

## Background

An increasing majority of paediatric anaesthesia is performed for day case procedures. This is partly attributable to increasing pressure on beds and services. Failure to discharge home has a negative impact on patient and family, hospital finances and provision of other services. It is recommended that all departments regularly audit their unplanned admissions (1). The Royal College of Anaesthetists propose that unplanned admission rates should be <2% in adults (2). Paediatric admission rates may approximate this (3,4).

Phase 1 was performed in early 2017. The aim of which was to gauge the approximate total number of day case general anaesthetics performed and the total number of unplanned admissions in the study hospitals over a 12-month period (1<sup>st</sup> Jan 2016 - 31<sup>st</sup> Dec 2016). This acted as a baseline on which to design Phase 2, by informing us about the required duration of data collection period. A total of 63 hospitals engaged in Phase 1. 48 were able to provide a full data set.

Based on the figures collected from Phase 1, the total annual day case procedures for the 48 hospitals contributing data was 101381 cases, with 4515 admissions. We estimate that the monthly figure would be approximately 8448, with 376 unplanned admissions for these 48 hospitals. We are aware that there may be some data inaccuracy owing to it being retrospective. We aim to increase the size of these figures by running the study phase for 6 weeks and to recruit more than 48 hospitals.

## Aims of Phase II

1. To more accurately identify the proportion of unplanned admissions after paediatric day case anaesthesia across the UK in both specialist and non-specialist paediatric centres in a national prospective audit.
2. To identify common contributors involved in unplanned admissions.
3. To generate data to target future quality improvement projects by the APA, PATRN and individual centres, and hence improve day case anaesthesia for children.

## Methodology

This is a national audit. Patients will be eligible if they are 0 – 16 years old and booked for a day case general anaesthetic. This will include patients undergoing general anaesthesia for surgery, endoscopies and radiology purposes. Patients having an urgent, non-elective procedure, but booked to come in and go home on the same day will be included.



Paediatric patients undergoing procedures or radiology scans under sedation will be excluded.

For each unplanned admission, data will be collected regarding patient demographics, procedure details and reason for admission. Patients will be identified as unplanned admissions via the assistance of the day care wards, bed managers and the post-operative care unit. At the end of the 6 week study period the total number of planned day case procedures will be extracted from the theatre IT systems. The denominator number minus the unplanned admissions forms the control group. The same variable data as for the unplanned admissions will be collected. Please see [Data Collection Guide](#) for advice on how to set this audit up.

## Timeline

Data will be collected between 10<sup>th</sup> October and 21<sup>st</sup> November 2017 and should be uploaded to the safe data portal by 20<sup>th</sup> December 2017. You will receive a certificate of contribution by February 2018. We aim to complete analysis and write up by Autumn 2018.

## References

1. Guidance on the Provision of Anaesthetic Services (GPAS). Royal College of Anaesthetists. 2016
2. Raising the Standard: a compendium of audit recipes. Section 5: Day Surgery Services, Section 9: Paediatrics. Royal College of Anaesthetists. 3<sup>rd</sup> edition, 2012
3. Paediatric day-case surgery: an audit of unplanned hospital admission Royal Hospital for Sick Children, Glasgow. Blacoe DA, Cunning E, Bell G. Anaesthesia. June 2008 63(6):610-652
4. Awad IT et al. Unplanned hospital admission in children undergoing day-case surgery. European Journal of Anaesthesiology. May 2004:21(5):379-383

