

**RIVERSIDE UNIVERSITY HEALTH SYSTEM - MEDICAL CENTER
ORTHOPAEDIC SURGERY RESIDENCY PROGRAM**

**Adult Reconstruction Rotation (PGY-5)
(Duration: Two Months)**

Supervising Faculty: Dr. Rolf Drinhaus, Dr. John Ellis and Dr. Wade Faerber

OVERVIEW

The goal of the Adult Reconstruction service is to provide the resident with an educational experience that maximizes the opportunity to understand, evaluate, and treat orthopaedic adult reconstructive conditions. This is achieved by combining a structured study program with a clinical experience that has a balance between office evaluation and surgical treatment of adult reconstructive conditions. Residents spend two months on the adult reconstructive services their PGY-5 year. This rotation will build upon the PGY-2 and PGY-4 experience with increasing levels of difficulty regarding decision making and technical skill acquisition. They will be exposed to basic (primary) and complex revision reconstruction of adult hip and knee disorders.

Patient Care

Goals:

Provide family centered patient care that is developmentally and age appropriate, compassionate, and effective for the treatment of health problems and the promotion of health.

Objectives:

Example: Hip and Knee Osteoarthritis, Patient Care Goals/Objectives (PGY-5)

- Demonstrate mastery of all PGY-2 and PGY-4 goals and objectives.
- Obtain a comprehensive history of a patient with a painful joint.
- Perform a thorough physical examination.
- Formulate a differential diagnosis and make an accurate final diagnosis.
- Discuss the etiology and natural history of the specific condition.
- Demonstrates effective of case presentation skills.
- Demonstrate patient care proficiency in obtaining appropriate history and physical examination, formulating a differential diagnosis and treatment plan.
- Communication effectively incorporating compassion, professionalism and appropriate medical knowledge when interacting with patients, family members and colleagues.
- Evaluate the overall medical condition of a patient with regard to peri-operative risks.
- Discuss complications of operative and non-operative treatment.
- Discuss the prognosis of operative and non-operative treatment.
- Demonstrate competency in primary joint arthroplasty techniques.
- Understand the principles of rehabilitation following total joint arthroplasty, including, clinical pathways, rehabilitation milestones, functional goals, and management of anticoagulation.
- Demonstrate competency with surgical approaches to the hip and knee.
- Effectively supervise post-operative care and manage postoperative operations.
- Faculty supervision will advance for direct supervision, to indirect supervision and oversight, with the PGY-5 resident assuming some of the direct supervision responsibilities over the junior level residents as their ability progresses.

Medical Knowledge

Goals:

Understand the scope of established and evolving biomedical, clinical, epidemiological and social-behavioral knowledge needed by an orthopedist; demonstrate the ability to acquire, critically interpret and apply this knowledge needed by an orthopedist; demonstrate the ability to acquire, critically interpret and apply this knowledge in patient care.

Objectives:

The resident will demonstrate knowledge of:

- The pathophysiology of adult hip and knee disease, including degenerative osteoarthritis, inflammatory arthritis, posttraumatic arthritis, avascular necrosis, secondary arthritis related to congenital deformity, and other related cartilage diseases.
- The biomechanics of the hip and knee joint, including normal, pathologic, and reconstructed joints.
- The surgical anatomy of the hip and knee and the various surgical approaches.
- The indications for nonsurgical and surgical treatment for adult hip and knee disease.
- The material science of prosthetic joint replacement.
- Design-engineering principles underlining total joint replacement.
- The principles of prosthesis fixation and biologic reaction to the prosthesis.
- Demonstrate the ability to recognize patterns of prosthesis failure.
- The basic concepts and details of rehabilitation after joint reconstruction procedures and the use of clinical pathway inpatient care.
- Understand and implement peri-operative medical management of joint replacement patient with special emphasis on:
 - Screening for patients at increased risk of venous thromboembolism
 - Prophylaxis of venous thromboembolism
 - Perioperative pain management
- Demonstrates preoperative templating techniques using specialized software.
- Demonstrates effective case presentation skills during conferences.
- Demonstrates knowledge obtained from the OKU Specialty Series on Hip and Knee Reconstruction.
- Understand the principles of prosthesis fixation and biologic reaction to the prosthesis.
- Understands the indications for revision surgery and treatment options.
- Demonstrates the ability to diagnose and treat pain in a symptomatic total joint replacement.
- PGY-5 demonstrates comprehensive knowledge of hip and knee implant design. Demonstrates comprehensive knowledge of anatomy of the hip and knee.
- Demonstrates knowledge of diagnosis and treatment of complications related to reconstructive procedures of the hip and knee including infection, dislocation, loosening and stiffness.
- Completes the recommended reading list for hip and knee reconstruction.
- Satisfactorily completes the OKU Self-Assessment Examination for Hip and Knee Reconstruction

The resident will:

- Demonstrate mastery of all PGY-4 level goals and objectives.
- Demonstrate competency in primary and revision total joint arthroplasty techniques.
- Outline prognosis of non-operative and operative treatment of the following specific conditions:
 - Post traumatic arthrosis of the knee
 - Post traumatic arthrosis of the hip
 - Acetabular dysplasia
 - Femoral acetabular impingement
 - Painful TJA
 - Loose TJA
 - Unstable TJA
 - Infected TJA
- Demonstrates knowledge of revision surgical approaches and procedures.
- Demonstrates knowledge of diagnosis and treatment of hip pain symptomatic total hip replacements.
- Reads and understands material developed in the OKU Specialty Series on Hip and Knee Arthroplasty Reconstruction
- Satisfactorily completes the OKU Self-Assessment Examination for Hip and Knee Reconstruction.
- Completes the recommended reading list for Hip and Knee Reconstruction.
- Assume a leadership role in planning patient care and teaching conferences.
- The Chief Resident will assist the PGY-4 resident in inpatient rounds and will report and coordinate with the PGY-4 resident to the attending orthopaedic resident.
- The Chief Resident's responsibilities in the operating room include assisting the attending orthopaedic surgeon in all aspects of operative care.
- The actual performance of all or part of the operative procedure will be accomplished either under direct supervision or semi-independently in those situations deemed appropriate by the attending orthopaedic surgeon.

Interpersonal and Communication Skills

Goals:

Demonstrate interpersonal and communication skills that result in information exchange and partnering with patients, their families and professional associates.

Objectives:

Residents are expected to:

- Demonstrate the ability to effectively convey and exchange information with patients, families and professional associates.
- Create and sustain a therapeutic and ethically sound relationship and patients.
- Use of effective learning skills.
- Utilize appropriate interpreters in order to assure to patient is in full understanding in spite of the language barriers.
- Work effectively with others as a member of the health care team.

Practice Based Learning and Improvement

Goals:

Demonstrate knowledge, skills and attitudes needed for continuous self-assessment, using scientific methods and evidence to investigate, evaluate and improve one's patient care practice.

Objectives:

- The resident will identify personal learning needs, systematically organize relevant information resources for future references, and plan for continuing data acquisition if appropriate.
- The resident will seek and incorporate feedback and self-assessment into a plan for professional growth and practice improvement (e.g., use evaluations provided by patients, peers, superiors, and subordinates to improve patient care.)
- The resident will teach and mentor junior residents on the service.
- Complete the personal learning project in the practiced based learning and improvement curriculum for the rotation.

Professionalism

Goals:

Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles and sensitivity to diversity.

Objectives:

Residents are expected to:

- Demonstrate respect, compassion and integrity at all times when interacting with patients, families, colleagues, hospital and ancillary staff.
- Demonstrate commitment to ethical conduct in the last with the patient care.
- Demonstrate sensitivity to diverse patient population specifically in regard to disability, age, culture and gender.
- Adhere to ethical code in regard to confidentiality when discussing patients.
- Attend to consults in a timely fashion.
- Maintain committed to continued learning.
- Teach more junior residents, medical students and staff.
- Attend weekly conferences.
- Be prompt to the clinic and operating room.
- Complete medical records and dictations in a timely fashion.

System-Based Practice

Goals:

Understand how to practice quality health care and advocate for patients within the context of the healthcare system

Objectives:

- Demonstrate the awareness that arthritis is one of the major causes of lost work time and major disability in the United States.
- Demonstrate awareness of how the expected exponentially growth of total joint replacements in the near future will impact economic issues related to reimbursements for total joint replacements as well as having a shortage of total joint specialists.
- Demonstrate awareness for the need to continue to develop techniques to improve clinical outcomes to decrease the number of expected revision joint replacements.
- Practice cost effective medical care within the system without compromising quality of care.
- Demonstrate an understanding of various health funding systems including Medicare, Medi-Cal, workers compensation, and private insurance.
- Understand the importance of correct coding for patient office visits and surgery.

- Demonstrate the awareness of multidisciplinary health care team involved in the care of a total joint replacement patient.
- Use specialized software to template cases pre-operatively.
- Use electronic medical records to gather clinical data and appropriately document information.
- Participate in one medical staff committee as a non-voting member, provide a formal presentation at the Orthopaedic Surgery educational grand rounds, and write a self-assessment of committee experience with relevant learning points articulated and documented.

ASSESSMENT METHOD:

Direct and indirect observation by faculty with assessment on formal end of rotation evaluation form.

DIDACTIC CURRICULUM REQUIRED ATTENDANCE:

RUHS Monday Pre-Op Conference (Monday AM)

RUHS Wednesday Conference (Wednesday AM)

RUHS Friday Post-Op Conference (Friday AM)

RUHS Ortho Monthly Research Meeting

RUHS Ortho Monthly Department Meeting/Educational Grand Rounds

RUHS Ortho Bi-Monthly M&M Conference

Reading List

1. Chapman's Orthopaedic Surgery (3rd Edition)

Week 1

- Chapter 105 – Primary THA
- Chapter 108 – Primary TKA

Week 2

- Chapter 104 – Osteotomies about the hip
- Chapter 107 – Osteotomies about the knee

Week 3

- Chapter 106 – Failed hip arthroplasty
- Chapter 109 – Revision knee arthroplasty

2. OKU Hip and Knee Reconstruction 3

Week 4

- Chapter 16 – Osteoarthritis & Inflammatory Arthritis
- Chapter 17 – Conservative Management of OA
- Chapter 18 – Perioperative Medical Management

Week 5

- Chapter 1 – Surgical Exposure in TKA
- Chapter 30 – Surgical Exposures (Hip)
- Chapter 21 – Venous Thromboembolic Disease
- Chapter 29 – Rehabilitation After THA/TKA

Week 6

- Chapter 3 – total Knee Implant Design
- Chapter 33 – Hip Implant Design
- Chapter 32 – Bearing Surfaces

Week 7

- Chapter 9 – Total Knee Arthroplasty Outcomes
- Chapter 14 – Osteolysis in TKA
- Chapter 15 – Infection TKA

Week 8

- Chapter 44 – Osteonecrosis
- Chapter 41 – Hip Revision
- Chapter 11 – Revision TKA