

A realist process evaluation of robot-assisted surgery: integration into routine practice and impacts on communication, collaboration and decision-making

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Disclaimer: This report contains transcripts of interviews conducted in the course of the research and contains language that may offend some readers.

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Plain English summary

Implementation of robot-assisted surgery and its impact on teamwork

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Plain English summary

Surgical robots are being introduced into the NHS but there are reports that they are underused. In robot-assisted surgery, the surgeon is separated from the patient and the theatre team, changing the nature of communication and teamwork. We wanted to understand what is needed for robot-assisted surgery to be successfully introduced into the NHS, to help improve its use for operations where it offers benefits to the patient over other techniques. We also wanted to know how to ensure good communication and teamwork in the operating theatre when robot-assisted surgery is undertaken.

We looked at articles and websites to find ideas about these topics. We then worked with theatre teams across nine NHS hospitals to revise those ideas to reflect their experiences. We tested their ideas by observing and video recording operations across four NHS hospitals.

The findings indicate that training as a team, having handpicked dedicated teams, and having suitably sized operating theatres are important for the successful introduction of robot-assisted surgery. The training provided to theatre teams varies between hospitals. Robot-assisted surgery can present challenges for teamwork. Strategies used by theatre teams for overcoming these challenges include clearer communication, with surgeons getting the attention of the team before making a request and team members confirming that they are completing that request. Working with an experienced assistant supports teamwork, and experienced scrub practitioners play an important role in supporting assistants who lack experience. Robot-assisted surgery can result in increased concentration for the surgeon, but only when he or she is supported by an experienced assistant or scrub practitioner.

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