Utilisation of Plastic Surgery Theatres in a Single UK Centre

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Introduction

Given the large proportion of hospital budget spent on the operating department, it is essential that optimal utilisation is achieved in order to maximise cost-efficiency (1). The average cost of a NHS operating theatre is £1,200 per hour (2). Therefore, if one theatre is open for 8 hours a day for 5 days a week, £4,800 could be saved per week if a 10% utilisation improvement is seen. In this study, theatre utilisation is defined as the percentage of available theatre time booked for plastic surgery lists used by anaesthesia and operating (3).

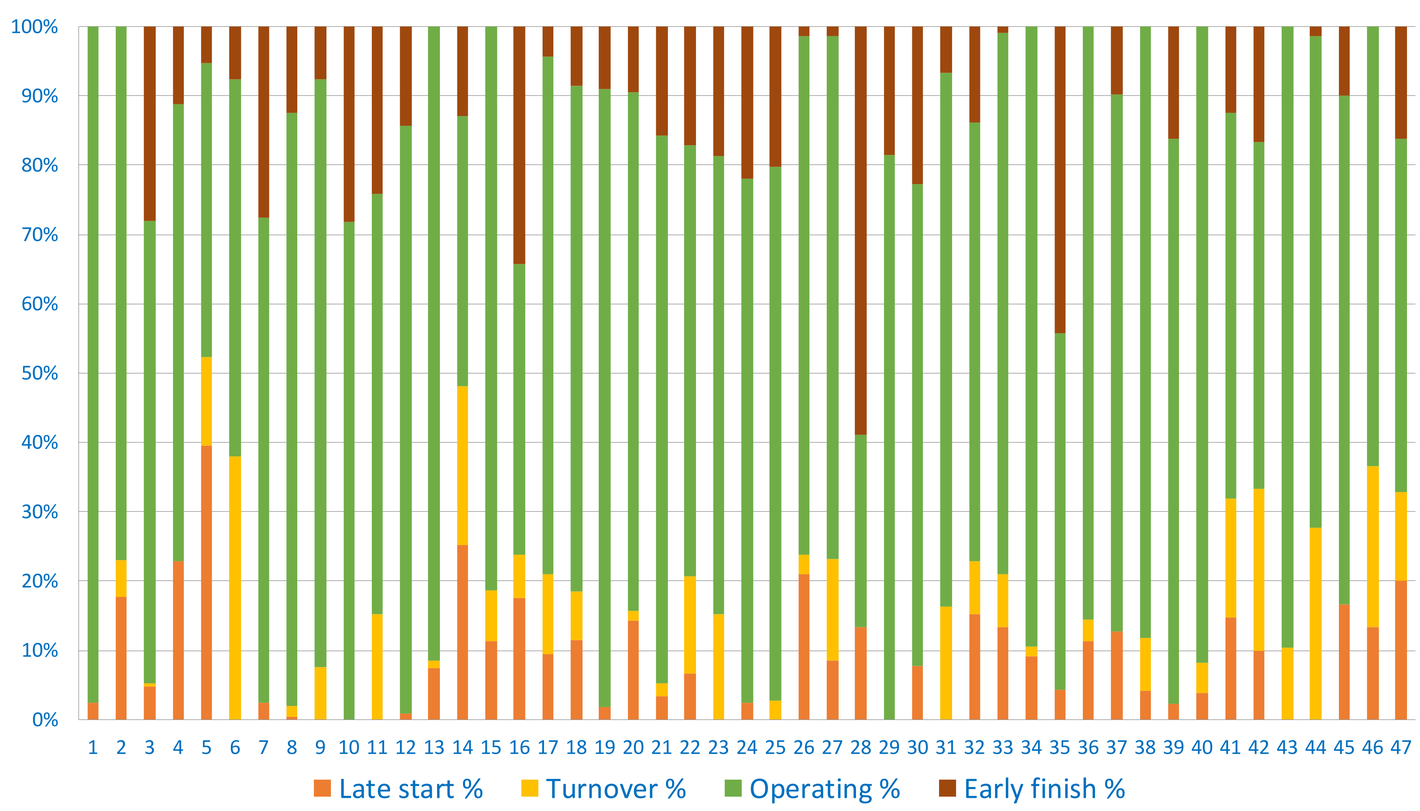
Aim and standards

This audit aimed to assess the utilisation of plastic surgery theatres in one NHS hospital by analysing the operative times. There are no standard guidelines for plastic surgery theatre utilisation. UK governmental institutions have provided figures on national theatre utilisation suggesting that operating departments should aim for 90% utilisation (4) (5) but there has been little research to validate the target of 90%. In 2018, the NHS Benchmarking Network's Operating Theatres project suggested a minimum of 83% utilisation should be achieved by general surgery theatres (6).

Methods

The database 'Opera' was accessed to retrospectively analyse plastic surgery theatre times. Operative time was defined as the time entering the anaesthetic room to the time the patient left theatre. Theatre utilisation was calculated as a percentage of total scheduled theatre time used by operative time. Start time delay was calculated as the difference between theatre scheduled start time and the time the patient entered the anaesthetic room. Turnover time was defined as the time between a patient leaving theatre and the next patient arriving in the anaesthetic room. The time the patient was sent for was also recorded.

Graph showing the proportion of theatre list schedule used by late starts, turnover, operating and early finishes per theatre list



Results

- 104 plastic surgery operations on 47 operating lists covering 7 different theatres were included in this analysis of theatre utilisation.
- Overall theatre utilisation rate of 76.7% (median per list 74.8%).
- 33 lists started late wasting 7.5% of scheduled theatre time (median 20 minutes).
- 6.5% of scheduled theatre time was wasted by patient turnover time (median 14 minutes).
- 12.1% of scheduled theatre time was wasted by early finishes (median 36 minutes).
- The median time it took for a patient to arrive in theatre after being sent for was 14 minutes. 25% of patients were sent for more than 14 minutes before the end of the previous operation.

Conclusion and recommendation

Theatre utilisation in plastic surgery theatres at this trust is below the recommended level due to delayed start times, delayed turnover times and early finishes.

- Aim to perform the 'huddle' in theatre half an hour before the list begins.
- Communication of a 30-minute and 15-minute warning so patients can be sent for earlier to decreased turnover time.
- Re-audit after changes have been made. If start times and turnover times are improved, there is the potential to add extra patients to theatre lists, increasing theatre utilisation.

References

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