was reduced from 75 (interquartile range: 60-93) minutes to 46 (33-59) minutes (p<0.0001). The median DTN time in the early and late post-modification phases was not different (41 versus 46 minutes, p=0.4085). Functional outcome at 3 months was not different in the two groups (proportion of mRS≤1: 34% versus 28%, p=0.882). *Conclusions:* We were able to decrease our DTN time for treatment of acute stroke by implementing simple modifications and these improvements persisted over time.

P.064

Delays in the emergency department for stroke patients, medical complications and predictors of outcomes: the McGill experience

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Background: The Canadian Stroke Best Practice recommends admission of patients to a specialised stroke unit within three hours. We aimed at assessing delays in our emergency department (ED) and correlating these with medical complications and clinical outcomes. *Methods:* Predictors and outcomes This is a retrospective review of patients (n=353) admitted with ischemic strokes (January 2011-March 2014). We assessed the length of stay in ED, medical complications in ED and in the stroke unit, functional status (modified Rankin Scale) at discharge and survival. *Results:* The median delay in ED was 13.8 hours. The rate of medical complications in the ED was 14% (most common being delirium), compared to the stroke unit with 46.7% (most common being pneumonia). Worse functional outcome was correlated with diagnosis of pneumonia (standardised β coefficient=0.2, p=0.001) and presence of brain oedema in the stroke unit (standardised β coefficient=0.2, p<0.01). Increased risk of death was correlated with brain oedema (OR=649.2, 95%CI=19-2184, p<0.01) and sepsis in the stroke unit (OR=26.8, 95%CI=2.1-339, p<0.01). *Conclusions:* We found a significant delay in the admission of our patients from the ED to the stroke unit, which is not in keeping with the present guidelines. Medical complications were correlated with worse outcomes. Future analyses will correlate ED delays with clinical outcomes.

P.065

The impact of a risk algorithm on time-to-care: targeting triage for acute cerebrovascular syndrome (ACVS) patients in a rapid TIA clinic

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Background: Approximately, one-third of TIA clinics use the ABCD^2 score to triage referrals. However, the usefulness of the score is limited because of its low specificity for non-cerebrovascular/mimic conditions. Timely access of referred patients to specialized TIA clinics may reduce recurrent stroke. *Methods:* The SpecTRA project implemented a novel electronic triage system in the TIA clinic that services Vancouver Island (BC), which replaced the existing ABCD^2 triage model. A clinical classifier generating an ACVS probability score was calculated on the basis of the clinic referral form information. Next, a time-varying ABCD^2-based risk score derived from Johnston et al. (2007) was calculated, which is then weighted by the ACVS probability score to produce a finalized triage score. Time-to-care was compared pre- (2013/14) and post- (2014/15) implementation. *Results:* One year results show a statistically significant improvement in that time-to-care for ACVS patients (ABCD^2 4/5) was one day earlier with the new triage system (median= 4days since symptom onset; N=250) compared to the previous year (median=5days; N=255) (Mann-Whitney U=38130, p< 0.001). No difference in unit arrival times (median= 5days) for non-cerebrovascular patients was observed (Mann-Whitney U=5563, p= 0.15). *Conclusions:* The performance of our ACVS triage system highlights quality improvement potential in time-to-care for outpatient TIA clinics.

P.066

Failing a dysphagia screen after acute ischemic stroke is highly predictive of poor outcomes

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Background: Bedside dysphagia screening is recommended for all patients with acute ischemic stroke, in order to detect swallowing impairment early and prevent complications. However, limited data are available on outcomes associated with failing a dysphagia screen. *Methods:* We used the Ontario Stroke Registry to identify patients who were admitted to Regional Stroke Centres from 2010-2013 and received a dysphagia screen within 72 hours. We used multivariable regression to determine outcomes of patients who failed the dysphagia screen. *Results:* Among 5145 patients who underwent dysphagia screening, 2458 (47.8%) failed and 2687 (52.2%) passed. Patients who failed had more co-morbidities and presented with more severe strokes (mean NIHSS 11.0 vs. 5.4). Among those who failed, 9% required permanent feeding tubes, versus 0.1% among those who passed. After controlling for age, co-morbidities, and stroke severity, failing a bedside swallowing screen remained highly predictive of poor outcomes, including decubitus ulcer (adjusted odds ratio aOR 10.5), pneumonia (aOR 4.6), discharge to long-term care (aOR 4.1) and 30-day mortality (aOR 4.5; 16.6% vs. 2.2%). *All p <0.0001 *Conclusions:* Patients who failed a dysphagia screen on admission had dramatically worse outcomes after controlling for baseline factors. A bedside dysphagia screen provides immediate risk stratification for acute stroke patients and can be used to guide appropriate care.

P.067

Incidence of tissue-defined stroke and large vessel occlusion in acute stroke alerts in a non-teaching hospital system

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Background: Stroke alerts are used to triage patients with acute neurologic change for rapid imaging evaluation. CTA has been advocated to rapidly triage stroke patients for endovascular therapy. However, the yield of this approach is not well established. We

evaluated the stroke alert yield in a non-teaching hospital system. *Methods:* A retrospective review of radiology reports for stroke alerts using PACS archive. Cases were then followed for 72 hours to determine the types of advanced imaging obtained and the findings of those studies. *Results:* From January to March 2014, 269 stroke alert head CTs were performed. Subsequent imaging included 128 MRIs (48%), 25 CTAs (9%) and 2 angiograms (0.7%). There were 58 (22%) tissue-defined strokes and 16 were non-lacunar (6% stroke alerts). 61% of stroke alert head CTs were negative or reported microvascular change. Other findings included large vessel occlusion (5%), intracranial stenosis (1.5%), extracranial stenosis(1.5 %), intracranial hemorrhage (9%) and masses (13%). *Conclusions:* Most stroke alerts were negative for tissue-defined stroke. Based on this data, universal use of CTA in the ER to triage patients with acute neurologic symptoms may not be appropriate. An updated triage system to facilitate endovascular rescue is being analyzed for changes to advanced imaging utilization and yield.

Neurophysiology

EEG

P.068

Reliability of EEG reactivity in assessment of comatose patients utilizing a standardized protocol

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Background: Electroencephalogram (EEG) is used in evaluating thalamocortical function in comatose patients. EEG reactivity is increasingly being recognized as a potentially important predictor of outcome in comatose patients. There are no existing guidelines or standardized testing for EEG reactivity assessment. We will report the use of a clinically implemented standardized reactivity testing protocol in comatose patients to determine accurate prognosis. *Methods:* In this retrospective study we report results from standardized reactivity testing from January 2016 to May 2016. Five stimuli (Calling name, clapping, nasal tickle, noxious stimulus, tracheal suctioning) were applied at one minute intervals in comatose patients of all etiologies. The EEG background reactivity will be analyzed by two independent electroencephalographers ad correlated to clinical outcome. *Results:* The methods for establishing EEG reactivity and the inter-rater reliability in determining EEG reactivity will be reported. *Conclusions:* EEG background reactivity is likely beneficial in determining prognosis. However, reliable methods for eliciting and determining EEG reactivity in comatose patients are necessary.

P.069

The predictive factors of electroencephalograms with epileptiform activity in psychiatric patients

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Background: Psychiatrists commonly use electroencephalogram (EEG) to rule out epilepsy as a cause of psychiatric symptoms. A large number of these studies are normal. Our study aims to identify the predictive factors of an EEG with epileptiform activity in these patients. *Methods:* We performed a retrospective study of the EEG results and chart reviews of the 208 psychiatric patients at Royal University Hospital in Saskatoon, Saskatchewan from 2013-2015. The EEG results were correlated with several factors known to increase the probability of an abnormal recording including history of seizures, previously abnormal EEGs, imaging abnormalities, medications known to cause epileptiform discharges, electroconvulsive therapy, prematurity, brain infection, childhood febrile seizures, head trauma, and family history. *Results:* Of the 208 EEGs performed, 176 (84%) were normal (77%) or essentially normal (7%). Epileptiform activity was found in 13 EEGs (6.3%), of which 9 (4.3%) had a previous EEG with epileptiform activity. Focal slowing appeared in 12 EEGs (5.8%), two of which had previous abnormal EEGs. Generalized slowing was found in 7 EEGs (3.4%). *Conclusions:* We conclude that the majority of EEGs in patients with psychiatric manifestations are normal. The most predictive factor for epileptiform activity in this population is a previous EEG with epileptiform discharges. Other predictive factors are under review.

P.071

Eeg activity during withdrawal of life sustaining therapies in the ICU: a substudy of the death prediction and physiology after removal of therapy study

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Background: Donation after circulatory death (DCD) is a recently accepted source for solid organ donation in Canada. Standards for circulatory death vary within and between countries and little is known about neurologic function at the time of circulatory death. This pilot study will explore the electrical physiology of the brain during the dying process following withdrawal of life support and at the time of declaration of circulatory death. *Methods:* This single-centre pilot study will build on preliminary data from the DDePICt (Death Determination Practices in Intensive Care) research program. With institutional approval and signed consent from the substitute decision maker, participants will undergo continuous 10-20 EEG (cEEG) monitoring in addition to monitoring vital signs during the dying process and for 30 minutes after the declaration of death. *Results:* Preliminary results including cEEG, blood pressure with arterial wave forms, EKG activity and oxygen saturations are currently under analysis and will be presented. *Conclusions:* It is feasible to study neurologic function during withdrawal of life support and these results will allow us to further understand the electrical activity of the brain during the dying process.