**Project Reference: RES-000-22-3016**

**Project Title: Gaze strategies of laparoscopy surgeons: Observational learning, implicit knowledge and performance in demanding conditions**

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This research aims to further our understanding of the perceptual and motor processes that underpin technical surgical skills.

A series of studies will investigate the gaze behaviour of expert surgeons with a view to determining whether learning of a laparoscopic task is advantaged by an intervention that educates the gaze strategy of novice surgeons to mimic the expert surgeon.

The research is broken down into two phases led by experts from the UK and Hong Kong. The UK Collaborators will first investigate the gaze strategies that support expert compared to novice laparoscopy skill. Secondly, this research will examine if changes in gaze strategies accompany the breakdown of laparoscopy skills under pressure. The HK collaborators will build upon this work and test the efficacy of an intervention that uses an observational learning paradigm to train the gaze strategy of learner surgeons to mimic that of expert surgeons.

The project is timely in that it is proposed during a period of flux in the health services of the UK and Hong Kong. Resident surgeons will be expected to complete their training more quickly than was previously the case, so the need to fine-tune surgeon training is critical.