Office of Student Opportunities

Second Look
2016
Creating a New Generation of Health Care Leaders

Through the GW School of Medicine and Health Sciences, students are provided with the tools and skills to become strong clinicians. They also have the choice to pursue opportunities that will enable them to influence the future of our healthcare system or fulfill any of their scholastic or professional goals through the Office of Student Opportunities (OSO). The OSO has its finger on the pulse of exciting and challenging opportunities in our nation’s capital and throughout the globe with an eye toward training a new generation of healthcare leaders. This unique resource provides professional support to students through the Track Program of study, the database of opportunities and a variety of scholarship programs.

Opportunity is at Our Doorstep . . .

A wealth of national and international organizations in the Washington, D.C. area provide our students with an array of valuable and meaningful experiences not found in a textbook or laboratory. Whether it’s learning from lawmakers on Capitol Hill about health policy, doing research at NIH or working overseas to gain a global perspective on fighting disease, our students have the opportunity to enrich their educational experiences with unique hands-on training. Through the OSO, the Track Program provides GW students with the option of pursuing an area of interest beyond the core curriculum. This unique program supports students in developing a broad perspective and encourages them to pursue paths of leadership in the field through nine tracks of study:

- Community/Urban Health
- Health Policy
- Medical Education Leadership
- Emergency Management
- Global Health
- Medical Humanities
- Clinical & Translational Research
- Integrative Medicine
- Clinical Practice Innovation & Entrepreneurship

Track Program Requirements

Lecture/Seminar/Workshop Series
Each Track area conducts a two year sequence of training seminars. Track students are required to attend the majority of these events. The events generally take place once a month during the academic year.

Summer Opportunity
Students participating in the Track Program are required to participate in an eight-week experiential opportunity in the summer after their first year of medical school.

Scholarly Project
All medical students are required to complete a Scholarly Project during their third and fourth years of medical school, and the purpose is to allow students to further investigate issues in medicine and health.

Fourth Year Elective
Finally, the track participants must complete a four to six week elective in their fourth year related to their chosen track.

Track Program Leadership

Each track is led by a Track Director, a faculty member who is an expert in the focus area of the track. Under the directors are Track Mentors which include GW faculty and non-faculty members who are recruited from organizations within the metro region.
Clinical Practice Innovation and Entrepreneurship

Project Title/Topic: “Use of PET Scans to Determine Treatment of Multiple Spine Metastases with Stereotactic Radiosurgery”
Organization: The George Washington University School of Medicine and Health Sciences
Project Objective/Description: Determine the effectiveness of only radiating the specific spinal lesions that are determined to be most active by means of PET imaging. As with any treatment modality there is a target patient population and a smaller group of ideal patients. The hope is to determine the group of patients that will maximally benefit from this treatment strategy. The objective is to identify the factors such as the age of the patient, the location, number and origin of metastases, the symptoms prior to treatment, and the type of treatment received that would determine a patient’s outcome.

Project Title/Topic: “Telemedicine/Remote Medical Access: Current and Future Applications of Healthcare at a Distance”
Organization: The George Washington University, Medical Faculty Associates
Project Objective/Description: Gain exposure to the department’s current projects including event, maritime and corporate telemedical practices. Develop an understanding of telemedicine laws/regulations. Observe and participate in corporate negotiations and expand the understanding of the financial side of healthcare as it relates to telemedicine/remote medical access. Assist with the implementation of novel project that utilizes telemedicine/remote medical access to improve continuity and access to care for individuals traveling abroad.

Project Title/Topic: “Opioid Dependence Following Open versus Minimally Invasive Posterior Lumbar Spinal Fusions”
Organization: The George Washington University, Medical Faculty Associates
Objective/Description: To compare two groups of patients, those who have received posterior lumbar spinal fusion through an open procedure and those who have received a posterior lumbar spinal fusion through the minimally invasive (percutaneous) method. Open surgery is a more traditional approach, where the area being operated on is opened with a long midline incision with wide exposure, allowing the surgeon to directly visualize and access the relevant anatomy. Recent advances, however, have given rise to minimally invasive spine surgery (MISS) which involves many smaller percutaneous incisions for each individual screw rather than a long midline incision, effectively preserving the muscles and fascia surrounding and supporting the spine. Faster recovery and decreased pain are some of the advantages of MISS.
Project Title/Topic: Assessing Emergency Room Utilization with Algorithms. 
Objective/Description: Develop an algorithm that will be used to assess the utilization of emergency departments. In its final form, the algorithm will take patient records from emergency departments, and classify them to form a metric. This metric will measure how an emergency department is being used by its patient population. For this phase of the algorithm's development, the researchers are attempting to verify that the parameters of the algorithm are understood by the physicians that will utilize the tool, and that there is consistency in how the algorithm is used to evaluate the same clinical vignettes.

Project Title/Topic: “Volumetric Assessment of Tonsil Size from 3D Ultrasound in Obstructive Sleep Apnea: A Pilot Study.”  
Organization: Children’s National Medical Center  
Project Object/Description: Is ultrasound a cost-effective, safe, and accurate tool to measure tonsil size in children with obstructive sleep apnea? To determine if 3D US is accurate in quantifying tonsil size. To determine if automated volumetric assessment of US images is accurate in quantifying tonsil size. To evaluate US of tonsil as predictor for OSA in a small feasibility study.

Medical Humanities Track

Project Title/Topic: “Poses for Noses: A Brief Illustrated History of Reconstructive Rhinoplasty”  
Organization: National Library of Medicine  
Objective/Description: Highlight an interest in the visual arts of medicine and medical illustration, specifically how surgical illustration has changed throughout history for submission to a literary of medical illustration journal.

Project Title/Topic: “The Investigation of the Interaction of Risk Factors for Type II Diabetes and Bone Quality”  
Organization: Children’s National Medical Center  
Objective/Description: Determine if two novel nucleotide polymorphisms (SNPs) that play a role in bone mineral density (BMD) were associated with other musculoskeletal traits in a young African American cohort and response to exercise in a young adult cohort undergoing resistance training. The research process will include medical narrative.

Project Title/Topic: Substance Abuse in Southern Appalachia  
Organization: Cherokee Hospital  
Objective/Description: Explore and analyze the stigma associated with patients suffering from substance abuse disorders, especially as it pertains to prescription drug abuse in Southern Appalachia. Investigate the personal effects that the stigma associated with substance use disorders has upon an individual dealing with addiction. This project will impact the healthcare
community by highlighting the complex and powerful role stigma plays in the doctor-patient relationship, both from the physician and patient perspective.

**Project Title/Topic:** “Summer of Telemedicine in the Emergency Department”  
**Organization:** The George Washington University, Medical Faculty Associates  
**Objective/Description:** Act as a member of the Emergency Department’s Innovative Practice Section in order to conduct a systematic review of existent literature on the use of telemedicine in the provision of healthcare, then to write a review article on the subject that examines the limitations of the current research on the topic. Additionally, this project aims to assist in improving upon the Emergency Department’s pilot telemedicine program, ERConnect, by providing strategies to make the program more affordable and practical for widespread use.

**Medical Education Leadership Track**

**Project Title/Topic:** Medical Education in Africa  
**Organization:** Global Health Service Partnership  
**Project Objective/Description:** This project will impact the healthcare community by improving the orientation experience of volunteers, which will leave them more prepared and confident. This will, in turn, improve their experience in Africa and will allow them to be more resourceful, knowledgeable, and supportive in their roles as teachers and mentors. This will then improve the healthcare community in African medical schools.

**Project Title/Topic:** Development of an “Exercise and Medicine” Elective  
**Organization:** University of California, Irvine School of Medicine  
**Project Objective/Description:** Create an elective for medical students that discuss the therapeutic benefits of physical activity in preventative medicine as well as the therapeutic gains for disease states for which pharmacologic therapy has been largely unsuccessful.

**Project Title/Topic:** Pediatric Medicine Curriculum Evaluation  
**Organization:** University of Nevada School of Medicine  
**Project Objective/Description:** The objective of this project is to evaluate the effectiveness of a course that is aimed to provide Pediatric Residents with the knowledge and training they need to be competent educators and advocates in the community. A critical component of being a physician in the community is having the ability to effectively communicate with patients and help facilitate learning to help patients and families better handle various illnesses and conditions in their everyday life setting. It is important to objectively evaluate this course to allow us to identify areas for improvement. The more effectively residents can be taught to be effective advocates and educators, the better they will be able to help and make a difference to the patients and families they work with.

**Project Title/Topic:** ACGMA Duty Hour Standards for Residents  
**Organization:** The George Washington University Hospital
**Project Objective/Description**: The study will examine whether the GW Hospital Gold Team (cardiology) resident and fellow duty hour requirements disrupt the continuity of care, with patients seeing different MDs many days in a row may lead to (1) poor patient care and a (2) negative impact on trainee learning. Conduct a retrospective chart review comparing number of MDs seeing patients under the two separate post 2011 ACGME duty hour guidelines from Jan-June 2014 and July to June 2015.

**Project Title/Topic**: SynDRME (Digital Resources for Medical Education) Project  
**Organization**: The George Washington School of Medicine and Health Sciences  
**Project Objective/Description**: The synDRME (Digital Resources for Medical Education) project was established to help alleviate some of the problems through the collection and evaluation of e"learning resources. The objective of synDRME is to collect, catalog, and evaluate e"learning resources for medical schools. Evaluation of resources takes into account cost, required technological infrastructure, completeness of content, learning value, and time demands on the faculty for each resource. These resources are meant to help supplement medical schools across the world in providing cost-efficient means to deliver basic science and clinical curricula, despite limited means and/or personnel.

**Project Title/Topic**: “Assessing Capacity for OBGYN Residency Training in Global Health”  
**Organization**: The George Washington University, Medical Faculty Associates  
**Project Objective/Description**: Develop qualitative needs assessment of graduate OBGYN residency program in Georgetown, Guyana (approximately 25 questions). The needs assessment will include exploration of infrastructural capacity, goals of faculty, and professional goals of residents. Develop qualitative needs assessment of GW MFA OBGYN Faculty to train and develop curricula for global OBGYN residency programs (approximately 20 questions). The needs assessment will target multiple faculty in different sub-specialties to evaluate desire to either develop sub-specialty curricula or travel to specific sites to provide technical training.

**Community and Urban Health**

**Project Title/Topic**: Communication and Health Outcomes in Adolescents/Young Adults with Type 1 Diabetes  
**Organization**: Center for Translational Science at Children’s National Medical Center  
**Project Objective/Description**: To evaluate health communication competence in adolescent patients and to understand how communication between adolescent patients and their healthcare providers impacts the development of independent self-care skills, as well as the patients’ health outcomes and transition to adult medical care.

**Project Title/Topic**: Hepatitis B in Asian Americans in the Metro Area  
**Organization**: Hepatitis B Initiative of Washington, DC  
**Project Objective/Description**: To assess chronic Hepatitis B infection’s impact to the Asian American community of the metropolitan Washington, D.C. area through analyzing the country-
of-origin and immigration year of positive test results obtained by a community-outreach screening program.

**Project Title/Topic**: Transitioning from Pediatric to Adult Mental Health Services  
**Organization**: Children’s National Medical Center  
**Project Objective/Description**: This project aims to engage with youth and families during the process of mental healthcare transition from pediatric care at CNMC to adult mental health care in the community, to identify areas of high priority, and inform program development.

**Project Title/Topic**: Tobacco-Free Living Project  
**Organization**: Fairfax County Health Department  
**Project Objective/Description**: The goal of the project is to implement tobacco-free policies in all public housing units in Fairfax County over the next three years.
1. Distribute surveys and analyze resident survey results.  
2. Provide health education around tobacco cessation and the benefits of smoke-free policies.  
3. Prepare a policy proposal document for the Fairfax County Public Housing Authority.  
4. Aid in constructing a trusting and mutually beneficial relationship between low income senior housing residents and Fairfax County officials.  
5. Gain an understanding of the role of the Fairfax County Department of Health in decreasing health disparities related to tobacco use.  
6. Connect with physicians and policymakers who are interested in decreasing health disparities in Fairfax County.  
7. Explore community-level and national-level smoke-free policy strategies.

**Integrative Medicine**

**Project Title/Topic**: Integrative Medical Approach to Breast Cancer Treatment Side Effects.  
**Organization**: The George Washington Center for Integrative Medicine  
**Project Objective/Description**: To understand the common complaints of breast cancer patients. To become familiar with frequently recommended supportive treatments. To better understand the breast cancer patient’s experience and the ways in which Integrative Medicine practices can support and improve healing.

**Project Title/Topic**: Non-surgical Integrative Medical Approach to Treating Spinal Stenosis  
**Organization**: University of Pittsburgh Center for Integrative Medicine  
**Project Objective/Description**: To learn the basic components of clinical research and the differences between Randomized Controlled Studies and PCORI funded trials, learn about the clinical practice of Integrative Medicine

**Project Title/Topic**: Outcome Evaluation of Integrative Health and Wellness Services  
**Organization**: DC Veterans Affairs Medical Center  
**Project Objective/Description**: 1. Assess the physical and mental health outcomes for veterans participating in the DC/VA Medical Center’s complementary and integrative medicine services and wellness activities. 2. Explore patient satisfaction for these services and activities. 3. Assess program demand, evaluate attrition rate, and explore ways to improve patient satisfaction.
Health Policy

Project Title/Topic: Alliance of Health Reform Internship
Organization: Alliance of Health Reform
Project Objective/Description: Research and become educated in health care economics and politics, the roots of the problems with our health care system, and the various proposed reform strategies. Work closely with experienced policy professionals, congressional staffers, administrators, journalists, and other members of the policy community in exploring these aspects of health policy.

Project Title/Topic: “Policy Recommendations for Addressing Drug Shortages in the United States”
Organization: The US House of Representatives
Project Objective/Description: Spend eight-weeks as a Health Policy Fellow in the office of Congressman Bill Cassidy, M.D., focusing on the drug shortage crisis. Summarize the available evidence on the subject and make policy recommendations to the Congressman.

Project Title/Topic: “A Medical School without Faculty: A Survey of Available Resources and Template for Development”
Organization: The George Washington School of Medicine and Health Sciences
Project Objective/Description: Evaluate e-learning in African medical schools and to see how utilization of e-learning can enhance medical education in those countries with limited resources and faculties. The objective for this summer is to catalog available e-learning resources to create an entire medical school’s curriculum

Project Title/Topic: Research Intern for Innovation Fellows Program at Harvard Medical School Center for Primary Care
Organization: Harvard Medical School
Project Objective/Description: The Harvard Medical School has created an Academic Innovation Collaborative to investigate projects that support primary care innovation. Dr. Charlotte Wu is the team leader of a project entitled “Implementation of Population Management Information Technology (IT) System as a Tool to Support Team-Based Workflow in a Primary Care Practice”. The project goal is to transition the Phyllis Jen Center for Primary Care (PJC) to team-based care in order to fully address the needs of their vulnerable patient population in Boston, Massachusetts. PJC seeks to promote better communication across physicians, nurses, medical residents, social workers, and administrative staff by implementing an IT-based care plan platform application that will collaborate information from each health care provider. This IT care plan platform will allow all the providers on the team to input clinically relevant patient information into an easily readable electronic application.
Emergency Management

**Project Title/Topic:** “Prospective Use of Biomarkers in Emergency Management for Severe Traumatic Brain Injuries”
**Organization:** National Institutes of Nursing Research, National Institutes of Health
**Project Objective/Description:** Examine whether concentrations of (1) tau, (2) phosphorylated tau, (3) amyloid beta 40, and (4) amyloid beta 42 in cerebrospinal fluid (CSF) and peripheral blood during the seven days following a severe TBI relate to recovery. Identifying a peripheral blood biomarker that provides some indication of the accompanying neuronal pathology would allow emergency responders and healthcare providers to quickly predict prognosis and employ an appropriate treatment plan.

Clinical and Translational Research

**Project Title/Topic:** Identification of Plasmodium Proteins Recognized by Children’s Immune Sera using a Proteomics Approach
**Organization:** National Institutes of Health National Institute of Allergy and Infectious Diseases Laboratory of Malaria Immunology and Vaccinology
**Project Objective/Description:** Use a proteomics approach to identify and characterize functional IgG antibodies from children’s immune sera and (2) identify surface proteins from children’s parasite isolates adapted to in-vitro culture that are recognized by children’s immune sera.

**Project Title/Topic:** The Relationship between Interferon Lambda 4 Expression and Fatigue in Chronic Hepatitis C Infection
**Organization:** The George Washington School of Medicine and Health Sciences
**Project Objective/Description:** Test the hypothesis that the functional variant of IFNL4 (IFNL4-ΔG) is associated with greater patient-reported fatigue during treatment due to the poorer response to ribavirin and pegylated interferon than the nonfunctional variant IFNL4-TT.

**Project Title/Topic:** Elemental Composition of Kidney Stones
**Organization:** University of California San Francisco, Department of Urology
**Project Objective/Description:** Determine the predominating heavy metal composition in mammalian kidney stones. 2) Investigate the role of heavy metals in the overall pathogenesis of kidney stone formation. 3) Identify potential heavy metal transporter candidates for therapy.

**Project Title/Topic:** The Significance of Red Blood Cell Antigen Matching on Bone Marrow Transplant Outcomes in Patients with Sickle Cell Disease
**Organization:** Children’s National Medical Center
**Project Objective/Description:** The primary aim of this study is to explain the clinical significance of Bone Marrow Transplants (BMT) in patients with Sickle Cell Disease (SCD) for which there is mismatched minor red blood cell (RBC) antigens between donors and recipients.

**Project Title/Topic:** PSA Toxicity and Quality of Life Outcomes in Overweight Prostate Cancer Patients Following Stereotactic Body Radiotherapy

**Organization:** Georgetown University Medical Center Lombardi Comprehensive Cancer Center

**Project Objective/Description:** This retrospective study will determine different domains of patient life affected by Stereotactic body radiation therapy SBRT through comprehensive evaluation of patient surveys taken at baseline, 1, 3, 12, 24 months after treatment. Urinary, bowel, and sexual function are the main domains of quality of life this study aims to focus on. Second, to evaluate any baseline factors that may have affected changes in quality of life within the obese study group. Lastly, this study will assess the relative effect of various changes in domains of quality of life on overall outcome.