



University of Calgary Disaster Medicine Certificate Program Proposal

Disaster Certificate Program Requirements:

Emergency Medicine trainees undertaking Disaster subspecialty training during their PGY4 year are required to meet the following criteria in order to qualify for the University of Calgary certificate of training in Prehospital care.

1. Disaster Core Medicine Education (250 hours)

- a. Completion of a minimum of 250 hours of disaster medicine-related, education. Options include a masters*, disaster management/medicine courses** but all must be approved by EM Disaster program director. Options for training include but not limited to:
 - i. European Masters of Disaster Medicine (EMDM)/MPH etc.
 - ii. Health Emergencies In Large Populations training course (HELP)
 - iii. Public Health In Complex Emergencies training course (PHCE)
 - iv. Disaster Management Course (ADPC)
 - v. Medical Specialist Course (TEEX)
- b. Additional 100 hours self-directed study includes the *Disaster Medicine 2nd edition by Ciottono*.
- c. Deployment to a disaster response in the capacity of medical or management expert for a minimum 21 days with a recognized agency. Recognized agencies include, but are not limited to, a National Disaster Medical System/Disaster Medical Assistance Team (NDMS/DMAT), National Disaster Medical System Urban Search & Rescue (NDMS/US&R), International Red Cross/Red Crescent (ICRC), Doctors Without Borders/Médecins Sans Frontières (MSF), United Nations (UN) and military deployments **OR**
- d. Participation in a large-scale multi-system simulation/disaster scenario that is recognized by the local, regional or national agencies.

2. Emergency Management Training - Applicants must complete all the following:

- a. Incident Command Systems
 - i. ICS 100 course
 - ii. ICS 200 course
 - iii. ICS 300 course
 - iv. ICS 400 (optional but recommended if available)
- b. FEMA educational courses
 - i. IS-700.a – National Incident Management System (NIMS)



- ii. IS-800.b – National Response Framework

3. Disaster Medicine Training - Applicants must complete all the following:

- a. Disaster Life support
 - i. Core Disaster Life Support (CDLS) course.
 - ii. Basic Disaster Life Support (BDLS) course.
 - iii. Advanced Disaster Life Support (ADLS) (optional)
- b. Hazmat
 - i. Basic Hazmat Life Support (BHLS) Course.
 - ii. Advanced Hazmat Life Support (AHLS) Course.

4. Disaster work experience:

- a. A minimum of one year's active participation on a federal, provincial, civic, hospital, or healthcare agency or facility disaster committee.

5. Educational/Clinical Responsibilities

- a. Education
 - i. The trainee is responsible for both disaster members and resident education during their fellowship year. A minimum of 40 hours should be spent developing and presenting formalized educational content.
 - ii. The trainee must develop and present the required academic half-day Disaster Medicine topics for that year for the Emergency Medicine residency program.
- b. Clinical
 - i. The trainee must develop and present the required academic half-day Disaster Medicine topics for that year for the Emergency Medicine residency program.
 - ii. A minimum of 8 clinical shifts per month in the Emergency Department (any combination of adult and peds).

6. Research, Administrative or Business project:

- a. Completion of a publishable research, administrative, educational or program evaluation project in the field of disaster management/medicine. The work should directly benefit the field of disaster management, federal, provincial or municipal government, the disaster organization, or the emergency medicine program. The topic must be initiated by the trainee and is at the discretion of the EM disaster program director.

7. Electives



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- a. A maximum of **two blocks** elective time of the disaster certificate training year can be substituted with education features of other pre-hospital programs offered through the University of Calgary (Aero-medical or EMS programs). As long as the hourly work initiative is equivalent and is approved by the program director.
- b. A Maximum of **one block** of elective time can be taken to explore other areas of emergency medicine during the year.

*Individuals are encouraged to consider completing a European Masters of Disaster Medicine (EMDM) or similar; Masters of Public Health (MPH) specializing in International health, Humanitarian assistance, Health Policy or a related field at some point in their career.

** Courses are at the discretion of the EM Disaster program director.

University of Calgary - Disaster Medicine Fellowship - Proposal

Core Competencies

A list of expected core competencies has been proposed by the International Disaster Medical Sciences fellowship under the American Board of Emergency Medicine. It outlines 3 main categories:

- 1) Conceptual Framework and strategic overview of disasters.
- 2) Operational Issues
- 3) Clinical Management

It is expected that the individual will acquire necessary competencies through the disaster fellowship framework proposed above.

Disaster Medicine Core Content

1.0 Conceptual Framework and Strategic Overview of Disasters

- 1.1 Disaster nomenclature
- 1.2 Disaster research and epidemiology
- 1.3 Disaster education and training: Linking individual and Organizational Learning and Performance
- 1.4 Surge Capacity
 - 1.4.1 Critical Thinking in a Resource poor setting
 - 1.4.2 Alternate care sites



- 1.5 International Perspectives on Disaster Management
- 1.6 Ethical Issues in Disaster Management
- 1.7 Emerging infectious disease: Concepts in preparing for the next Microbial Threat
- 1.8 Disaster Mental and Behavioural Health
- 1.9 Special Populations

2.0 Operational Issues

- 2.1 Public Health and Emergency Management systems
 - 2.1.1 National Incident Management Systems
 - 2.1.2 Incident Command Systems
 - 2.1.3 Communications
 - 2.1.4 Media
 - 2.1.5 Phases of Emergency Management Systems (Mitigation, Preparedness, Response, and Recovery)
 - 2.1.6 All-Hazard Approach
 - 2.1.7 Resource Management
 - 2.1.8 Volunteer Management
 - 2.1.9 National Disaster Medical System
 - 2.1.10 Personal Preparedness
- 2.2 Legislative Authority and Regulatory Issues
- 2.3 Syndromic Surveillance
- 2.4 Disaster Triage
- 2.5 Personal Protective Equipment
- 2.6 Decontamination
- 2.7 Quarantine
- 2.8 Mass Dispensing of Antibiotics and Vaccines
- 2.9 Management of Mass Gathering
- 2.10 Transportation Disasters
- 2.11 Emergency Medical Services Scene Management
 - 2.11.1 Recognition, notification, initiation
 - 2.11.2 Scene Safety
 - 2.11.3 Search and Rescue
 - 2.11.4 Transportation
- 2.12 Health Care Facility Disaster Management
 - 2.12.1 Hospital Incident Command System
 - 2.12.2 Allocation of Scarce Resources
 - 2.12.3 Evacuation
- 2.13 Mortuary affairs
- 2.14 Crisis and Emergency risk Communication
- 2.15 Telemedicine and Telehealth and the role in Public Health Emergencies
- 2.16 Complex Public Health Emergencies



2.17 Patient Identification and Tracking

3.0 Clinical Management

3.1 Chemical-Biological-Radiological-Nuclear and Hazardous Materials

- 3.1.1 Traumatic and Explosive Events
 - 3.1.1.1 Management of Crush injury
 - 3.1.1.2 Management of Compartment Syndrome
 - 3.1.1.3 Management of Crush Syndrome
- 3.1.2 Burn Patient Management
- 3.1.3 Clinical aspects of Large scale Chemical Events
- 3.1.4 Biological Events
- 3.1.5 Nuclear and Radiological Events
 - 3.1.5.1 Dirty Bomb
 - 3.1.5.2 Nuclear Detonation
- 3.1.6 Hazmat, Toxic and Industrial Events

3.2 Environmental Events

- 3.2.1 Floods
- 3.2.2 Hurricanes
- 3.2.3 Tornados
- 3.2.4 Earthquake
- 3.2.5 Tsunamis
- 3.2.6 Winter Storms
- 3.2.7 Heat Wave
- 3.2.8 Volcanoes

References:

American Board of Physician Specialties (ABPS) Website as of September 2015:

<http://www.abpsus.org/disaster-medicine-eligibility>

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Koenig *et al*. (2009). International Disaster Medical Sciences Fellowship: Model Curriculum and Key Considerations for Establishment of an Innovative International Educational Program. *West J Emerg Med.* 2009 Nov;10(4):213-9.



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