For the second year in a row the CAEP New Investigator Award has gone to one of our physicians—Congratulations Dr. Ka Wai Cheung!

Over the last year...

- 50 Conference abstracts & presentations
- 44 Publications in peer reviewed journals
- 45 Research Assistants & Student Volunteers
- 2 New CIHR Grants

Congratulations to our researchers

**Abu-Laban, RB.** (Barclay, N. and Cheng, A.) Effect of a Diagnostic Treatment Unit (DTU) on Emergency Department Length of Stay and Inpatient Admissions. Fraser Health Authority Seed Grant. $5000 total, 2013.


**Cheung, KW.** CAEP Top New Investigator Award, June 2013.

**Cheung, KW.** VCH People First Award at the True North Forum, January 2013.

**Cheung, KW.** (Fitzgerald, M., Khara, M., Lam, A.). Vancouver Foundation Community Grant. $70,000 total, 2013-2015.


**Ho, K.** (Cafazzo, J. and Novak Lauscher, H.) Developing the “Smart” Nursing Station eHealth Model in First Nations Remote and Isolated Communities. Health Canada First Nations Inuit Health Branch. $150,000 total, 2013-2014.


Our ED is collaborating with the Center for Addictions Research BC (CARBC) to investigate the effect of alcohol and stimulants on risk of injury.

Catherine and Lindsay CARBC Research Team

**Congratulations Continued...**


**Hohl, CM.** Teacher of the Year 2013, UBC Emergency Medicine Residency Program.


**Collaborative Research Policy**

The VGH Department of Emergency Medicine has a tradition of producing high quality original research, and collaborating on the research initiatives of other VGH Departments or external groups. This academic mission must be balanced with the demands research places on Emergency Department patient care and teaching of Residents and Medical Students. In addition, simultaneous research projects may conflict with one another and may compete for the same patients as well as for the time and attention of our clerical, nursing, and medical staff.

For these reasons, all potential studies which require signoff by the VGH Department of Emergency Medicine undergo internal review, approval, and prioritization. It is expected that one or more members of the VGH Department of Emergency Medicine will be involved academically (as co-applicant on grants, and co-author on publications) on any significant peer-reviewed or investigator-initiated collaborative project conducted in the VGH Emergency Department. This involvement should commence during the development of the study protocol and the ED should receive appropriate acknowledgement for the role it plays for any such projects.

For further information on our research policy or to discuss a potential project please contact our Research Director (Jeff Brubacher; Jbrubacher@shaw.ca).

**Research Activities**

**Road Safety:** Our road safety research team of Dr. Jeff Brubacher, Dr. Herbert Chan (PhD), and Dr. Roy Purssell enrolled the first 1638 injured drivers for their study “Cannabis and Motor Vehicle Crashes: A multicentre culpability study”. This CIHR funded study has been launched in 8 trauma centres across BC and will determine the role of marijuana use in causing car crashes. The team received funding from CIHR and CIHI ($198,868 over two years) for an evaluation of British Columbia’s new immediate roadside penalty (IRP) regime. That evaluation shows that the new laws resulted in a 52% reduction in alcohol related fatal crashes, a 21% reduction in all cause fatal crashes, an 8% reduction in hospital admissions for road trauma and a 7.2% reduction in ambulance calls for road trauma. Dr. Edi Desapriya (PhD) who is interested in road traffic safety from the lens of sociology joined our team last August. Dr Desapriya led a Cochrane review update summarizing the role of vision screening of older drivers. Drs. Brubacher and Chan with numerous student volunteers completed a pilot study based on interviews with drivers injured in a motor vehicle crash and have applied for CIHR funding for a 5 year multi-centre...
Research Activities Continued...

This past year Dr. Corinne Hohl lead a CIHR Meetings, Planning and Dissemination Workshop which brought experts together to discuss medication review in ED patients

Dr. Corinne Hohl
Adverse Drug Events

Adverse Drug Events: Dr. Corinne Hohl (PI) successfully completed the project “Implementation of an Emergency Department-Based Adverse Drug Event Screening Strategy: A Demonstration Project”. This regional project screened over 155,000 emergency department patients for adverse drug events. It was funded by the BC Health Services Purchasing Organization & Vancouver Coastal Health Authority ($1,762,201). Preliminary results indicate that a widespread implementation of the Adverse Drug Event Screening Program was feasible, and that it may save health resources and improve patient outcomes. In 2013, Dr. Hohl secured seed funds to validate the Adverse Drug Event Clinical Decision Rule ($50,000 CMPA & $99,000 TOMAHO), the first evidence-based tool that may allow emergency departments to risk-stratify patients for adverse drug events, and enable referral of high-risk patients for medication review services. The team anticipates that the validation of the Adverse Drug Event Rule will enable widespread implementation of this rule, and compliance with Accreditation Canada's 2014 required organizational practices. In 2013, Dr. Hohl's team was also awarded a $853,000 Partnership for Health System improvement grant from CIHR to develop an Adverse Drug Event reporting platform in PharmaNet. Dr. Hohl continues to actively collaborate on national clinical decision rule development studies on neurosurgical and cardiovascular emergencies, and is an active member of the Drug Safety and Effectiveness Research Network.

Smoking Cessation: Dr. KaWai Cheung and team continue their smoking cessation research. They have completed enrollment for their randomized controlled trial looking at the effectiveness of referring ED smokers to QuitNow Services, our provincial smoking cessation service. More than 1,300 patients were recruited for this study, and 12 month follow-up phone calls to determine patient smoking status is ongoing. QuitNow offers smoking cessation counselling via text, email, or phone services. Dr. Cheung’s team is also looking at whether specific patient factors affect a patient's choice of service modality. This will ultimately help refine smoking cessation services. Finally, the team is also looking at the accuracy of patient perception that their ED visit may be related to smoking. This will help to determine whether further patient education may be needed.

Research Education: Riyad Abu-Laban, UBC Department of Emergency Medicine Research Director, led a highly successful third annual "NERD Block" (Novel Education in Research & Design) with Quynh Doan in the fall of 2013. This 1 month program involves 34 interactive small group sessions and workshops facilitated by faculty members from the Department of Emergency Medicine and Division of Pediatric Emergency Medicine on all aspects of research and critical appraisal. The NERD Block now includes participant slots for EM faculty members, and two enrolled in 2013. NERD participants gain foundational knowledge, interact with and learn about the research being done by a wide range of Emergency Medicine faculty members, and develop and advance their own research projects. Since its onset the NERD Block has gained wide attention, both across UBC and nationally. Riyad published a research paper on the NERD Block in 2013 (CJEM), and has been invited to present the background and experience with the initiative to the June 2014 Royal College of Physicians and Surgeons EM Specialty Committee meeting.
**Research Activities Continued...**

**Pre-hospital Care:** Dr. Erik Vu and his collaborators specialize in pre-hospital care, specifically involving air ambulance patient transport. This program uses evidence-based procedures to ensure that patients in remote and rural areas have timely access to critical care services. One such initiative over the past year has streamlined the blood transfusion protocol for critically ill patients. Now BC Emergency Health Services will fly directly to the patient with type O negative blood on board, resulting in faster treatment and reduced travel time. Other focuses of Dr. Vu’s research include pre-hospital airway management, pre-hospital treatment of hemorrhagic shock, and development of a paramedic ultrasound curriculum.

**Nurse Initiated X-Rays and ED Length of Stay:** Drs. Wailliam Lee, Lyne Filiatrault, and Riyad Abu-Laban launched a randomized control trial in the VGH Emergency Department (ED) in August 2012 which ended recruitment in August 2013. With the help of 15 VGH ED volunteer triage nurses, they examined whether triage nurse initiated x-rays in accordance with the Ottawa Ankle Rules would reduce ED patients’ length of stay. Funding through the UBC Summer Student Research Program (SSRP) was secured in both 2012 and 2013, thereby recruiting Nancy Liu (2012) and Anita Rashidi (2013), both 2nd year UBC medical student at the time. Lawrence Yau, a graduate in Medical Sciences from University of Western Ontario has been also been involved throughout the project. Dr. Lee will be presenting the study’s results at both the 2014 UBC Department of Emergency Medicine Research Day and in June 2014 at CAEP’s Annual Conference Lightning Oral Sessions. Dr. Lee was awarded one of CAEP’s 2014 Resident Research Abstract Awards.

**Publications**


Publications Continued...


11. Cheung KW. The role of emergency physicians in tobacco cessation and the British Columbia smoking cessation program. CJEM (Forthcoming 2014).


Dr. David Sweet is working to optimize the treatment of patients with severe sepsis

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Publications Continued...


Publications Continued...


Abstracts and Presentations


2. Brubacher JR. Cannabis and Motor Vehicle Crashes. Fraser Health Trauma Grand Rounds May 2013, Vancouver BC.


8. Brubacher JR. Cannabis and motor vehicle crashes: A multicentre culpability study. Vancouver Island Research Rounds April 2013, Victoria BC.


Abstracts and Presentations Continued...


12. **Cheung KW**. VGH Emergency Smoking Trial. BC Lung Association Tobacco Control Workshop Jan 2013, Vancouver BC.

13. **Cheung KW**. Emergency department tobacco cessation counseling and referral: A Pilot Study. Public Health Association of British Columbia Regional Conference November 2013, Vancouver BC.

14. **Cheung KW**. Emergency department usage by smokers and non-smokers at Vancouver General Hospital. UBC Multidisciplinary Undergraduate Research Conference Mar 2013, Vancouver BC.

15. **Cheung KW**. Smoking-Related Illnesses: Accuracy of Patient Perception that their ED Visit May be Related to Smoking. International Roundtable Public Event: Health Literacy and Heart and Lung Disease May 2013, Vancouver BC.


21. **Ho K**. Foresight in Medicine in the Next Decade. eHealth literacy for all, Italian Embassy Symposium December 2013, Washington DC, USA.

22. **Ho K**. Health Apps for eMental Health. UBC eMental Health Conference Dec 2013, Vancouver BC.


24. **Ho K**. eHealth trends and how they affect CPD. CACHE Annual Conference, Keynote Speaker Jun 2013, Vancouver BC.


26. **Ho K**. EMR for physician performance. 5th Annual National CPD Accreditation Conference Oct 2013, Ottawa ON.

27. **Ho K**. eHealth Trends for research. GRAND National Centre of Excellence Conference, Keynote Speaker Oct 2013, Vancouver BC.

Abstracts and Presentations Continued...

29. **Ho K.** eHealth Trends Update. CMA Continuing Professional Development Leadership Conference May 2013, Vancouver BC.

30. **Hohl CM.** Preliminary Results from the Adverse Drug Event Screening Program. CIHR Meetings, Planning & Dissemination Workshop May 2013, Vancouver BC.

31. **Hohl CM.** Preliminary Results from a Systematic Review on Medication Review & Gaps in the Literature. CIHR Meetings, Planning & Dissemination Workshop May 2013, Vancouver BC.

32. **Hohl CM, Reddekopp LN, Yu E, Rotinsky J, Strang C.** Reliability of clinical decision rules to improve the detection of adverse drug events in emergency department patients. CJEM 2013;15(S1).

33. **Hohl CM.** ADE Screening Program-Qualitative Results. Invited Presentation to the Senior Executive Team, Vancouver Coastal Health Authority January 2013, Vancouver BC.

34. **Hohl CM.** Risk Stratification in Medication Review. Preliminary Results from the ADE Demonstration Project. Pharmacy Department, Vancouver General Hospital Pharmacy Department Mar 2013, Vancouver BC.


The ED Smoking Cessation Study lead by Dr. Ka Wai Cheung bridges preventative medicine with acute care


47. Perry JJ, Alyahya B, Steill IG, Sutherland J, Sivilotti M, Bullard M, et al. (Hohl, CM) A Prospective Cohort Study to Differentiate Traumatic Tap from True Subarachnoid Hemorrhage. CJEM 2013;15(S1).
Abstracts and Presentations Continued...

48. Quinn M, Hunte G, Hohl CM. The role of pharmacists within the context of an emergency department-based adverse drug event screening program. CJEM 2013;15(S1).

49. Silverbert ND, Lange RT, Brubacher JR, Iverson GL. The Good-Old-Days Bias after Mild Traumatic Brain Injury and Orthopedic Injury. 41st Annual meeting of the International Neuropsychological Society Feb 2013, Waikola HI USA.


Student & ED Staff Involvement
Student volunteers play a valuable role in our research division, and we are grateful for the dedicated and motivated individuals who have donated their time. In turn, students gain exposure to emergency medicine and clinical research. Over the past summer we were able to provide a series of learning sessions for the volunteers with topics including biostatistics, study design, and quality assurance. Four students were hosted this past year through UBC’s Summer Student Research Program.

Our research would not be possible without the involvement and ongoing support from Emergency Department Nurses, Unit Clerks, and Physicians. We are lucky to have an amazing team that continues to engage in research without compromising patient care.

Study Volunteers

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<th>Injured Driver Interviews</th>
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<td>Cannabis &amp; MVCs</td>
<td>Amanda Lane</td>
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Dr. Lyne Filiatrault
Quality Assurance
Research Personnel

Director
Jeff Brubacher (Jbrubacher@shaw.ca)

Coordinator
Lauren Stewart (Lauren.Stewart@vch.ca)

Investigators
Riyad Abu-Laban (Research Education)
Jeff Brubacher (Road Safety)
KaWai Cheung (Smoking Cessation)
Lyne Filiatrault (Quality Assurance)
Kendall Ho (Knowledge Translation)
Corinne Hohl (Adverse Drug Reactions)
Roy Purssell (Road Safety)
David Sweet (Sepsis)
Herbert Chan, PhD (Road Safety)
Edi Desapriya, PhD (Road Safety)

Advisory Committee
Riyad Abu-Laban, MD, MHSc
Jeff Brubacher, MD, MSc
Brian Chung, MD
Lannon de Best, RN
Corinne Hohl, MD, MHSc
Doug McKnight, MD
Roy Purssell, MD
Lauren Stewart, MPH

Research Coordinators
Angela Aquino (Traumatic Brain Injury)
Maeve Wickham, MSc (Adverse Drug Events)

Research Assistants
Vahid Mehrnoush (Cannabis & MVCs)
Kit Mung (ED Smoking Cessation)