



# Standards in peri-operative monitoring.

An audit measuring mean transfer time from theatre to recovery to assess quality of monitoring perioperatively.

Supervisor: Dr Ruth Ford Author: Alitta Abraham

## Introduction

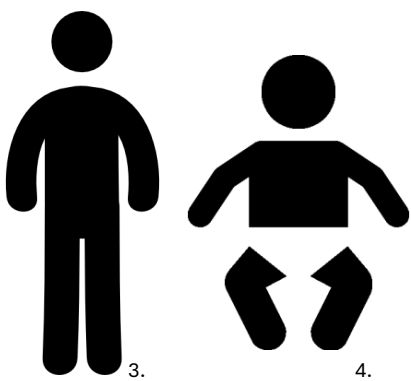
- Continuous monitoring of vital signs in patients during the immediate peri-operative period is important to pick up any complications due to surgery or anaesthesia in a timely manner.
- **STANDARDS** of monitoring during anaesthesia and recovery 2021 (2) set out by the Association of Anaesthetists state monitoring on transfer should be similar to the operating theatre. Also, a transfer time of less than 5 minutes is favourable.
- **AIM** of this audit is to quantify the mean time taken for transfer of patients across 4 different theatres performing different types of surgeries on varying ASA graded patients.
- **TARGET** is to keep time between the last set of observations completed in theatre and the first set of observations completed in recovery under 5 minutes according to guidelines set by the association of anaesthetists.

## Methodology

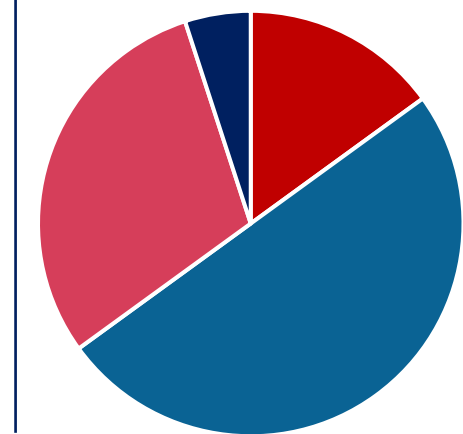
- Reviewed anaesthetic and recovery records of 20 patients and calculated the time difference between their last observation taken in theatre and first observation taken in recovery.
- Patients ranged from ASA grades 1-4 and had surgeries with different specialities including general surgery, ENT and obstetrics & gynaecology in 4 different theatres.
- Any immediate recovery action and the use of 'pods' which transferred patients' observations from theatre to recovery was also noted.

## Results

### Patient demographics



19:1

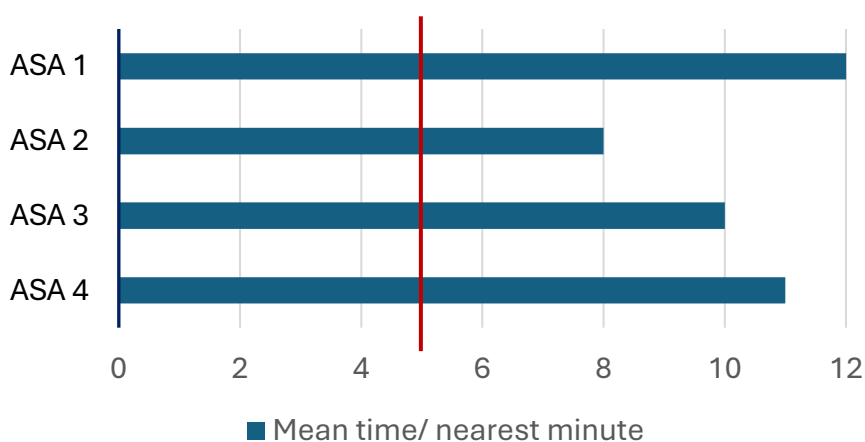


■ ASA 1 ■ ASA 2 ■ ASA 3 ■ ASA 4

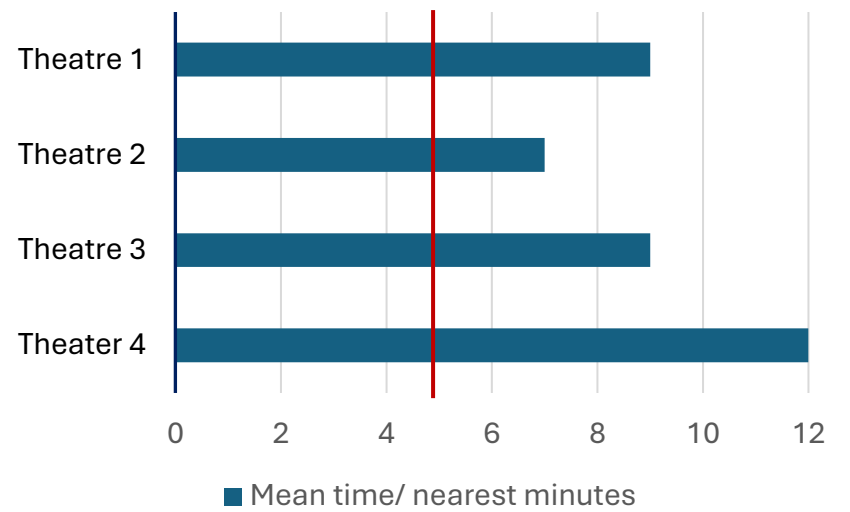
Mean time for all 20 patients was **9 minutes 9 seconds**

Mean time according to **ASA grade** to nearest minute

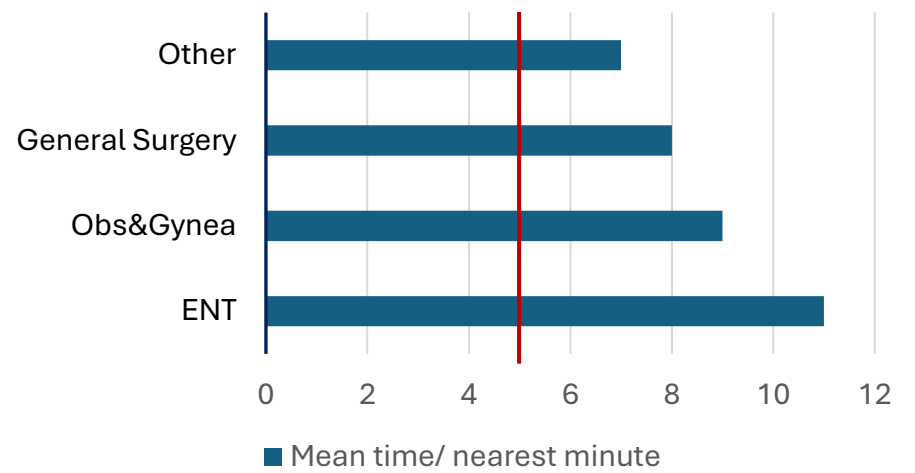
\* Red line marks 5-minute mark



Mean time according to **theatre** to nearest minute.



Mean time according to **surgery speciality** to nearest minute.



- 'Pods' were used each time, and two significant events were recorded.

## Conclusion

The target of a transfer time **LESS THAN 5 MINTUES** was **NOT** met for any patient in this audit.



**ASA 1 graded patients** had the longest mean time compared to other grades. However, looking at the raw data this could be due to one outlier.

Patients from **theatre 4** had the longest mean time. Possible causes include physical distance between theatre and recovery.

**ENT surgeries** had the longest mean time for transfer.

### Recommendations

1. Set up monitoring during the transfer of patients using portable monitors.
2. Reduce transfer time by identifying specific obstacles on route e.g. busy or bottle necked corridors, unavailability of staff or beds

### Further steps

A reaudit with the above recommendations put in place would need to be carried out. Additional information useful in the next audit include:

- Distance of each theatre to recovery and any obstacles in the way, for example a busy corridor.
- What specific surgery is being performed for each patient.

1. Pngtree. (2021). Vital Signs PNG Transparent Images Free Download | Vector Files | Pngtree. [online] Available at: <https://pngtree.com/so/vital-signs> [Accessed 1 Oct. 2024].  
 2. Klein, A.A., Meek, T., Allcock, E., Cook, T.M., Mincher, N., Morris, C., Nimmo, A.F., Pandit, J.J., Pawa, A., Rodney, G., Sheraton, T. and Young, P. (2021), Recommendations for standards of monitoring during anaesthesia and recovery 2021. Anaesthesia, 76: 1212-1223. <https://doi.org/10.1111/anae.15501>  
 3. Clipart (2020). Free Clip art - Clip Art Collection - Download Clipart on Clipart Library. [online] Clipart-library.com. Available at: <https://clipart-library.com/>.  
 4. Freeiconspng.com. (2014). Baby Icon, Transparent Baby.PNG Images & Vector - FreeiconsPNG. [online] Available at: <https://www.freeiconspng.com/images/baby-icon> [Accessed 1 Oct. 2024].  
 5. Pngtree. (2019). Checklist Silhouette PNG And Vector Images Free Download - Pngtree. [online] Available at: <https://pngtree.com/so/checklist-silhouette> [Accessed 1 Oct. 2024].  
 6. Pngtree.com. (2024). Available at: <https://pngtree.com/so/hospital-bed-silhouette> [Accessed 1 Oct. 2024].  
 7. PNG Play. (2020). Ear Shape, Outline, Vector Free PNG. [online] Available at: <https://www.pngplay.com/image/118608> [Accessed 1 Oct. 2024].