Overview

The Grand Rapids Medical Education Partners (GRMEP)/Michigan State University (MSU) cardiovascular disease fellowship’s mission at Spectrum Health in Grand Rapids, Michigan, is to train the best cardiologists by educating and mentoring our fellows to become the clinical and academic leaders of tomorrow.

Fellows train in our integrated Frederik Meijer Heart and Vascular Institute, comprised of cardiologists, cardiothoracic surgeons, vascular surgeons, cardiac anesthesiologists and cardiac radiologists. Our cardiovascular medicine division consists of advanced imaging, interventional cardiology, electrophysiology, transplant cardiology, adult congenital heart and structural heart.

Our state-of-the-art facilities at Butterworth Hospital, Fred and Lena Meijer Heart Center, Helen DeVos Children’s Hospital and Lemmen-Holton Cancer Pavilion set the stage for our comprehensive program. Through our strong collaboration with MSU and Van Andel Research Institute, fellows will discover an environment that prepares them for clinical challenges and rewards ahead. Our strong commitment to patient care, education and research has helped us become a leader in cardiovascular care throughout the region.
Program Director Message

We are pleased to introduce the GRMEP/Michigan State University Cardiovascular Disease Fellowship Program at Spectrum Health’s Frederik Meijer Heart & Vascular Institute. We are committed to providing the best academic and clinical training program for our fellows.

Our passion is teaching, and our entire program is designed with the fellow in mind. Our fellows will train at the largest medical center in Western Michigan, affiliated with MSU’s College of Human Medicine. Our cardiology continuum-of-care philosophy ensures that our fellows are provided a well-rounded clinical experience in a multi-disciplinary setting.

As a fellow in our program, you will pursue your passion in clinical or academic cardiology. For interested fellows, we offer level 2 certification in echocardiography, nuclear cardiology, and diagnostic cardiac catheterization beyond the core cardiology curriculum.

Our procedural volumes allow fellows to participate in transplant cardiology, cardiac CT/MRI, electrophysiology, interventional cardiology, vascular cardiology, adult congenital cardiology and preventive cardiology. We are dedicated to high quality outcomes and exceptional patient experience.

Our dynamic educational conference series focuses on your educational needs. In addition, our cardiovascular research program allows fellows to support novel investigator-initiated research studies. Fellows have the opportunity to be participants in many quality improvement programs.

On behalf of the cardiology faculty, our goal is to make your fellowship training the best in the country. Please do not hesitate to contact us with any questions. You can also refer to https://www.grmep.org/programs/cardiology for detailed information.

Sincerely,

Nagib Chalfoun, MD FHRS
Spectrum Health Medical Group
Chair, Education
Frederik Meijer Heart and Vascular Institute
Program Director, Cardiology Fellowship
GRMEP/Michigan State University
Assistant Professor of Medicine
Why Choose the GRMEP/Michigan State University Cardiovascular Disease Fellowship Program at Spectrum Health?

Spectrum Health offers a wide breadth of cardiology, cardiothoracic and vascular services. As a partner with MSU, fellows are surrounded by an academic environment including residents and medical students. Fellows will also enjoy opportunities to learn in a state-of-the-art facility providing innovative cardiovascular care. From open heart surgery and transplant to minimally invasive interventions, our physicians and clinical teams are experienced in blending individualized patient plans with a complete dedication to quality outcomes.

With a network of care that spans 13 counties in western Michigan, our experts perform more advanced lifesaving heart and vascular procedures than any other hospital in Michigan. Our high LVAD and electrophysiology volumes allow fellows the opportunity to participate in complex procedures led by expert cardiologists. We are also a state leader year after year, in PCI for STEMI volumes. We always strive to adopt the latest technologies, including WatchmanTM, TAVR, Mitraclip, chronic total occlusion (CTO) interventions, and the latest LVAD devices.

World-renowned physicians call Spectrum Health’s Fred and Lena Meijer Heart Center their medical home. Our fellows receive educational opportunities few locations can provide.

1Michigan Health and Hospital Association Michigan Inpatient Database FY08 – FY15. Includes adult inpatient discharges only.

Awards

- **Healthgrades Cardiac Care Excellence Award (2016)**
- **Healthgrades Coronary Intervention Excellence Award (2016)**
- **Healthgrades Among the Top 5% in the Nation for Overall Cardiac Services (2016)**
- **Healthgrades Among the Top 5% in the Nation for Coronary Interventional Procedures (2016)**
- **BCBS Cardiac Center of Excellence (2016)**
- **ACTION Registry – GWTG; 2015 Performance Achievement Award**

Volumes

As a nationally recognized health care system, Spectrum Health provides high quality clinical care to thousands of patients each year. Here are some of our clinical volumes from FY 2015 (July 1, 2014 to June 30, 2015).

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Volume</th>
</tr>
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<tbody>
<tr>
<td><strong>Catheterization:</strong></td>
<td></td>
</tr>
<tr>
<td>1. PCI</td>
<td>1777</td>
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<tr>
<td>2. Diagnostic Catheterizations</td>
<td>4434</td>
</tr>
<tr>
<td><strong>Electrophysiology procedures:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Total Ablations</td>
<td>980</td>
</tr>
<tr>
<td>2. Total Devices</td>
<td>1271</td>
</tr>
<tr>
<td>3. AFIB Ablations</td>
<td>334</td>
</tr>
<tr>
<td>4. Pacemakers</td>
<td>742</td>
</tr>
<tr>
<td>5. ICDs</td>
<td>529</td>
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<tr>
<td><strong>Open heart surgeries:</strong></td>
<td></td>
</tr>
<tr>
<td>1. CABG</td>
<td>580</td>
</tr>
<tr>
<td>2. Other</td>
<td>563</td>
</tr>
<tr>
<td>3. Total</td>
<td>1143</td>
</tr>
<tr>
<td><strong>Left Ventricular Assist Device:</strong></td>
<td>60</td>
</tr>
<tr>
<td><strong>Transcatheter Aortic Valve Replacement:</strong></td>
<td>141</td>
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<tr>
<td><strong>Heart transplant:</strong></td>
<td>14</td>
</tr>
<tr>
<td><strong>Lung transplant:</strong></td>
<td>22</td>
</tr>
<tr>
<td><strong>Extracorporeal Membrane Oxygenation:</strong></td>
<td>96</td>
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</tbody>
</table>

In addition to the many procedures listed above, Spectrum Health was one of the first hospitals to introduce the WatchmanTM left atrial appendage closure device. We are also one of 20 locations in the country performing varicose vein treatment with Venaseal technology, and the first Michigan health system to perform Topera 3D Mapping for atrial fibrillation.
Research and Clinical Trials

At the Frederik Meijer Heart & Vascular Institute our cardiology faculty is actively involved in innovative clinical research. We have a large cardiovascular research department which provides dedicated support to our physicians and staff. The Heart and Vascular Institute works in collaboration with numerous institutions across the globe, including the Magdi Yacoub Institute, Van Andel Research Institute, MSU, Grand Valley State University and the DeVos Cardiovascular Research Program. Our experts are involved in multicenter clinical trials and investigator initiated studies, in addition to a translational research division. Our clinical volumes have enabled us to become top enrollers in multiple trials such as the global Surgical Replacement and Transcatheter Aortic Valve Implantation (SURTAVI), where we were a top two enroller in the country.

Curriculum

The curriculum of the cardiovascular fellowship training program is designed to meet the goals defined by the American College of Cardiology Task Force for Training in Clinical Cardiology (COCATS) and the ACGME. The 36-month curriculum gives exposure to the essential rotations in general cardiology. A sample rotation could include:

- Cardiac catheterization, 5 months
- Electrophysiology, 3 months
- Noninvasive imaging, 10 months
  - Echocardiography
  - Nuclear imaging
  - Cardiac MRI/MRA
  - CTA and peripheral vascular imaging
- General clinical cardiology, 13 months
  - Inpatient cardiology consultation
  - CCU
  - Exercise testing
  - Rehabilitation
  - ECG interpretation
  - Heart failure and transplant
  - Vascular
  - Cardiothoracic surgery

In the third year, fellows can devote more time to advanced training in invasive and noninvasive techniques as well as electives. One block each year will be devoted to research where all fellows can explore their own scientific ideas or collaborate with a principal investigator on an existing research study. Since our clinical volume is so high, our fellows will have the option to become Level 2 certified in diagnostic catheterization, transesophageal echocardiography and nuclear imaging during their three years of training.

How to Apply

All applications to the GRMEP/MSU cardiovascular disease fellowship program at Spectrum Health are submitted through MyERAS on the AAMC’s website. Select ERAS® for Fellowships under “Students, Applicants, Residents. For this year’s Match®, our NRMP Program Code is 2077141F0.

Fellowship Links:
spectrumhealth.org (select “Students and Residents”) grmep grmep.org/programs/cardiology