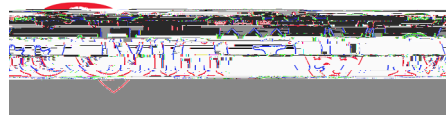


Aviation Medicine Fellowship McGill University



Length: 1 year

Number of positions available: 1

Type of fellowship: Primarily a clinical fellowship but the candidate is expected to complete at least two clinical courses during the year.

Facilities: McGill University Health Centre and Affiliated Centres

Fellowship Program Director: Dr. Vincent Poirier, MD.CM, FRCPC, DAvMed

Program Summary

The McGill Aviation Medicine fellowship is a clinical program which covers different aspects of Aviation Medicine including:

- 4 In-flight environment
- 4 Repatriation and Medevacs (fixed wing and rotator wing)
- 4 Postgraduate Certificate in Civil Aviation Medicine (PGCertCAvMed)
- 4 Human factors in accident investigation
- 4 Human factors in cabin safety
- 4 Hypo and Hyper-baric Medicine
- 4 Commercial aviation

The fellowship candidate must have successfully completed a full specialty program in Emergency Medicine. The fellow will learn the core knowledge and technical/clinical skills on the ground and in the air.

He/she will also be responsible for the ongoing care of evacuated patient which include patient assessment in the sending hospital, any contraindication for flying, preparing all needed medical equipment, managing all medical emergencies on the flight, and handing over the patient to the receiving hospital, as well as involvement in coordination with other health and governmental entities to facilitate his appropriate disposition.

Fellow Characteristics/Requirements

1. Graduated from an approved Canadian emergency medicine residency (

- 4 Central and visual forms of disorientation
- 4 Long duration acceleration
- 4 Effects of microgravity
- 4 Circadian/sleep physiology
- 4 Thermal physiology
- 4 Ageing and performance
- 4 Otolaryngology; ophthalmology; neurology and neurosurgery; psychiatry; respiratory medicine and aviation; cardiology; general medical conditions with emphasis on

4- Human Factors in Aircraft Accident Investigation

The resident will have the choice to take this course either via video conference, at the Transportation Safety Institute in Oklahoma or at Southern California Safety Institute (SCSI) in Albuquerque, New Mexico.

This course teaches the required material for investigators to:

- 4 Identify the human error issues involved in an accident wherever they occurred, e.g. in the cockpit, ATC (air traffic control), management, maintenance
- 4 Know when and how to call on the required Human Factors experts for further analysis.

This course will prepare the fellow to:

- 4 Assist in aircraft accident investigations
- 4 Review human, environmental, and materiel factors which directly or indirectly contribute to the aircraft mishaps
- 4 Use simulated or actual aircraft mishaps to learn the keys of accident investigation
- 4 Analyze human factors and human error from an investigator's perspective
- 4 Analyze human performance and information processing
- 4 Learn about illusions, stress and fatigue in the flight environment
- 4 Look at summary of human error causes and reduction methods from an accident investigator perspective
- 4 Integrate human error investigation procedures including case studies and clues
- 4 Learn the introduction to human factors analysis and classification system.
- 4 Learn the psychology of witness interviewing including the interviewing of key witnesses not normally associated with basic witness interviewing, e.g. spouses of pilots, survivors, crew members with survivor syndrome
- 4 Look at pressures on the accident investigation team
- 4 Do case studies: individual and team investigation exercises

Survivability groups. In addition attendees will become familiar with the design requirements for major transport aircraft with particular focus on survivability considerations. Finally, each resident will learn the unique requirements for interviewing survivors and completely documenting the cabin for deficiencies, injuries sustained during the aircraft accident, escape from the aircraft, and survivability in the post-crash environment.

The course topics include:

- 4 Cabin safety investigation guidelines
- 4 Applicable ICAO (International Civil Aviation Organization) standards
- 4 Example of NTSB (National Transportation Safety Board) participation guidance
- 4 Human factors and survivability group activities
- 4 Party to the investigation duties and submissions
- 4 Technical and engineering aspects
- 4 Aircraft cabin design basics
- 4 Identification of station points, stringers, chord, pressure bulkheads, waterline, side of body ribs, b(poi)62 -0.012 Tw [(des)4 (i)16 (gn b)]T0 Tc 0 oTD 16  )Tj0.

8- Emergency Medicine

The fellow will do clinical rotations at Emergency Department at the McGill University Health Centre hospitals. The fellow will also be required to do 4-6 shifts/month when they are based in Montreal.

During these months, the resident will:

- 4 Refine and demonstrate the skills necessary to provide for the efficient and safe evaluation/management of patients presenting to the emergency department with a wide spectrum of patient-declared emergencies.
- 4 Through teaching rounds, clinical exposure and independent use of selected learning resources, will obtain and demonstrate a knowledge of common medical and surgical emergencies, including their epidemiology, pathophysiology, clinical features and investigation.
- 4 Demonstrate, through his/her daily work, an ability to interact with patients, their families and other health care providers in a professional, compassionate and efficient manner.
- 4 Develop and demonstrate an ability to perform a variety of medical and surgical procedures appropriate to the practice of emergency medicine.

9- Elective rotation

The resident will have the opportunity to choose a one month elective rotation in a field related to aerospace/aviation medicine (e.g.: Medevac with AirMedic, Tropical Medicine, Travel Medicine, Occupational Medicine or Emergency Medicine).

10- Vacation

A total of 4 weeks vacation time can be taken any time during the academic year with the following **restrictions**:

- 4 Residents must not miss more than 1/4 of a period, or it will be considered incomplete and it will have to be repeated
- 4 Residents can take 2 weeks vacations consecutively if they:
 - o Take the last week of one period, and the first week of following period,
 - or**
 - o Request a two-week vacation during a two-month block rotation
- 4 Residents must inform the rotation supervisor with a sixty (60)-days' notice using the "Change of Schedule Request" form and submitting it to the Program Coordinator for approval by the Site Coordinator and EM Program Director/Fellowship Director.
- 4 Article 25.01 of the Residents' Contract, states that the "rotation supervisor has the right to refuse a vacation request should this have an effect on the medical care provided by that service".

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Other

The applicant will need a current Police Records Check before doing rotations in other provinces (Alberta and Ontario).

Core Faculty

Fellowship Director: **Vincent Poirier**, MD.CM, FRCPC, FACEP, DAvMed
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