might help the attending anaesthesiologist to formulate a strategy to allay the anxiety in these patients. This is the pioneer study highlighting a very high desire for information not only for surgery but also for anaesthesia among neurosurgical patients of a developing country. Our study was limited by recruitment of all the patients from 1 centre so culture and clinic specific factors can alter the findings.

[SNACC-120] Evaluation of the PEGASUS Clinical Pathway Implementation on Severe Pediatric Traumatic Brain Injury Patients

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Background: Traumatic brain injury (TBI) is a leading cause of disability and death and a significant public health problem. Adherence to evidence based guidelines is associated with improved discharge survival in severe pediatric TBI. Three key performance indicators (KPIs), namely avoidance of unwanted hyperventilation in the absence of herniation, maintenance of all cerebral perfusion pressure (CPP) >40 mm Hg, and start of nutrition within 72 hours, are protective. The Pediatric Guideline Adherence and Outcomes (PEGASUS) program is a multilevel, implementation science guided, comprehensive quality improvement effort developed in 2011 and implemented in 2014 at Harborview Medical Center (HMC) that includes clinical protocol (KPIs), value added processes, and provider perspectives. We hypothesized that implementation of PEGASUS program is associated with improved adherence to KPIs and favorable discharge outcomes.

Methods: This is a quasiexperimental, pre-post interventional study. After IRB approval, data were extracted from the Harborview Trauma Registry and electronic medical record system. Program phases were Baseline (January 2007 to December 2011), Development (April 2011 to March 2014), and Implementation phase (from April 2014 to December, 2016). Inclusion criteria were patients age older than 18 years, TBI, admission Glasgow Coma Scale (GCS) <9, and abnormal head CT. Patients admitted with less than severe TBI but who deteriorated were included. KPI adherence and favorable discharge disposition (discharge home or rehabilitation) were examined across PEGASUS phases. χ^2 and Student t test were used for univariate tests. P-values are compared with baseline phase.

Results: A total of 56 patients from baseline phase (5 y), 103 patients from development phase (3 y), and 89 patients from implementation phase (2.75 y) were identified. Avoidance of unwanted hyperventilation increased from 12.5% to 61% and 69.2% (both $P<0.0001$), all CPP maintained >40 mm Hg remained the same at 69.6%, 62% ($P=0.23$), and 60% ($P=0.14$), Nutrition initiation within 72 hours increased nonsignificantly from baseline at 91.1%, to 84% ($P=0.13$), and finally to 94.2% ($P=0.42$). Favorable discharge disposition increased from 55.4% to 70.3% ($P=0.03$) and 71.9% (0.01).

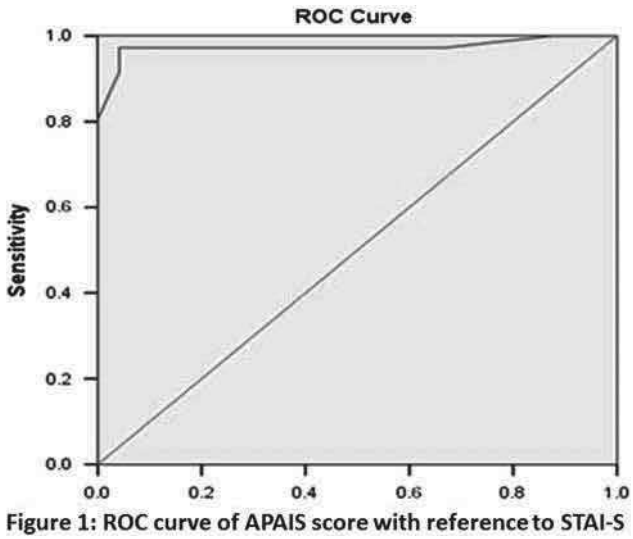
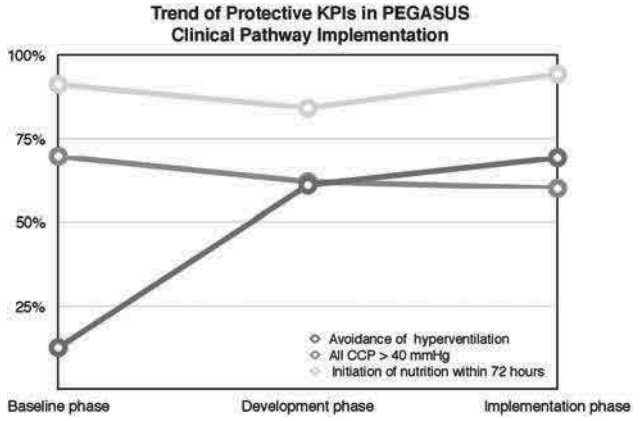


Figure 1: ROC curve of APAIS score with reference to STAI-S



Discussion: Implementation of the PEGASUS program increased adherence to the ventilation KPI and improved discharge outcome. The change in nutrition was less sensitive to PEGASUS program implementation, possibly due to relatively high baseline adherence rate. CPP maintenance rates did not change but efforts made to increase CPP were noted by nursing staff.

[SNACC-121] Towards Personalized Anesthesia: Predictive Factors for Propofol Requirements for Loss of Consciousness

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The importance of personalized medicine is becoming increasingly recognized. We previously reported a wide variability in individual patient propofol requirements for loss of consciousness (LOC).[1] The aim of this study was to identify the physiologic variables that may contribute to the observed interindividual variability.

Data of 217 adult patients submitted to neurosurgical procedures were retrospectively analyzed. Only patients submitted to TIVA with propofol and remifentanil were considered. In all cases 1% propofol was infused at a slow rate (around 200 mL/h) with a TCI pump, to allow the precise identification of the amount required for LOC. LOC was identified as lack of eye opening to name calling and a tap on the forehead. Variables considered for analysis were: age, weight, height, lean body mass, sex, ASA status, type of surgery, baseline arterial pressure, baseline heart rate and baseline BIS value. The amount of propofol (mg) required for LOC, the propofol predicted effect-site concentration (EC ug/mL) at LOC (Schnider's PK model), and the induction sequence (propofol or opioid first) were also noted. Multivariate Regression Analysis was used to determine if any of the patient data and baseline recordings were predictors of the propofol amount (mg or mg/kg) required for LOC, or of the predicted propofol EC at LOC.

The propofol EC ug/mL at LOC: IQ range (3.1 to 5.3) (71%). The total amount of propofol in mg at LOC: IQ range (71.8 to 116.3) (62%). Propofol for LOC in mg/kg: IQ range (1.1 to 1.7) (55%).

The identified independent predictive factors for the propofol EC at LOC were: sex ($P<0.001$) and baseline SAP ($P<0.001$), with $R^2=0.25$ ($P<0.001$). For the propofol total amount in milligrams required for LOC the identified independent predictive factors were: age ($P<0.001$), sex ($P=0.018$), weight ($P=0.009$), and baseline SAP ($P<0.001$), with $R^2=0.31$ ($P<0.001$). For the propofol total amount in mg/kg the independent predictive factors were: age ($P<0.001$), sex ($P=0.045$), weight ($P<0.001$) and baseline SAP ($P<0.001$), with $R^2=0.3$ ($P<0.001$). For all, the female sex and age decreased the propofol requirements, while higher SAP baseline values increased the propofol requirements.

We show a wide variability in individual patient propofol requirements to induce LOC, which is critical. This variability was observed even when EC were used, although PK models already incorporate sex, age, weight,

and height. Interestingly, the baseline SAP and sex, proved to be independent predictive factors and explained at least 25% of the variability.
Acknowledgements: LAETA-INEGI; FCT: SFRH/BD/98915/2013.
Reference:
1. Walia H, Schloss B, Tobias J. Proceedings from the American Society of Anesthesiologists; 2015. Abstract 4151.

[SNACC-122] A Survey Assessing Attitudes Regarding Neuroanesthesia Fellowship Amongst Attending Anesthesiologists, Fellows and Residents

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Background: Despite advances in the exciting field of neuroanesthesiology, the number of residents applying for a neuroanesthesia fellowship is still low compared with other anesthesiology fellowship programs. We conducted a survey on behalf of the Society for Neuroscience in Anesthesiology and Critical Care (SNACC) Neuroanesthesia Education Special Interest Group (SIG) to assess attitudes regarding neuroanesthesia fellowship training.

Methods: The survey was administered to all e-mail addresses contained within SNACC's database and was also administered to members of the Society for Education in Anesthesiology (SEA) and the Society of Academic Anesthesiology Associations (SAAA). Additionally, members of the SNACC board of directors were asked to distribute the survey to

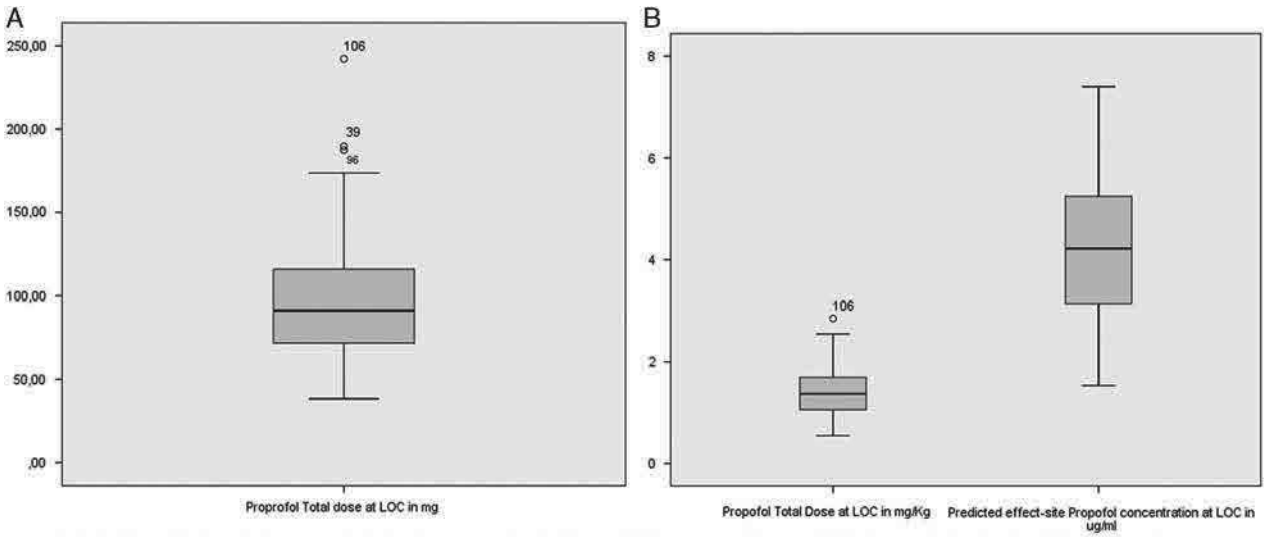

Figure 1: Data distribution for the propofol requirements at loss of consciousness (LOC): A) - propofol total dose in mg; B) - propofol total dose in mg/Kg and predicted effect-site propofol concentration (ug/ml) uisng the Schnider Pk Model.

Table 1: Patient demographics and recorded data (Data are mean±SD or %).

Patient demographic data and baseline values (before induction)	
Age (years)	53 ± 15
Weight (Kg)	69 ± 13
Height (cm)	164 ± 11
Lean Body Mass (Kg)	47 ± 9
Baseline Systolic Arterial Pressure (SAP) (mmHg) Baseline Diastolic arterial pressure (mmHg)	140 ±20 82 ±11
Baseline Mean arterial Pressure (mmHg)	102 ±13
Baseline Heart Rate (bpm)	72 ± 14
Baseline BIS	93 ± 10
Male /Female	48.8% /51.2%
ASA status: I/ II/ III	26.4% /56.4 % / 17.3 %
Type of Surgery: Craniotomy /Spinal	57.2 % /42.8 %
Propofol Data at Loss of Consciousness (LOC)	
Total dose in mg	96 ± 32 Range: 38 to 242mg
Total dose in mg/Kg	1.4 ±0.5 Range: 0.6 to 2.9mg/Kg
Effect-site concentration in ug/ml	4.3 ± 1.3 Range: 1.5 to 7.4ug/ml