

Name of Institution: McGill University

Location: Montreal, QC

Type of Fellowship: Clinical

Number of positions: 1

Length: 1 year

APPLICATION FORM FOR FELLOWSHIPS

Program Information (please append description):

- Number of fellowship positions requested
 - 1
- Academic affiliation
 - McGill University
- Name of hospitals involved in training
 - Jewish General Hospital
 - McGill University Health Center
- Background
 - In light of the increasing complexity and prevalence of older adults presenting with cardiovascular disease, there is an unmet need to incorporate the expertise of the geriatric cardiology specialist into the “heart team”. Beyond knowing how to treat older adults with heart disease in a general sense, this specialist requires a unique skillset in knowing how to perform a comprehensive geriatric assessment and, importantly, how to integrate the geriatric issues along with the underlying cardiac conditions to formulate a balanced holistic therapeutic plan. To equip the geriatric cardiology specialist with the requisite up-to-date knowledge of integrated cardiovascular and geriatric assessment and care, the following fellowship curriculum is proposed.
- Research activity
 - Fellows will spend one day per week pursuing research activities in the field of geriatric cardiology. In addition to completing their own research projects, fellows will acquire career-building exposure to collaborative research projects and networks on a national and international level. Further methodological training in the Departments of Epidemiology or Experimental Medicine will be encouraged but not mandatory. The fellowship program’s research component is outlined in greater detail on pages 6-7.
- Publications
 - Not applicable

- Mission
 - The primary mission of the Geriatric Cardiology Fellowship Program is to train specialists to become highly-skilled in providing integrated care for complex older adults with cardiovascular conditions, particularly those with multiple chronic conditions and geriatric syndromes. Secondly, to generate and present new knowledge by conducting meaningful research in the field of geriatric cardiology. Thirdly, to sensitize the cardiology and geriatric communities (including trainees) to the special considerations that are important to optimize care for our challenging geriatric cardiology patients. Fourthly, to demonstrate vision as *early adopters/leaders* in adding this emerging fellowship program to our robust portfolio of sub-specialty training programs offered by the Division of Cardiology at McGill University.
- Outline how intended fellowship will enhance residency training
 - Throughout residency training, residents treat older adults with heart disease. The fellowship in geriatric cardiology strives to go beyond the algorithmic guideline-based diagnosis and treatment of heart disease, and emphasize the critical interplay between the underlying heart disease and the geriatric domains. These include frailty, polypharmacy, cognitive function, to name a few, and are a blind spot in training programs and guideline documents. Cardiology residents are minimally exposed to geriatric domains during their training. Geriatric medicine residents are minimally exposed to cardiovascular conditions during their training, and although they are taught how to perform comprehensive geriatric assessments, they have limited experience directly applying these to the specific context and needs of a cardiovascular patient.

Name of the Fellowship Program Director

Jonathan Afilalo, MD, MSc, FACC, FRCPC

Assistant Professor, McGill University

Clinician Scientist, Division of Cardiology

Associate Member, Departments of Epidemiology and Experimental Medicine

Co-Director of Research, McGill Cardiology Training Program

Co-Chair of Research Working Group, American College of Cardiology Geriatric Cardiology Section

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Academic Facilities

- Outline facilities for clinical and academic pursuit
 - Cardiology outpatient clinics at the JGH & MUHC
 - Geriatrics outpatient clinics at the JGH & MUHC
 - Heart failure outpatient clinics at the JGH & MUHC
 - Structural heart disease clinic at the MUHC
 - ER and wards at the JGH & MUHC (for inpatient consultation service)
 - Cardiac catheterization lab at the MUHC (for observation of TAVR cases)
 - Center for Clinical Epidemiology at the JGH
 - Center for Innovative Medicine at the MUHC
- Library access, materials relevant to fellowship training
 - Textbook and online learning materials as outlines below
 - Basic equipment to perform physical performance tests and frailty assessments such as handgrip dynamometers, digital stopwatches, and state-of-the art bioimpedance scales (available at both sites) to perform point-of-care measurements of body composition
 - Medical libraries accessible at the JGH & MUHC
- Multimedia learning materials available
 - Fellows will complete *The Essentials of Cardiovascular Care in Older Adults (ECCOA) Self-Assessment Program* offered by the American College of Cardiology online at the following address: www.acc.org/ECCOA
- Availability of a skills lab if applicable
 - Not applicable

Fellow Duties and Responsibilities

- Call responsibilities to cover service
 - On call during daytime working hours for geriatric cardiology consults. No call or coverage responsibilities on nights or weekends.
- Include whether the fellow is the senior supervisor of residents
 - For trainees with a background in geriatric medicine, the cardiology resident or sub-specialty fellow will be their senior for the inpatient consultation service.

See pages 4-7 for:

- Outline whether there are fixed rotations at various institutions
- Outpatient clinic responsibilities need to be outlined
- Outline role of the fellow towards residents on service
- Teaching responsibilities towards residents

- Outline participation in academic activities involving the residents: seminars, outcome assessment (morbidity and mortality rounds etc.)
- Describe any support staff available to the fellow: program coordinator, nurse clinician, secretarial
- Proposed meetings to be attended by the fellow
- Research productivity and publications expected by the Fellow

Curriculum

- Intended caseload
 - General clinic, Heart failure clinic: Fellows will be assigned 4-6 clinic patients per morning and allotted 45-60 minutes per patient to comprehensively assess and synthesize their cardiovascular and geriatric issues.
 - Cardiology consult service: Fellows will be primarily assigned 4-6 consults per day, and be present to listen and contribute to an additional 4-6 consults completed by their peers (dependent on the daily volume of cases).
- Intended % of varieties of cases
 - Heart failure 30%
 - Valvular heart disease 30%
 - Coronary artery disease 20%
 - Arrhythmia 10%
 - Other incl. cardiac rehab 10%
- Regular reading materials provided (if any)
 - Fellows will be provided with *Tresch and Aronow's Cardiovascular Disease in the Elderly, Fifth Edition* (<http://amzn.com/1842145436>), which is the foremost reference textbook in this field.
 - A binder containing seminal articles in geriatric cardiology will be provided to fellows and new publications pertinent to this field will be circulated on a regular basis to update the binder.
 - As discussed above, fellows will read materials in the online ECCOA curriculum. These materials encompass powerpoint presentations on major topics in geriatric cardiology authored by leading practitioners.
- Conference weekly schedules
 - Medical grand rounds Monday 12:30-13:30
 - Cardiology academic half-day Wednesday 13:00-16:00 (if topic pertinent)
 - Cardiology M&M rounds Thursday 12:00-13:00 (monthly)
 - Cardiology rounds Friday 12:00-13:00
- Role of the fellow in attending, presenting, supervising, organization

- The fellow will be given the opportunity to present didactic lectures on a geriatric cardiology topic at rounds and academic half-day. Moreover, the fellow will regularly be called upon to discuss the geriatric considerations for cases presented at cardiology and M&M rounds.

Eligibility

- Trainees having completed residency training in internal medicine are eligible to apply as they are completing (in good academic standing) their fellowship training in geriatrics or cardiology. Those with a background or strong interest in research are encouraged to apply.
- Geriatric cardiology fellows will have complementary interactions with general cardiology resident. For geriatric cardiology fellows with a background in cardiology, the cardiology fellowship PDs will work with the geriatric cardiology PD to ensure that their roles and responsibilities do not overlap in a manner detrimental to the training of the general cardiology residents.

Weekly Activities

	Monday	Tuesday	Wednesday	Thursday	Friday
a.m.	General clinic	Heart failure clinic / Supportive care	Cardiology consult service	Structural / TAVR clinic	Research
p.m.	Geriatric cardiology assessments	Geriatric cardiology assessments	Cardiology consult service	Structural / TAVR clinic	Research

Clinical Roles and Responsibilities

The general clinic component will consist of two streams. Fellows having completed training in geriatric medicine will participate in a general cardiology clinic supervised by Dr. Jonathan Afilalo at the JGH, consisting of stable outpatients with a broad representation of cardiovascular diagnoses. Fellows having completed training in cardiovascular medicine will participate in a geriatrics clinic supervised by Dr. Jose Morais at the MUHC, consisting

of referrals for assessment of functional status, falls, memory, and other representative geriatric domains. The fellow will longitudinally be assigned older adult patients and be responsible for evaluating their clinical status, medication list, psycho-social domains, and outlining a therapeutic plan after reviewing the case with the attending.

The heart failure clinic will be supervised by Dr. Caroline Michel and Dr. Richard Sheppard at the JGH and Dr. Nadia Giannetti at the MUHC and will expose the fellow to outpatients with chronic heart failure. Once monthly, the heart failure clinic will be substituted for a supportive care clinic for end-stage cardiac patients in conjunction with Dr. Bernard Lapointe from the Division of Palliative Care. The responsibilities of the fellow will mirror those described in the general cardiology clinic.

The structural heart disease clinic will be supervised by Dr. Nicolo Piazza and Dr. Giuseppe Martucci at the MUHC and will expose the fellow to complex older adults with valvular heart disease who have undergone or are being considered for transcatheter or surgical interventions. In addition to assessing the patient's cardiovascular status, the fellow will be tasked with assessing the patient's geriatric domains including but not limited to performing frailty tests.

Both the heart failure and structural heart disease clinics employ a multi-disciplinary heart team model that involves active collaboration with specialized nursing and other services. As a core member of this heart team, the fellow will be asked to participate in case discussions and provide input regarding geriatric considerations, which are highly valued and pertinent to decision-making.

As part of the cardiology inpatient consultation service, the fellow will be supervised by various attending staff in the Division of Cardiology at the JGH and MUHC and will be exposed to ER and ward patients with a broad representation of cardiovascular diagnoses. The fellow will be assigned consults for older patients and be responsible for completing the consult with a specific focus on structured assessment of geriatric domains pertinent to the case, reviewing with the attending, and outlining a therapeutic plan.

The fellow will be available on-request to perform comprehensive geriatric assessments and frailty tests for cardiology and cardiac surgery patients in our integrated cardiovascular unit. Comprehensive geriatric assessments will be reviewed in a multi-disciplinary fashion in conjunction with the geriatric medicine consultation service. Frailty tests will be provided to the clinical team in a structured format and also integrated into an ongoing frailty registry. The fellow will be linked with the clinical pharmacology team to perform in-depth reviews of medication interactions and adverse effects.

Additionally, depending on the interest of the fellow, an optional rotation may be arranged in the Catherine Booth cardiac rehabilitation program under the supervision of Dr. Mark Smilovitch.

Research and Academia

The fellow will be actively involved in geriatric cardiology research, with protected time to conduct projects and present their work at local and international conferences. Depending on the fellow's profile, their exposure may span: developing a proposal for an original study or systematic review, performing frailty tests, reviewing medical records, participating in data analysis, and/or authoring abstracts and manuscripts in peer-reviewed journals. By partaking in these projects, they will get to know (and be known by) collaborators who are leading experts in geriatric cardiology across Canada, the United States, and Europe.

The fellow will present a lecture to the McGill cardiology fellows at academic half-day on a geriatric cardiology topic or journal club pertaining to the cardiovascular care of older adults. Similarly, the fellow will be given the opportunity to present in other forums such as cardiology grand round and geriatric medicine rounds at the various McGill sites. There will also be interactive participation in weekly cardiology rounds and monthly M&M rounds to discuss challenging cases. Fellows will be encouraged to attend at least one of the following annual scientific conferences: Canadian Cardiovascular Congress, American College of Cardiology (including Geriatric Cardiology Section plenary), Canadian Geriatrics Society, and/or American Geriatrics Society.

Dr. Jonathan Afilalo will meet the fellow on a regular basis, including a weekly meeting to discuss progress in research and clinical tasks. Epidemiological and biostatistical support will be provided, as well as other resources necessary to achieve success in research. Several large datasets rich in geriatric content will be readily available to be analyzed as sub-studies. Furthermore, fellows will be encouraged and supported to pursue methodological training in epidemiology or experimental medicine at the University level.