

mobile devices with similar accuracy. Algorithms were potentially portable to wearable devices. Qualitative observations on the state and applicability of technology were made. *Conclusions:* Software analysing heart rhythm may be accurate for AF screening, but has not been tested on wearable devices. Such technology is promising but may be limited by hardware accuracy and high false positive rates.

P.059

Predictors of gastrostomy tube placement in patients with dysphagia after acute stroke

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Background: In patients with acute stroke, nasogastric (NG) tubes are commonly inserted for feeding when dysphagia is identified, and percutaneous endoscopic gastrostomy (PEG) tubes are placed for severe or persistent dysphagia. However, little is known regarding predictors of PEG insertion. *Methods:* We used the Ontario stroke registry from 2003-2013 to identify baseline characteristics of all patients with NG or PEG tube insertion after stroke. We used multiple logistic regression with backwards selection to determine variables that were independent predictors of PEG tube insertion during admission. *Results:* 4002 patients with NG and 1903 patients with PEG were included in the analysis. Independent predictors of PEG were: Age (80+ vs. <60; odds ratio [OR] 1.70), past history of stroke (OR 1.17), higher stroke severity (severe vs. mild stroke; OR 1.37), stroke unit admission (OR 1.46), and dysphagia screening (OR 1.52). Factors associated with reduced odds of PEG insertion were: Prior history of peptic ulcer disease (OR 0.70), prior independence (OR 0.78), dementia (OR 0.76), palliative status (OR 0.49), and thrombolysis (OR 0.66). *All $p < 0.01$ *Conclusions:* The strongest predictors of PEG were older age, higher stroke severity, stroke unit admission and dysphagia screening. Patients with dementia had reduced odds of PEG. Thrombolysis also reduced odds of PEG and may be protective.

P.060

Altered oculomotor learning in thalamic stroke patients

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Background: Visuomotor learning can be elicited experimentally by displacing the target of a saccade during the ongoing eye movement. In healthy subjects, the resulting mismatch between expected and experienced visual error after saccade completion elicits a gradual adaptation of saccade amplitude. The goal of this project was to explore the role of cerebro-thalamo-cerebellar circuits in the dynamics of visuomotor learning. *Methods:* Patient RK is a 38-year-old right hand dominant male who suffered a focal thalamic stroke of the right thalamus, confined to ventral lateral posterior and ventral medial nuclei. We employed a standard saccadic adaptation paradigm and assessed dynamics of visuomotor learning by fitting a simple state-equation to saccade amplitudes towards the ipsi- and contralesional hemifield. *Results:* While RK was able to adapt saccade amplitudes in both directions, adaptation dynamics were different for leftward versus rightward saccades. Rightward, ipsilesional saccades exhibited a lower learning rate but similar retention of al-

tered saccade metrics, compared to leftward, contralesional saccades. *Conclusions:* The present study assessed a patient with a focal lesion to the right cerebellar thalamus on a saccade adaptation paradigm. Results demonstrated slower visuomotor learning for saccades into the ipsilesional hemifield, suggesting an important contribution of cerebello-cortical projections mediated by thalamic relays for visuomotor learning.

P.061

An outcome study of ischemic stroke patients admitted to a rehabilitation unit

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Background: Earlier studies suggest that age and stroke severity are the main determinants in stroke patient disposition after rehabilitation. We examined these and other variables to determine those that correlated with returning home vs. long-term care (LTC). *Methods:* Chart review of ischemic stroke patients with initial alpha-FIM scores between 40 and 80 admitted to our Rehabilitation Unit from January 1, 2005 to December 31, 2014. Univariate and multivariate analyses were performed. *Results:* There were 162 suitable patients. 130 went home and 32 went to LTC. The multivariable analysis showed the following variables favored LTC disposition: age (1.2x increased risk with increased age, $P < 0.01$), residence (17.5x increased risk if not starting at home, $P < 0.01$), right vs. left hemisphere (5.4x greater risk with right hemisphere, $p = 0.01$), bowel continence (10.6x greater risk if not continent, $p < 0.01$), and caregiver (0.05x decreased risk if a caregiver is present, $p < 0.01$). No differences were found for sex, diabetes mellitus, atrial fibrillation, previous stroke, congestive heart failure, COPD, obesity, hemianopsia or financial status. *Conclusions:* Numerous variables probably affect patient disposition after rehabilitation for acute ischemic stroke.

P.062

Fun for the brain: activities promoting stroke recovery in the acute phase

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Background: Canadian Stroke Best Practices recommend early mobilization and engagement in activities after stroke to enhance recovery. StrokeEngine reports the use of music can further promote recovery by harnessing neuroplasticity. Using music to enhance participation in activities after stroke may impact favorably on outcome after stroke. *Methods:* This descriptive study will be offered to patients admitted on the stroke unit. Based on the music preferences of willing participants and guided by the physiotherapy assessment, music, singing or dance movements will be incorporated into extra-therapeutic activities using specific musical instruments matched to patient ability. The music-enhanced activity program includes at least 3 sessions per week with a trained volunteer and additional sessions with family members for the duration of the hospital stay. Each session will last between 20 and 30 mins. The program will run for six weeks. *Results:* Data on patient participation in daily therapy and activities on the stroke unit will be presented and compared to a

similar group of stroke patients. Changes in patient stroke recovery parameters will be measured and reported on magnitude of change for future work. *Conclusions:* Innovative ways to enhance patient engagement early after a stroke can optimize stroke recovery. This project will shed some light on the effects of a music-enhanced intervention

P.063

The evolving epidemiology of infective endocarditis at St. Paul's Hospital and Vancouver General Hospital

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Background: SPH and VGH are the two largest tertiary care centers in BC's Lower Mainland. Among those served are the low-SES, high-risk population of Vancouver's Downtown East Side (DTES). We aim to characterize the changing epidemiology of infective endocarditis (IE) in this population from 1995 and 2014. To date, our database is among the world's largest. *Methods:* 1337 cases were identified using ICD9/10 codes. A retrospective chart review was conducted to collect demographic data including HIV status, IVDU, neurologic complications and mortality. The cohort was dichotomized into IVDU and non-IVDU, and first (1995-2005) and second (2006-2014) decades. Data analysis was performed using univariate chi-square and t-tests. *Results:* Age at presentation has increased in the past decade (45 vs 55, $p < 0.001$). Rates of IVDU and HIV have decreased significantly (50.5% vs 44.3%, $p < 0.001$; 21.8% vs 7.9%, $p < 0.001$, respectively). Neurologic complications were less frequent in non-IVDUs (16.5% vs 28.9%, $p < 0.01$). Mortality was greater in those with neurologic complications (RR=2.6 95%CI:2.1-3.3, $p < 0.001$). Patients with neurologic complications were more likely to undergo cardiac surgery (RR=1.6 95%CI:1.3-2.0, $p < 0.001$). *Conclusions:* Our findings highlight the changing epidemiology of IE. Some discrepancies between our data and the existing literature may be accounted for by Vancouver's unique DTES population. Further work characterizing this is ongoing.

NEUROLOGY AND CHILD NEUROLOGY SUBSPECIALTIES

DEMENTIA AND COGNITIVE DISORDERS

P.064

Sex differences in patients referred to a rural and remote memory clinic

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Background: Dementia is more prevalent in women. Sex differences exist as the disease progresses (e.g. males are more likely to become aggressive). In many medical illnesses (e.g. cardiac disease),

there are differences in presentation between men and women. The current study explores sex differences at the patients' initial presentation to the Rural and Remote Memory Clinic (RRMC). *Methods:* Patients were referred to the RRMC in Saskatoon, Saskatchewan. Cognitive and demographic data were collected. Questionnaires included cognitive (e.g. Mini-Mental Status Examination) and daily living (e.g. Instrumental Activities of Daily Living) assessments. *Results:* Three hundred and seventy-five (159 male, 216 female) patients participated. Of these patients, 146 (49 male, 97 female) were diagnosed with Alzheimer's disease. Males and females presented to the clinic at similar ages. Females were more likely to have a son or daughter caregiver and to live alone. Males were more likely to be currently working and to be a former smoker. No statistically significant differences were found for cognitive assessment scores. *Conclusions:* Analysis of the initial presentation of patients to the RRMC revealed females and males had similar presentation in measures of cognitive impairment. This may be reassuring for patients and their families knowing their family member, regardless of sex, is receiving equivalent referral to receive care.

P.065

Alzheimer's disease (AD) and dementias in Canada: First national surveillance data from the Canadian Chronic Disease Surveillance System (CCDSS)

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Background: With a growing and aging population, the number of individuals with AD and dementias and their associated costs are expected to increase in Canada. Up to now, no national mechanism was in place to monitor the epidemiological burden of AD and dementias. This presentation will showcase the first CCDSS data available on these conditions. *Methods:* Through the CCDSS, a Federal/Provincial/Territorial partnership, health administrative databases are linked to collect data on chronic conditions. Using selected ICD-9(CM)/ICD-10 codes for AD and dementias, the validated case definition implemented to identify relevant cases aged 65+ is:

- 1+ hospitalizations; or
- 3+ physician claims within 2 years, with a 30-day-gap between each claim; or
- 1+ anti-dementia drug prescriptions.

Prevalence and incidence rates will be presented by 5-year age group, sex, province/territory, and fiscal year. **Results:** Overall, incidence and prevalence rates were higher in women. The prevalence rate approximately doubled between 5-year age groups and sex differences tended to widen with age. While aged-standardised data show increasing prevalence rates over time, incidence rates fluctuated but suggest a decline since 2009/10. **Conclusions:** CCDSS data can be used to monitor the burden of AD and dementias in Canada. This information is important for the assessment of prevention actions and the planning of health care resources.