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**THE UNIVERSITY OF BRITISH COLUMBIA**

# Department of Emergency Medicine Strategic Plan

Winter 2011  
Modified Fall 2013

September, 2013 Version

## A Vision for the Department of Emergency Medicine

*A provincially integrated department  
committed to clinical and academic leadership  
in the creation and exchange of knowledge  
to promote excellence in emergency care.*

### Our Values

**Faculty:** We value the people who provide emergency care, who educate emergency medicine learners and who search for answers and we celebrate their achievements

**Collaboration:** We can accomplish the most if the whole DEM community works together, sharing ownership of our problems and focusing all our varied resources on solutions

**Partnerships:** We actively reach out and partner with others both within and outside BC to advance common goals and interests, and to foster intra- and inter-disciplinary collaboration and networks

**Respect:** We treat all parties with respect, dignity, integrity, honesty and humanity

**Ethics:** We always act according to the highest ethical principles when dealing with patients, research subjects, colleagues, and partners

**Scholarship:** We promote a dynamic and inquisitive environment, challenging conventional wisdom, and ensuring that we make new and significant contributions to education, research and service

**Innovation:** We seek-out, generate, and apply new and creative insights, technologies, and approaches in the fulfillment of our mandate.

**Integration:** We integrate education, research, and service, valuing the contributions of each in promoting knowledge and improving health

**Accountability:** We hold ourselves accountable to the communities we serve and the generations who come after us

**Excellence:** We strive for excellence in all that we do



## Our Mission

To bring our vision into reality, the Department of Emergency Medicine:

- **Plays the lead role in provincial integration of clinical emergency care with knowledge creation and synthesis; knowledge exchange and education**
- **Identifies and addresses gaps in emergency care in BC through a coordinated network of emergency practitioners**
- **Partners with stakeholders in BC to develop and implement cost-effective emergency health care policy**
- **Advances emergency medical care nationally and globally**
- **Uses and advances best educational methodologies across the spectrum of learners**
- **Strengthens and broadens clinical and academic leadership in the specialty of emergency medicine**
- **Enhances patient safety, harm reduction and prevention in the population we serve**



# Department of Emergency Medicine Strategic Plan

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## Primary Goals of the Department of Emergency Medicine

### **Goal # 1:**

#### ***Integrate clinical emergency care in BC with knowledge creation and knowledge sharing***

UBC is a unique medical school due to its distribution across a broad geography. The Faculty of Medicine serves and supports not only the traditional core sites but also the sites outside the Lower Mainland to ensure success for the distributed medical school.

The Department of Emergency Medicine believes that the most effective strategy to make a positive impact on emergency care delivered in BC is to develop a network that facilitates meaningful and regular communication among those: who deliver care in small centers, large community hospital and academic centers; who investigate better ways to deliver care or prevent disease; who evaluate care; who specialize in knowledge sharing; who manage health care delivery; and who develop health care policy that impacts emergency care.

An effective knowledge translation framework for emergency practitioners in BC would be the final common pathway for knowledge generated or synthesized by UBC DEM faculty. The Department of Emergency Medicine faculty includes members who are leaders in knowledge translation and continuing professional development. As a key component of the network of emergency practitioners we will work with emergency practitioners to design, build and evaluate processes and infrastructure to facilitate efficient and effective knowledge sharing solutions.

### **Goal # 2:**

#### ***Establish UBC Emergency Medicine Undergraduate Education as the premier program for medical student learning and development in Canada***

Emergency Departments are rich learning environments that provide a broad range of undifferentiated clinical problems and opportunities for procedures. Students receive one-on-one supervision by faculty while gaining clinical experiences mandated by accreditation. Students highly regard their clerkship and electives in Emergency Medicine at UBC. Active, continuous quality improvement and continued development of the teaching programs in alignment with UBC Faculty of Medicine curriculum renewal will further enhance undergraduate medical education, continue to demonstrate leadership within the Faculty of Medicine, encourage the best and brightest students to consider a career in emergency medicine and provide a strong educational foundation for medical students regardless of their ultimate chosen practice.



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### **Goal # 3:**

#### ***Establish UBC Emergency Medicine Postgraduate Education as the premier program for resident learning and development in Canada***

British Columbia is a beautiful destination with first-rate teaching facilities and faculty and a reputation for excellence. Using a continuous improvement approach and taking advantage of clinical expertise in sites throughout the province will ensure that our FRCPC and CCFP(EM) programs are known as the premier emergency medicine residencies in the country.

We will expand the RCPS residency training program and advocate for expansion of the CFPC (EM) certification and enhanced skills programs in all Health Authorities to meet manpower needs.

### **Goal # 4:**

#### ***Establish the most productive and collaborative Emergency Medicine research program in Canada***

Research is essential to the mission of the department. The spirit of inquiry defines a university department as different from other organizations that focus on improving patient care. The Department of Emergency Medicine faculty have remarkable track records in research. With increased collaboration, coordination and support we strive to be the best emergency medicine research program in the country.

### **Goal # 5:**

#### ***Ensure financial sustainability and growth***

Our current financial support is not ideal. Sufficient revenue to support our mission must be secured so that we can strengthen academic leadership and attract the best faculty to carry out our objectives. All resources must be used effectively and efficiently to support the mission and the priority strategies.

We will ensure that the resources received are aligned with the goals and expectations of the funding source, whether it is the Ministry of Health, the Faculty of Medicine, Health Authorities, Public Agencies, Clinical Groups, Industry or Non-Profit organizations.

We will specifically develop a business plan to articulate the reasons for developing an integrated network, specific goals and objectives, strategic partners and stakeholders and their roles, the financial plan and the details of implementation.



## Strategic Initiatives Knowledge Generation and Exchange

In addition to the primary goals, the Department of Emergency Medicine will be known for its success in new knowledge generation, knowledge synthesis and effective knowledge exchange. Faculty members have been engaged in knowledge generation and exchange activities for many years, and long before the creation of the Department. Emergency Medicine sits at a unique position in our Health Care System, between community care and acute care. Emergency Physicians deal with the result of failure of chronic disease management, trauma, sudden and unexpected critical illness, and a wide range of physical, social and psychological emergencies. All of these patient groups represent opportunities for more effective care to reduce unnecessary morbidity and mortality, to more accurately delineate those with disease from those without, or to provide more efficient care. Our strategic initiatives represent identified opportunities that are important to both individual patients and the health care system.

Strategic Initiatives within the Department of Emergency Medicine are in addition to and integrated with our core educational, research and administrative activities. They require focus, energy, leadership and partnership support. Each is interdisciplinary and provincial, national or international in scope. Most are anticipated to be successful, but some may falter. We will continually attempt to develop new initiatives.

Strategic Initiatives are essential to the success of the Department in achieving its Vision and Mission. The Department of Emergency Medicine will play an active support role to ensure the effectiveness of each Strategic Initiative.

Our Strategic Initiatives fall into 3 broad areas: infrastructure initiatives which cut across all other initiatives, specific patient-centered initiatives and educational initiatives to improve education of the next generation of physicians.



# Department of Emergency Medicine Strategic Plan

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## A Provincial Emergency Medicine Clinical Database

*Strategic Leader: Eric Grafstein*

### **Vision**

Complete and reliable provincial Emergency Department data to provide knowledge for key decision makers to improve the quality of Emergency Care for British Columbians.

### **Long Term Goals**

- To standardize the acquisition of key data elements by the major sites within the regional health authorities in BC.
- To understand outcomes of Emergency Department visits with the creation of important linkages with Admission and Discharge data, Vital Statistics, Pharmanet, Resuscitation Outcomes Consortium, Registries (Stroke, Trauma, Cardiac), as well as Medication Dispensing data (Omnicell/Pyxis) in order to support CCM initiatives and other provincial KRAs.
- To align clinical decision makers with policymakers through the interpretation of ED data.

### **Short Term Goals**

- Continue support for work being done to build the VCH-PHC regional ED database.
- Complete NACRS dataset standardization and implementation in VCH.
- Develop a provincial strategy for data stewardship, access, privacy, and governance.
- Understand ED site data gathering limitations and barriers to data collection.

### **Key Partners and Stakeholders**

- Provincial ED Leaders
- HA Decision Support Services
- Regional and Provincial Privacy Officers
- UBC DEM
- Provincial MoH Emergency Directors
- CHSPR

### **Work to Date**

This initiative builds on a 13-year history of database development, health services research, and front-end IT system implementation and expansion at Providence Health Care and Vancouver Coastal Health. Proof of concept for a provincial administrative database is established with initial support for VCHA Decision Support development of a regional ED data warehouse. Our team has standardized regional data around the Canadian Triage and Acuity Scale and discharge diagnosis. We have engaged key VCH regional ED stakeholders to support regional data initiatives. Local data systems are being used to produce high quality outcome studies on atrial fibrillation, suicidal ideation, and revisit-readmits.



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## **Towards Improved Medication Safety: A Provincial Program for Adverse Drug Event Screening and Surveillance in Emergency Departments**

**Strategic Leader: Corinne M. Hohl**

*Adverse drug events, the unintended and harmful consequences of medication use, cause over 240,000 ED visits in British Columbia annually. Patients presenting to British Columbian EDs with adverse drug events spend more days in acute care hospitals, have more frequent outpatient healthcare encounters, and incur almost double the cost compared with other patients.*

### **Vision**

- To improve the health of British Columbians by ensuring timely and appropriate recognition and management of adverse drug events in the ED.
- To improve access to ED and acute care hospital beds by reducing the health services utilization and cost associated with preventable adverse drug events.
- To develop a provincial adverse drug event surveillance system using ED data to monitor adverse drug event trends, and to provide robust ED data on adverse drug events for comparative effectiveness research.

### **Long Term Goals**

To create an Emergency Department-based Adverse Drug Event Surveillance Program that will improve drug safety, and evaluations of clinical effectiveness and cost effectiveness of licensed medications using ED data on adverse drug events.

### **Short Term Goals**

- To implement a prospective screening tool in EDs provincially that will improve the recognition, treatment and documentation of adverse drug events.
- To evaluate the treatment effect of ED based medication review on health services utilization and cost.
- To create a provincial electronic platform for documenting ED adverse drug events.

### **Key Partners and Stakeholders**

We have established partnerships with PharmaNet, local Health Authorities, the BC Health Services Purchasing Organization, the BC Patient Safety & Quality Council, the Canadian Patient Safety Institute and the Institute for Safe Medication Practices. Our goals are aligned with provincial initiatives to reduce polypharmacy, implement medication reconciliation and improve care for the elderly and those with complex co-morbidities.

### **Work to Date**

Our work shows that 12% of ED visits in British Columbia are attributable to the adverse effects of medications, and that emergency physicians do not attribute *one-half to one-third* of these cases to medication use. We have prospectively derived a screening strategy that will improve the diagnosis of adverse drug events in the ED to >90% by flagging high-risk patients for medication review by a pharmacist in the ED. Our group won the Best Paper Award at the American Association of Emergency Physicians' conference in 2012 for this contribution. In conjunction with Vancouver Coastal Health and the BC Health Services Purchasing Organization we are presently piloting the implementation of this strategy in three EDs in the Lower Mainland. We are collaborating with PharmaNet and Excelleris to document and communicate adverse drug events found in EDs to community care providers, and to pilot a provincial electronic platform for adverse drug event reporting.



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## **A Provincial Emergency Medicine Knowledge Exchange Framework**

**Strategic Leaders:** *Kendall Ho, Julian Marsden, Helen Novak Lauscher*

### **Vision**

In alignment with the Department of Emergency Medicine's Strategic Plan, we intend to design, develop, and implement a cohesive academic strategy involving the key stakeholder groups of health professionals, health policy makers, health administrators, researchers, and community members/health consumers. To this end, we will tangibly demonstrate and improve on bringing evidence-based knowledge and skills to routine practice in Emergency Medicine, leading to excellence in health outcome of our patients and community members.

### **Long Term Goals**

To establish a provincial KT research and evaluation framework serving to clarify how the clinical, research, education, and health policy initiatives in the Department of Emergency Medicine in BC contribute kaleidoscopically and synergistically towards effective knowledge exchange and translation in all parts of the province. This framework will help guide the garnering of research and evaluation funding, the generation of evidence, the publication of best practices, and the continuing improvement of KT in BC, thus propelling our Department and the Faculty as an academic leader in KT implementation and science both nationally and internationally.

### **Short Term Goals**

- Encourage our provincial DEM members to participate in setting provincial priorities, documentation of current KT activities taking place, and co-creation of the KT evaluation framework.
- Engage key partners and inter-professional colleagues to collaborate in this provincial KT effort.
- Initiate strategic demonstration projects aligned with the priorities set within the next three years to demonstrate what we can accomplish together.

### **Key Partners and Stakeholders**

- DEM Provincial Members
- Emergency Departments in B.C.
- Practicing Health Professionals in Emergency Medicine
- BCMA Section of Emergency Medicine
- Ministry of Health
- Health Authorities
- NGOs (e.g. Canadian Heart and Stroke Foundation)

### **Work to Date**

- Production of a five-page draft document highlighting KT in the DEM vision, with the premise of how to initiate our KT efforts using evidence based frameworks.
- Presentation of the KT Strategic Initiative at the Department of Emergency Medicine Advisory Committee (DEMAC) on April 12, 2011.
- Invitation to 33 DEM members throughout BC to participate in a teleconference on May 24, 2011 to discuss how we would be able to work together as a group to move the KT initiative forward.



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## **Cardiovascular Emergencies**

*Strategic Leader: Frank Scheuermeyer*

### **Vision**

Efficient and safe disposition for chest pain patients in BC Emergency Departments with potential ischemic chest pain.

### **Long Term Goals**

To integrate new and existing knowledge into a comprehensive framework for safe and efficient diagnosis and disposition of patients with potential ischemic chest pain presenting at all BC Emergency Departments; and to quantitatively measure the decrease in ED and hospital resource use by implementing such a framework.

### **Short Term Goals**

- To test implementation of a two-hour discharge rule for chest pain patients.
- Implement rapid diagnostic testing of chest pain patients at triage.
- To synthesize and implement a comprehensive clinical pathway for patients with chest pain that incorporates triage ordered testing, a validated two-hour rule-out clinical decision rule, and a six-hour strategy with rapid out-patient stress tests.
- To find resources to follow patients in order to evaluate the strategy in St. Paul's Hospital and in other settings in BC.

### **Key Partners and Stakeholders**

- UBC Department of Emergency Medicine
- Evidence-2-Excellence
- UBC, Division of Cardiology

### **Work to Date**

Our team demonstrated that 5% of patients with heart attacks or unstable angina were inappropriately discharged from teaching hospitals with an inaccurate diagnosis and no follow-up. In response, St. Paul's Hospital Department of Emergency Medicine (with the Division of Cardiology) developed a six-hour ED pathway coupled with rapid outpatient stress testing. Our outcome evaluation found that the "miss rate" was reduced to zero with a concomitant decrease in resource use. We then developed a clinical decision rule to safely and rapidly discharge patients at very low risk within two hours, while ensuring that all high-risk patients were identified. We recently validated this rule. Furthermore, we have shown that many stable chest pain patients can be assessed and treated in non-traditional low-resource care areas, preserving scarce ED resources for sicker patients. Our intentions are to actively implement these components in a synthesized pathway across Emergency Departments in BC.



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## **Procedural Sedation and Analgesia**

*Strategic Leader: Gary Andolfatto*

### **Vision**

Safe, effective, timely, efficient, equitable, and patient centered evidence-based care to patients requiring emergency department procedures in BC.

### **Long Term Goals**

To implement best practices for the provision of emergency department procedural sedation and analgesia that improve patient comfort and safety and emergency department flow and efficiency.

### **Short Term Goals**

To design, develop and refine techniques, medication regimens, and monitoring strategies to improve the provision of emergency department procedural sedation and analgesia.

### **Key Partners and Stakeholders**

The Lions Gate Hospital Foundation, The Vancouver Coastal Health Research Institute, The North Shore Health Research Foundation, Harvard Children's Hospital, Albert Einstein Medical Center (Philadelphia).

### **Work to Date**

We have completed several studies on the use of a novel combination of medications for emergency department sedation in both adults and children that may result in improved patient care and more efficient use of emergency resources. This medication is currently the subject of an ongoing study where it is being compared to the standard medication used most commonly at present. In this study we will attempt to determine if there are fewer adverse effects on breathing, as well as improved patient comfort.

A detailed analysis of the use of hospital resources will also be carried out. Part of this work detailed the physical and chemical compatibility and stability of these medications in syringe for emergency department use. The results of an international collaborative project with Harvard Children's Hospital and the Albert Einstein Medical Center are currently being analyzed. These analyses are designed to investigate novel patient monitoring strategies with regards to vital signs. This is meant to significantly improve patient safety. Through a year-long collaborative effort involving the engagement of relevant stakeholders, we produced a comprehensive Clinical Practice Guideline describing the suggested standards ("best practice") for safe and effective emergency department procedural sedation and analgesia for the Vancouver Coastal Health Region.



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## Road Safety

*Strategic Leader: Jeffrey R Brubacher*

### **Vision**

To create knowledge that will inform evidence based traffic safety policy and public education campaigns designed to improve road safety by preventing drug and alcohol impaired driving.

### **Long Term Goals**

To help make British Columbia's roads the safest in the world.

### **Short Term Goals**

- To determine the proportion of injured drivers who used psychotropic drugs before a crash.
- To determine whether drivers who used cannabis are more likely to have caused the crash.
- To work effectively with policy makers to ensure that they are aware of the most recent evidence around the problem of drug and alcohol impaired driving in BC.

### **Key Partners and Stakeholders**

- Office of the Superintendent of Motor Vehicles - Our team meets regularly with the BC superintendent of motor vehicles and other members of the Office of the Superintendent of Motor Vehicles (OSMV). The OSMV is extremely interested
- Office of the Provincial Health Officer – Our team provided input into the drug and alcohol impaired driving section of the upcoming PHO report on traffic safety in BC.
- Health Authorities – Our team is working with the medical health officers of VCH and FHA to improve access to data on road injuries and specifically around impaired driving.
- Ministry of Health Services – Matt Herman (Director, Injury Prevention & Healthy Built Environment, Population and Public Health Division) supports our research and is kept updated.
- Other Stakeholders: ICBC, BCAA Traffic Safety Foundation, RCMP, Vancouver City Police.

### **Work to Date**

It is estimated that the cost of impaired driving injuries and deaths is 12 billion dollars per year in Canada. In our studies on alcohol impaired driving we found that impaired drivers treated in hospital after a crash are seldom convicted. Unfortunately, we also found that, these drivers have not “learned their lesson” and often engage in impaired driving again after being released from hospital.

Research and advocacy work directly influenced the new more stringent “drunk driving” laws which are estimated to have reduced deaths related to impaired driving by 51%. We are conducting an in-depth evaluation of these new laws. We developed and validated the “Canadian Culpability Scoring Tool”, a tool for determining responsibility for the crash based on data in the police report. We used this tool to study the role of cell phones in causing crashes. This tool will also be used for several studies of drug impaired driving. We have launched a five-year study of the role of cannabis in causing motor vehicle crashes and have recruited one thousand injured drivers. This study, funded by CIHR (\$910,000), is now conducted in eight BC trauma centres and will provide the best possible evidence of the role played by cannabis in causing motor vehicle crashes. We have received CIHR funding (\$526,000) and will soon launch a 4 year study investigating the crash risk.



# Department of Emergency Medicine Strategic Plan

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## **Smoking Cessation and the Role of the ED**

**Strategic Leader:** Ka Wai Cheung

### **Vision**

Decreased patient morbidity and mortality and reduced health care costs from smoking.

### **Long Term Goals**

To reduce the number of smokers in BC and thus the number of emergency department (ED) visits and hospitalizations by effectively engaging ED smokers in smoking cessation programs.

### **Short Term Goals**

- To provide ED strategies for counseling smokers to stop
- To evaluate the effectiveness of a policy to refer patients from the ED to QuitNow Services at Vancouver General Hospital.
- To share the knowledge of a successful strategy with all emergency departments in BC and to advocate for its routine use.

### **Key Partners and Stakeholders**

- QuitNow Services (Mr. Jack Boomer (Director, QuitNow Services))
- BC Lung Association (Ms. Kelly Ablog Marrant)
- Tobacco Reduction, Office of the Chief Medical Health Officer, VCHA (Ms. Christina Tonella)
- Tobacco Control Program, BC Ministry of Healthy Living and Sport (Mr. Frankie Best)
- Tobacco Control Program, Ministry of Health Services (Ms. Shelley Canitz)
- BC Cancer Agency, Prevention Programs (Ms. Sonia Lamont)

### **Work to date**

Dr. Ka Wai Cheung completed a Master of Public Health degree from Johns Hopkins School of Public Health in 2010, focusing on health promotion and health behavior change. She has also completed a pilot study in the Emergency Department (ED) showing that 60% of smokers would accept a referral to our provincial telephone quit line, and that these referrals could potentially increase quit rates by three times at 12 months compared to no referral. With a team of undergraduate and graduate students, and funding from the Vancouver Coastal Health Research Institute, the Ministry of Health, the Faculty of Medicine, and the BC Cancer Agency, she is now conducting a full-scale randomized controlled trial to determine the effectiveness of such a referral program. Her team has completed the recruitment phase, enrolling more than 1300 patients.



# Department of Emergency Medicine Strategic Plan

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## Optimizing Survival in Out-of-Hospital Cardiac Arrest

*Strategic Leader: Jim Christenson*

### **Vision**

To achieve survival to hospital discharge rates consistent with the best communities in the world

### **Long Term Goals**

To provide consistently best care during out-of-hospital cardiac arrest and consistently best post resuscitation care in ICU settings so that the probability of survival to discharge from hospital in BC is as among the best in the world.

### **Short Term Goals**

- Share the knowledge of best resuscitation practices with the BC Ambulance Service and First Responder Agencies
- Share the knowledge and assist in implementation of best post resuscitation clinical care in all emergency departments and ICUs in BC
- To collect province wide data on outcomes and CPR process
- To report publically on resuscitation survival and the impact of this initiative

### **Key Partners and Stakeholders**

- British Columbia Ambulance Service
- First Responder Agencies in BC
- The Provincial Health Services Authority
- The Emergency Health Services Commission
- Emergency Department operational heads in BC
- Intensive care unit heads in BC
- The Resuscitation Outcomes Consortium (ROC)

### **Work to date**

For the past eight years Dr. Christenson's roles included the Principal Investigator of the Resuscitation Outcomes Consortium (international research group funded by multiple agencies including the NIH and the CIHR) and from 2005-2010 as Vice President, Medical Programs for the Emergency Health Services Commission. Resuscitation practices in the prehospital setting have been monitored and improved to evidences based standards. Four cardiac arrest clinical trials are completes and two are ongoing. Survival rates to hospital discharge subsequently rose from 6.6% to approximately 13.9% in 2012. This means that about 150 more British Columbians are alive every year more than previously. Future goals include a complete provincial cardiac arrests registry and a sustainable organization for resuscitation excellence.



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## **Sepsis and ED Soft Tissue Infections**

**Strategic Leader:** Robert Stenstrom

### **Vision**

Optimal outcomes and efficiencies for emergency department patients with infections through research, advocacy, education, and knowledge translation.

### **Long Term Goals**

To ensure that patients with infections in emergency departments across BC receive timely and optimal evidence-based care, and to become a leader in research and knowledge translation in this area.

### **Short Term Goals**

- To build on existing relationships with the BC Ministry of Health Services/BC CDC and BC Centre for Excellence in HIV/AIDS to establish policy on point of care testing for HIV for all emergency department patients, and rapid linkage to care for patients found to be positive.
- To partner with industry and the BC Ministry of Health Services to develop a program of research on resistant bacteria (MRSA) and skin and soft tissue infections in the Emergency Department
- To strengthen partnerships with the BC Patient Safety & Quality Council and the Canadian Association of Emergency Physicians (CAEP) Critical Care Committee in the development of a cohesive strategy of evidence-based care for patients with sepsis and septic shock through knowledge generation, knowledge translation, and evaluation.
- To design and conduct research studies examining the utility of blood cultures done in the emergency department.
- To design research studies of high risk patients with infections and sepsis

### **Key Partners and Stake Holders**

DEM Provincial Members, Emergency Departments in B.C., Practicing Health Professionals in Emergency Medicine, BCMA Section of Emergency Medicine, Ministry of Health, Health Authorities, Canadian Association of Emergency Physicians, BC CDC, BC Centre for Excellence in HIV/AIDS, B.C. Patient Safety and Quality Council, Center for Health Evaluation & Outcomes, and industry.

### **Work to date**

Point of care HIV testing: We recently completed a study of over 1,400 emergency department patients demonstrating the feasibility and benefits of point of care HIV testing. Widespread testing of all emergency department patients is now being conducted. Sepsis and septic shock: We have a growing database of emergency department patients with sepsis that we continue to mine for clues to identifying high risk patients and improving process outcomes (time to antibiotics, lactate measurements, etc). A study to assess the impact of rapid treatment of sepsis on various biochemical markers in septic patients will be starting in the summer of 2013. Bacterial resistance and skin and soft tissue infections (SSTIs). We currently have a number of studies ongoing in the area of resistant bacteria and SSTIs. Such as: changing incidence and prevalence of MRSA in Vancouver; prevalence of MRSA across Canada; Randomized controlled trial of a novel antibiotic for the treatment of MRSA SSTIs; Oral and IV antibiotic efficacy for SSTIs. Risk factors for the acquisition of MRSA.



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## **Patient Safety and System Resilience in Emergency Care**

**Strategic Leader:** Garth Hunte

### **Vision**

No patient will suffer harm from emergency care in British Columbia.

### **Long Term Goals**

To create safety for patients in British Columbia by fostering the cornerstone capabilities of system resilience – the abilities to anticipate the potential, monitor the critical, respond to the actual, and learn from the factual – in emergency healthcare.

### **Short Term Goals**

Building on principles for creating safety that emerged from an ethnography of everyday practice in an emergency department (ED), emphasizing dialogic storying, resilience, and *phronesis* [practical wisdom], we aim to:

- Pilot a multi-disciplinary safety action team in an ED
- Collaborate on knowledge synthesis about resilience in healthcare across Canadian regional health authorities
- Adapt the Resilience Analysis Grid© (Hollnagel, 2010) for emergency care
- Map system resilience in emergency care
- Design and pilot an *in situ* team-based ED simulation program

### **Key Partners and Stakeholders**

Emergency Departments in BC; BC Ambulance Service; Providence Health Care; Vancouver Coastal Health; Provincial Health Services Authority; BC Patient Safety & Learning System; UBC School of Population and Public Health

### **Work to Date**

Dr. Hunte's dissertation is a multi-method ethnographic description of how practitioners and staff create safety in patient care in everyday practice in an ED. [Hunte GS, Creating safety in an emergency department [dissertation]. University of British Columbia, 2010; available at <https://circle.ubc.ca/handle/2429/27485>]. Drs. Brubacher and Hunte also completed a description of safety event reporting and response in EDs in BC. [Brubacher JB, Hunte GS, et al. Barriers to and incentives for safety event reporting in emergency departments. *Healthcare Quarterly*, 2011;14(3):57–65], and have completed data collection and analysis of a study to explore safety in Emergency Health Services in BC.



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## **Stroke and Transient Ischemic Attacks**

**Strategic Leader:** *Devin R. Harris*

**Vision:** Improved care for stroke and TIA patients in Emergency Departments, and across the continuum of care, through research, education, exchange of knowledge and advocacy.

### **Long Term Goals**

Establish British Columbia as a leader in research and effective knowledge translation of best practices in Emergency Department (ED) management of stroke and TIA.

### **Short Term Goals**

- To partner with Stroke Services B.C., PHSA and the Clinical Care Management, Stroke / TIA Initiative and provide leadership in knowledge generation, knowledge translation and evaluation.
- To perform stroke and TIA clinical trials in the pre-hospital and acute care settings.
- To ensure ongoing emergency medicine stroke leadership at a national level.
- To ensure that stroke and TIA care remains a key strategic focus within the UBC Department of Emergency Medicine and the academic community in B.C.
- To ensure financial sustainability of Stroke/TIA leadership in B.C.

### **Key Partners and Stakeholders**

- Stroke Services B.C., PHSA
- Canadian Stroke Network, Heart and Stroke Foundation of Canada
- Heart and Stroke Foundation of B.C. & Yukon
- B.C. Ministry of Health
- Canadian Association of Emergency Physicians (CAEP)
- School of Population & Public Health, UBC
- B.C. Patient Safety and Quality Council
- Center for Health Evaluation & Outcomes
- B.C. Emergency Health Services (B.C. Ambulance Service)
- St. Paul's Hospital Emergency Associates

### **Work to Date**

**Emergency Department Quality Improvement Initiatives:** We have been leaders in the ED Protocol Working Group TIA/Stroke Protocol, which was implemented throughout BC in '05 – '07. We now provide clinical and evaluation leadership for the Clinical Care Management Stroke/TIA Initiative. Both initiatives are unique in Canada in their ED focus and leadership.

**Clinical Trials:** Successful Genome Canada Large Scale Grant co-investigators on a TIA trial. Leadership for the FRONTIER trial – a pre-hospital neuroprotectant clinical trial in partnership with BCAS.

**Evaluation of Stroke / TIA Care in ED's:** We have evaluated care in ED's at Provincial and Regional levels, and have collaborated in National efforts. We have found significant institutional discrepancies in care within B.C. and, in comparison to other provinces, that B.C. can improve. **Provincial Stroke Evaluation Strategy:** We have been instrumental in development of a Stroke Registry for B.C. and for an overall evaluation strategy for stroke / TIA patients with the PHSA. **National Leadership:** We are recognized leaders in ED stroke / TIA, holding key positions.



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## **Developing and Implementing a Continuing Professional Skills Based Training Program**

*Strategic Leader: Afshin Khazei*

### **Vision**

To teach and maintain skills relevant to emergency medicine quality practice in emergency practitioners across the province.

### **Long Term Goals**

To have a sustainable delivery system of simulation based courses that keep skills current in all 1000 emergency physician practitioners in the province.

### **Short Term Goals**

- To work with the Center for Excellence in Surgery Education and Innovation to develop sustainable simulation skills educational products
- To support and enhance the programs developed under the Rural Care Collaboration program in the Department of Family Practice
- To collaborate with other regional simulation based programs to be as effective as possible with distributing simulation-based courses

### **Key Partners and Stakeholders**

- Center for Excellence in Surgical Education and Innovation
- The Rural Care Collaborative
- Regional Health Authority's critical thinking skills course
- The Shock Course
- UBC Continuing Professional Education
- The Knowledge Translation Framework Strategic Initiative

### **Work to date**

Dr. Afshin Khazei developed a high-fidelity simulation-based seminar to teach UBC Phase 4 Medical students principles of resuscitation of critically ill patients. Dr. Khazei also developed, and widely delivered, a "Simulation-assisted Emergency Medicine Procedures Course" (SEMP) to allow physicians to acquire and review their skills in a number of essential life-saving emergency procedures. SEMP was presented at the RCPS annual National Conference and Simulation Summit in 2009. A Pediatric version of SEMP was developed in 2009-2010 (SEMP-Pediatrics), by Dr. Adam Cheng, the evaluation of which was presented through two recent abstracts at a conference in Madrid. Dr. Kevin Clark completed a Masters of Education where he focused his thesis on patient simulation and presented two abstracts at the 2010 CAEP conference. Dr. Ho has published extensively on knowledge translation in a multitude of settings.

Dr. Khazei is currently working with CESEI and the UBC CPD office to develop and implement a province-wide simulation program.



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THE UNIVERSITY OF BRITISH COLUMBIA

# Department of Emergency Medicine Strategic Plan

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## Developing Best Practices for Mass Gathering Medicine

*Strategic Leader: Adam Lund*

Mass Gathering Medicine (MGM), also referred to as “special events” and event medicine in the literature, is an emerging area of emergency prehospital care provided by multi-disciplinary teams through a variety of models dependent on event size, risk factors, geography, unique hazards and resources available.

### **Vision**

To provide academic leadership in research, education, clinical support tools, and advocacy/policy development to protect and improve the quality of care in the context of special events for British Columbians, Canadians, and to contribute to the world literature on MGM.

### **Long Term Goals**

- To support multi-disciplinary leaders in MGM **research** in order to create knowledge that will strengthen evidence-based risk assessment, strategic planning, pre-event collaboration, injury prevention and harm-reduction, on-event provision of care, and post-event reporting
- To maintain an international Registry of MGM events as a core resource to support evidence-based recommendations for best practice
- To develop **educational** resources that support the development of robust, multi-disciplinary teams with the knowledge and skills to provide optimal care in a range of event contexts
- To **advocate** for event safety, and provide consultation and support to government agencies (municipal and provincial) involved in permit-granting of special events to ensure that adequate tools are available to support decision-makers in evaluating and approving realistic risk assessments, and emergency management and safety plans
- To create knowledge around **clinical best practices** and support activities that translate that knowledge into practice

### **Short Term Goals**

- Participate in guideline development for mass gatherings through Emergency Management BC
- Maintain and expand the scope of the UBC DEM MGM Registry ([www.ubcmgm.ca/registry](http://www.ubcmgm.ca/registry))
- Participate in the development of a data framework with international collaborators to improve interjurisdictional comparisons and meta-analyses by MGM researchers
- Contribute to networking, theory and conceptual development of MGM through interdisciplinary team publication
- Support multi-disciplinary learners to participate in MGM events through planned mentorships by seasoned, practicing health care professionals in the event context



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## Department of Emergency Medicine Strategic Plan

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### Key Partners and Stakeholders

- UBC Departments of Emergency Medicine and School of Nursing
- Justice Institute of BC
- BC Ambulance Service – Special Operations Division
- Emergency Management BC
- Union of BC Municipalities
- Flinders University, Adelaide, Australia
- World Health Organization – Virtual Interactive Advisory Group on Mass Gatherings
- World Association of Disaster and Emergency Medicine
- Medical Services Providers (not exhaustive), such as Rockdoc Consulting, St. John Ambulance, SportMedBC, and other medical teams specific to individual events

### Work to Date

The MGM group began in 2008 at the Pemberton Music Festival, with the introduction of the first MGM Elective resident learner. The vision expanded from **education** to include **research, clinical practice support and advocacy** that Fall. The group has engaged in and completed several research projects, and presented at local, national, and international conferences. MGM was the first approved Interest Group in the UBC DEM, and established the template and structure for future interest groups. The group continues to engage with diverse stakeholders, and is viewed as a central source for expert input into mass gathering and special event issues in our province and beyond.



### Strengthening Key Interest Groups

A large number of interest groups in Emergency Medicine can be defined. Some are aligned with the above initiatives and activities; others do not yet have a sufficiently established track record or focus to be deemed a strategic initiative. Formalizing these interest groups will provide a stronger sense of community within the Department in areas of common interest, and will facilitate interaction and collaboration with other like-minded EPs across the province and beyond. The establishment of interest groups will also energize leaders within these groups to explore and perhaps build a productive academic program. In the future some may evolve into formal divisions within the Department of Emergency Medicine. Each will be identified on the Department website to enhance communication among members.

The number of groups is not limited and includes:

NOTE: those in bold are officially approved by the DEM Advisory Committee as of September, 2013.

- **Prehospital Medicine**
- **Mass Gathering Medicine**
- **Global Emergency Medicine**
- **Ultrasound in the Emergency Department**
- **Simulation**
- Disaster Medicine
- Wilderness Medicine
- Air Transport Medicine
- Emergency Department Administration
- Toxicology
- Trauma
- Patient safety in emergency settings
- Resuscitation
- Procedural sedation
- Sepsis
- Cardiovascular Emergencies
- Airway Management
- Pediatric Emergency Medicine
- Health Services
- ED based Public Health



## Strategic Financial Support

The three main functional “programs” in the DEM are Medical Student (Undergraduate) Education, Residency training and research (knowledge creation and exchange). Currently medical leadership and administrative support for residency training is funded through the FOM according to a well-defined grid based on the number of residents. Teaching honoraria are provided according to scheduled teaching for residents and medical students. Medical leadership and administrative support for undergraduate education is ad hoc and discussions are ongoing to ensure that the medical leadership and administrative support provided for UG education is adequate. The FOM funds 2.1 “F-slots” to senior faculty with heavy administrative loads. The Department does not have any General Purpose Operating Funds to support research faculty or general administration functions. Discussions are underway to ensure that necessary administrative costs are fully covered by the FOM since no other source is available.

The Department of Emergency Medicine is more likely to achieve its goals related to knowledge creation and sharing if leaders of strategic initiatives are provided funding to protect time necessary to plan, develop interdisciplinary teams and implement identified strategies.

In the current year the MOHS provides \$500K. A cost sharing framework and contract was written and signed between the MOH and UBC. in 2013. It defines deliverables for Strategic Initiative Leaders and basic infrastructure support for research and knowledge sharing. The MOH funds are leveraged by support from clinical groups at Vancouver General Hospital, St. Paul’s Hospital and the Royal Columbian Hospital. Two grant-tenure track faculty have multi-year peer-reviewed salary support and one other faculty in the “Professor without Review” category has one year of Vancouver Coastal Health Research Institute partial salary support.

In the long term, resources must be steadily expanded to increase the number of faculty with protected time and the appropriate number of support personnel. Each person funded with DEM/MOH funds will work diligently with the Head of the Department to seek opportunities and secure external sources of funding support for the position.

The current level of research activity to support our goals does not take advantage of the expertise that exists within our faculty. Our goal is to increase the amount and sustainability of support for clinical scientists to increase output in knowledge creation and exchange.

Goal #1 identifies a new structured framework focused on building a network that integrates clinical care, knowledge creation and knowledge sharing. We envision that the Faculty of Medicine, regional Health Authorities, and the Ministry of Health will engage in a true partnership to meet our common patient care goals. The business plan to support this new paradigm will clarify financial needs and opportunities for personnel support to do the academic work that will provide innovative solutions to effective and efficient emergency care. We will also explore strategies to generate endowed chairs for these important strategic initiatives.



## Department of Emergency Medicine Strategic Plan

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### General Principles to Guide Faculty Funding

1. Funding amounts for academic or administrative FTEs supported by the DEM are defined by the tenured grid for their appointment level in the Faculty Association collective agreement.
2. The time expectation for a faculty member supported to the 1.0 FTE level is a 40-50 hour work week that includes the academic or administrative responsibilities and the clinical work necessary to ensure a yearly income similar to a full time clinician in the same group.
3. The optimum protected time for most strategic leaders to be effective is 1.0 FTE. This support does not include other external funds supporting unrelated activities.
4. The minimum total protected time for DEM faculty bringing in significant salary funds is 0.5 FTE.
5. Faculty who successfully win competitive operating grant awards should be supported by protecting at least 0.5 FTE if they do not have accompanying salary award grants.
6. The maximum DEM discretionary support for positions that do not have external personnel support funds or operating grant funds and who are not defined as strategic initiative leadership positions is 0.5 FTE.



### What will the Department look like in 3 years?

#### If we can achieve most of what is in this plan, in three years the department will:

- be a provincial leader and one of the major partners in an Integrated Emergency Medicine Community that truly creates and shares solutions to common patient care issues in rural and urban emergency departments.
- be a leader in a provincial Emergency Medicine Network integrating clinical and academic activities. It will include a common shared knowledge sharing framework that defines best clinical care and clinical support tools, that provides access to real-time on-line advice for acute emergency care dilemmas and that allows emergency practitioners and hospitals particularly in rural and remote settings to access expertise immediately and that provides a provincial venue for province-wide discussion on priorities and sharing of local solutions that may benefit others.
- be the best university in Canada for medical student and resident education in emergency medicine
- have distributed residency programs established in Victoria, Prince George and Kelowna
- be one of the premier emergency medicine research universities in Canada.
- be publishing a regular stream of important papers in high impact journals
- have an active program of scholarship in education, and have made noticeable improvements in student and education delivery across all sites
- have actively communicating and collaborating interest groups
- have a provincial clinical database that can be utilized by any faculty member in the province to address questions of interest, and where appropriate publish the results of analyses.
- be actively pursuing a set of academic but practical strategic initiatives, consisting of sustainable, funded, interdisciplinary and provincial, national, or international teams that bring new knowledge and benefits to patients and the Health Care System.
- have sufficient, stable and predictable financial resources to achieve our strategic goals.

