance. Consequently, pre-operative preparation and induction of anaesthesia are now an (even more) anxiety inducing process for some.

There have been some innovative global strategies used to address these communication issues. Social media has been filled with images of healthcare workers with photos of themselves on their PPE-covered chests to help improve patients’ experience [4]. However, interprofessional communication may require more technologically advanced solutions. Teams from University College London, Bristol University and the Royal Free Hospital are collaborating to conduct the **‘Theatre Comm’ project** in a bid to combat the negative effects of PPE on communication in the operating theatre. This work explores the use of alternate “off-the-shelf” audio-communications solutions in operating theatre settings. We aim to identify the specifications of an “ideal” communication system for combining with PPE, and then compare the trial technologies against this standard. We will use mixed qualitative methods including interviews with theatre staff and patient, analysis of the audio recordings of interactions, and a Delphi process. Alongside this, rapid review will identify related published research. We hope to provide practical solutions for other theatre teams attempting to overcome communication related challenges and thereby elevate patient safety, and reduce operating time and staff exposure time, in the current, challenging global environment.

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