



# Setting-up the perfect Robotic Surgical Programme; a qualitative observational and interview study of staff experiences at two tertiary UK hospitals.

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## INTRODUCTION

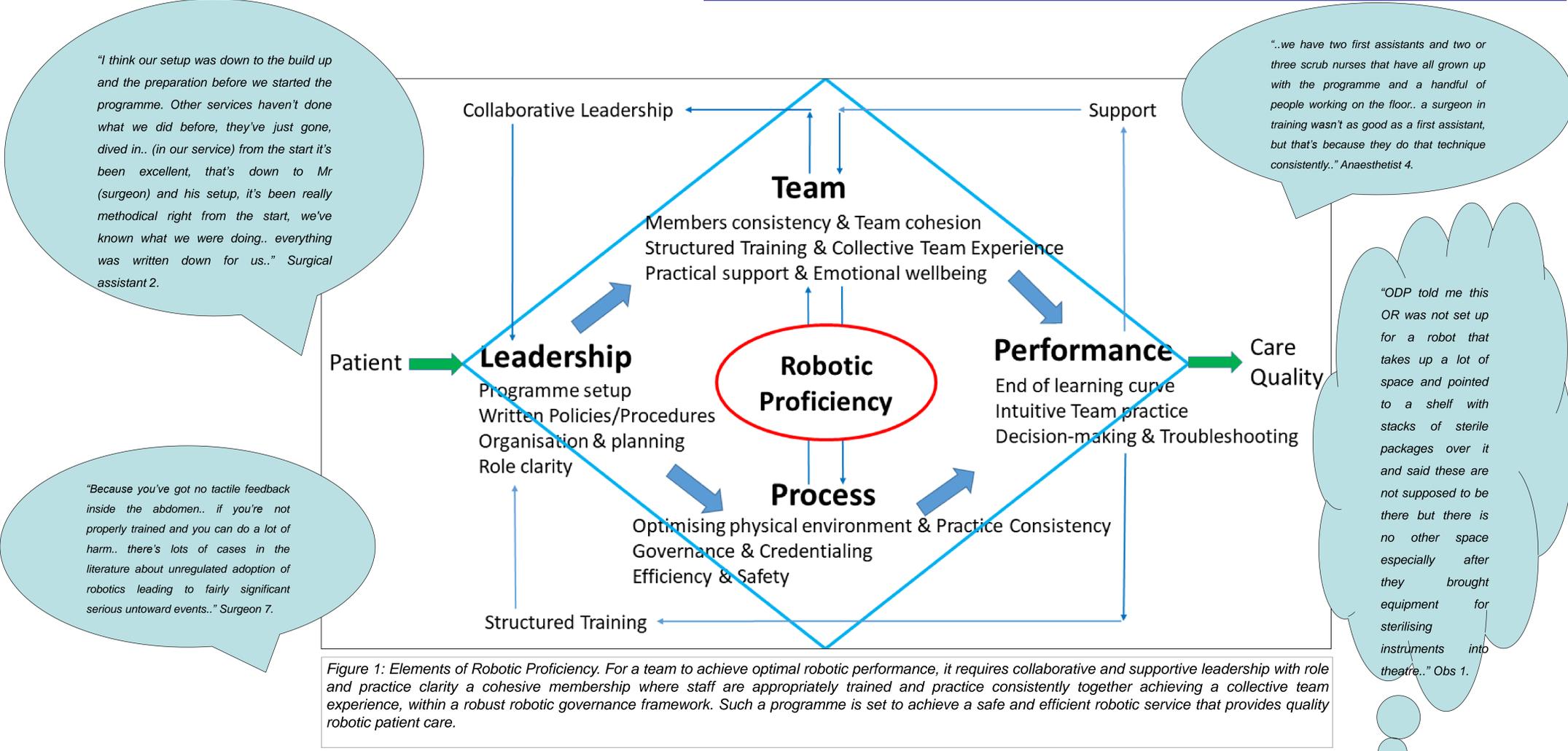
Despite the worldwide spread of robotic surgery, it remains a relatively new surgical modality, particularly in the UK (1). Surgical teams face logistical challenges for set-up, safety and efficiency with the robot as a new “team member”.

The aim of this study was to explore staff experiences for adapting to new working approaches at two tertiary established robotic centres to inform how to ensure high quality outcomes.

## METHODS

The study was approved by Sheffield Research Ethics Committee: 18/YH/0098, and local research departments.

Robotic procedures were observed at 2 tertiary hospitals, and laparoscopic/open procedures were added for comparison; field notes were taken contemporaneously. One-to-one interviews with the interprofessional theatre team members were audio recorded and transcribed verbatim. Qualitative analysis was conducted using grounded theory via NVIVO12.



## RESULTS

Twenty-nine participants (26 interviewed) were recruited to the study (11 females) and 134 (109 robotic) hours of observation were completed across gynaecology, urology, and colorectal surgery. Data coalesced around three major themes relating to 1) The Robotic Team (structure and consistency, training and experience and teamwork and support, 2) Theatre processes (factors relating to theatre efficiency and patient safety) and 3) Staff emotions (positive and negative emotions, including active and passive stressors).

Data synthesis and comparison within and between sites proposed a robotic proficiency theory (figure 1) which relies on four major pillars: 1. Collaborative and supportive leadership, 2. A well-trained and supported team, 3. Consistent processes with robust governance, and 4. Optimal performance at the end of the team's learning curve.

## CONCLUSIONS

This study presents the first in-depth analysis of the impact of presence of the surgical robot on theatre dynamics and team interactions. It sets a theoretical framework of setting up a safe and efficient robotic programme to provide quality patient care. This may guide hospitals and teams wishing to adopt robotic surgery regardless of surgical discipline.

## References

1. El-Hamamsy D, Geary RS, Gurol-Urganci I, van der Meulen J, Tincello D. Uptake and outcomes of robotic gynaecological surgery in England (2006-2018): an account of Hospital Episodes Statistics (HES). Journal of robotic surgery. 2021.