

Title of Program: Orthopaedic Clinical Research

Dept/Center/Lab: [Orthopaedic Clinical Research](#),
Department of Orthopaedic Surgery

Principal Mentors: [Michael J. Bosse, MD](#)
Director, Orthopaedic Clinical Research
Department of Orthopaedic Trauma

Rachel Seymour, PhD
Senior Research Scientist
Orthopaedic Clinical Research

Other Faculty: Joseph Hsu, MD
Department of Orthopaedic Trauma

[Madhav Karunakar, MD](#)
Department of Orthopaedic Trauma

[Stephen Sims, MD](#)
Department of Orthopaedic Trauma

Summary Description:

From fractures and sprains to orthopedic cancers, the orthopedic physicians and surgeons of Carolinas HealthCare System (CHS) offer experienced care for bone and soft tissue conditions for patients in North and South Carolina. Orthopedic programs at CHS are continuously recognized by healthcare agencies and organizations. In 2011, Carolinas Medical Center was listed as a Best Hospital by U.S. News & World Report for Orthopedics. CHS doctors maintain specific areas of specialization within the management of orthopedic care, including trauma, joint replacement, fractures, arthritis, osteoporosis, acute and chronic joint disease, and injuries of the hand, wrist and elbow. Physicians and staff are actively involved in research and provide advanced care for all aspects of musculoskeletal injuries, with specific expertise and interest in severe open fractures, pelvic and acetabular fractures and high-energy joint injuries.

Drs. Bosse and Seymour co-direct the Orthopaedic Clinical Research Program (OCR) at Carolinas Medical Center. OCR was developed to enhance the ability of the CMC Orthopaedic Department in order to influence the direction of Orthopaedic clinical care in the US. Already recognized as a pre-eminent leader in orthopaedic clinical outcomes research and the nuclear site of numerous “against the grain” orthopaedic clinical studies, CMC initiated a formal study

section in 2007 to facilitate and enlarge the clinical effort. As a result, 40 IRB approved clinical projects are currently active. Most of the research is targeted to improve care with fewer complications and at a lower cost. The Carolinas Medical Center is one of the core centers of the Major Extremity Trauma Research Consortium (METRC.org) and is currently the top enroller. The OCR Director, Michael Bosse MD, is the co-PI of the METRC, serves as the Clinical Chair of METRC and the Chair of the Consortium's Steering Committee, and as Principal Investigator of 3 of the studies.

In addition, Drs. Bosse and Seymour co-direct the Carolinas Trauma Network Research Center of Excellence (COE). The COE combines the talents and strengths of Carolinas Medical Center's Departments of Emergency Medicine, General Surgery-Trauma, Orthopaedic Surgery, Physical and Rehabilitation Medicine, Neurosciences and Dickson Advanced Analytics with those of the affiliated CHS medical centers. The goal of the COE is to unify CHS's trauma research efforts under one umbrella and establish a robust clinical platform to attract external funding. The team identifies injury research areas with established national funding mechanisms that impact the communities CHS serves. Current areas of research include unintentional poisonings, the evaluation and treatment of patients with mild or moderate Traumatic Brain Injury, geriatric trauma, and pediatric trauma.

Expectations and Role of Student:

The student will become an active member of the clinical research team, providing assistance to the investigators and coordinators by handling and providing data entry, record review and abstraction. The summer intern will be assigned tasks that are in direct support of the ongoing OCR efforts. The student will present oral and written summaries of research and will be required to prepare and present an abstract and paper summarizing findings.