

UK, 27 collaboratives have been established in various specialties by trainees. Some published high quality trials with implications on their clinical fields. Evidence suggests that such endeavors improves trainees' research skills and may help cultivate a research culture tailored towards clinical trials. *Conclusions:* Given the growing evidence for research collaboratives in the UK, we propose launching the Canadian Neurosurgery Research Collaborative (CNRC) which currently represents 12 out of 14 neurosurgery programs in Canada, and planning its first multicenter prospective study.

P.011

Evaluation of educational needs in neurology in the province of Quebec: a survey-based study

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Background: In contrast with 56% of US medical schools, most Canadian medical schools do not offer a required clerkship neurology rotation. This study aims to assess the need for additional clinical neurology training in Quebec medical schools. *Methods:* Third and fourth year medical students from the province of Quebec completed surveys inquiring about accumulated theoretical teaching time, clinical neurology exposure, self-reported neurological examination proficiency and interest in additional training. *Results:* 66 students answered the survey. 43% were from Université de Montréal, 18% from McGill University, 14% from Université Laval and 24% from Université de Sherbrooke. For theoretical teaching, 44% reported at least 60 hours (h) of teaching, 44% reported 40 to 60h and 23% reported 10 to 40h. For clinical exposure, 24% reported at least 60h, 8% reported 40 to 60h, 40% reported 10 to 40h and 29% reported less than 10h. Most students reported being comfortable with their neurological examination skills (58%) but still 41% were uncertain or felt uncomfortable. 80% indicated interest in receiving additional clinical exposure. *Conclusions:* Amongst Quebec medical students, clinical neurology exposure is likely insufficient. An important proportion of students remain uncomfortable with the neurological examination and most students are interested in additional neurological training.

P.012

Spinal durotomy repair simulator for deliberate microsurgical practice: integration into a residency training module

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Background: Deliberate practice is one aspect of gaining competency in surgical skills. We have previously integrated a vascular microsurgery module into our residency training curriculum, and have recently described our experience with constructing patient-specific spine models for simulating lumbar spinal durotomy repair. The goal of this project is to develop the necessary infrastructure to facilitate practice on the spine model during residency. *Methods:* A 3D-printed plastic lumbar spine model was created from a patient computed tomography scan. L2 was manually laminectomized, and paraspinous tissues were simulated using Polyvinyl Chloride (PVC)

Plastisol. Harvested bovine pericardium was sewn into tubular form as a dural substitute. The pericardial tubes were tied at either end and attached to intravenous tubing to create a closed loop water system. *Results:* We are developing a video tutorial describing how to setup and use the model. Residents will be recorded while performing a 1.5 cm durotomy and repair using a surgical microscope available in our training laboratory (Drake-Hunterian Neurovascular Laboratory, London, Ontario, Canada). Residents are asked to grade the realism of the model using a questionnaire. Metrics of quality are to be determined. *Conclusions:* Our proposed model is a cost-effective, easy-to-prepare lumbar spinal simulator that facilitates microsurgical practice during neurosurgical residency.

P.013

Conflicts of interest in neurosurgical research - comparing voluntary physician disclosure to mandatory company data

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Background: Industry involvement in neurosurgical research is common, creating financial conflicts of interest (COIs). Most journals require voluntary disclosure of financial COIs. In 2013, the Sunshine Act (SA) was passed in the US, mandating industry disclosure of all payments to physicians. The accuracy of voluntary disclosure can now be determined by comparing voluntary author disclosure with industry data. *Methods:* We reviewed disclosure statements and calculated rates of voluntary disclosure in major neurosurgical journals before (2011) and after (2013) the Sunshine Act to determine if voluntary disclosure increased after its implementation. We then determined the accuracy of voluntary disclosure in 2013, comparing voluntary disclosure with industry disclosure on the Open Payments Database (OPD). Mean, median and range of industry payments to neurosurgeons were calculated. *Results:* Voluntary disclosure significantly increased in JNS-Spine only (10.7% to 35.4%, $p < 0.001$) after implementation of the SA. The average rate of non-disclosure in all journals studied was 38.3% (Range 33.8%-42.2%)

\$32,598,522.97 of industry payments were provided to 656 authors in the five-month period studied (Average \$49,692.87/author). *Conclusions:* Voluntary COI disclosure in JNS- Spine increased after implementation of the Sunshine Act. Industry payments to physicians publishing in neurosurgery journals are common and rates of non-disclosure of COIs are high. The ethical implications of COIs and non-disclosure are discussed.

P.014

Cadaveric avian wing model complements live rat model in microsurgical simulation training for neurosurgical residents: technical aspects

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Background: Training of surgical residents based on the traditional Halstedian model is becoming increasingly scrutinized. The