

University of Rochester
Medical Center

Department of Orthopaedics
And Rehabilitation



2011-2012
Resident Manual

Table of Contents

INTRODUCTION	3
GOALS AND OBJECTIVES.....	4
RESIDENT SELECTION	55
RESIDENT APPOINTMENT, REAPPOINTMENT, AND PROMOTION POLICY	56
EVALUATION POLICY	57
SUPERVISION POLICY.....	59
RESIDENT WORK HOURS POLICY.....	60
MOONLIGHTING POLICY.....	63
DUTIES OF THE CHIEF RESIDENT	64
DUTIES OF THE EXECUTIVE CHIEF RESIDENT.....	66
RESIDENTS ASSIGNED TO HIGHLAND HOSPITAL.....	69
GENERAL PRIORITIES OF RESIDENT ASSIGNMENTS.....	70
EMERGENCY DEPARTMENT SMH	71
OPERATING ROOM.....	72
CONSULTATIONS.....	72
ORTHOPAEDIC SURGERY CASE LIST	73
ORTHOPAEDIC COMMUNITY CARE CLINIC.....	73
MEDICAL STUDENTS	73
R. PLATO SCHWARTZ LIBRARY	74
CONFERENCES.....	75
GUIDELINES FOR RESIDENT THESIS	77
ILLNESS	78
MEETINGS AND VACATION POLICY	79
BOOK POLICY.....	81

INTRODUCTION

This Residency Manual has been developed as a guide and resource for Orthopaedic residents. The purpose of these written policies is to establish guidelines for residents in the Department of Orthopaedics and Rehabilitation. Residents are expected to become familiar with and comply with all policies set forth in this book. This manual will be amended and updated as necessary.

The University of Rochester School of Medicine and Dentistry Department of Orthopaedics and Rehabilitation is organized into ten divisions that provide the resident with a wide variety of educational experiences and broad introduction to the field of musculoskeletal disorders. These Divisions include General Orthopaedics, Adult Reconstructive Surgery, Spine Surgery, Surgery of the Hand and Upper Extremity, Athletic Medicine, Metabolic Bone Disease/Musculoskeletal Oncology and Geriatrics, Musculoskeletal Research (cell biology and molecular biology), Pediatric Orthopaedics, Trauma, and Foot and Ankle. Similar rotations are provided for each of the residents during the residency. On the clinical services the attending orthopaedist is medicolegally responsible for all patients "private or staff" in conjunction with the resident staff.

The Orthopaedic department office hours are Monday through Friday 8 AM until 4:30 PM.

Regis J. O'Keefe, M.D., Ph.D. 275-5167 Regis_O'Keefe@urmc.rochester.edu
Chair, Department of Orthopaedics and Rehabilitation

John T. Gorczyca, M.D. 275-7576 john_gorczyca@urmc.rochester.edu
Residency Program Director

Stephen L. Kates, MD 341-0485 Stephen_Kates@urmc.rochester.edu
Associate Program Director

Karen Balta 275-5168 Karen_Balta@urmc.rochester.edu
Education Administrator

GOALS AND OBJECTIVES

EDUCATIONAL OBJECTIVES FOR ALL ROTATIONS

1) PATIENT CARE

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Residents are expected to:

- communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families
- gather essential and accurate information about their patients
- make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
- develop and carry out patient management plans
- counsel and educate patients and their families
- use information technology to support patient care decisions and patient education
- perform competently all medical and invasive procedures considered essential for the area of practice
- provide health care services aimed at preventing health problems or maintaining health
- work with health care professionals, including those from other disciplines, to provide patient-focused care
- Respect the patient's need for confidentiality in accordance with University policy as well as state and federal policies

2) MEDICAL KNOWLEDGE

Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care.

Residents are expected to:

- demonstrate an investigatory and analytic thinking approach to clinical situations
- know and apply the basic and clinically supportive sciences which are appropriate to Orthopaedics

3) PRACTICE-BASED LEARNING AND IMPROVEMENT

Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:

- analyze practice experience and perform practice-based improvement activities
- using a systematic methodology
- locate, appraise, and assimilate evidence from scientific studies related to their patients health problems
- obtain and use information about their own population of patients and the larger population from which their patients are drawn
- apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness

- use information technology to manage information, access on-line medical
- information; and support their own education
- facilitate the learning of students and other health care professionals

4) INTERPERSONAL AND COMMUNICATION SKILLS

Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates.

Residents are expected to:

- create and sustain a therapeutic and ethically sound relationship with patients
- use effective listening skills; elicit & provide information using effective nonverbal,
- explanatory, questioning, and writing skills
- work effectively with others as a member or leader of a health care team or other
- professional group

5) PROFESSIONALISM

Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

Residents are expected to:

- demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development
- demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices
- demonstrate sensitivity and responsiveness to patients culture, age, gender, and
- disabilities
- demonstrate sensitivity and responsiveness to fellow health care professionals'
- culture, age, gender, and disabilities.

6) SYSTEMS-BASED PRACTICE

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Residents are expected to:

- understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice
- know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources
- practice cost-effective health care and resource allocation that does not compromise quality of care
- advocate for quality patient care and assist patients in dealing with system complexities
- know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance

7) ASSESSMENT OF PERFORMANCE

- Residents will be expected to participate periodically in reviews of their clinical and academic performance by departmental leadership, see below under “promotions”
- Residents will also be expected to participate in quality assurance activities on a regular basis to assist them with a thorough understanding of problems and complications experienced by their patients
- Residents will be expected to participate in periodic assessment of their learning experiences at the University of Rochester Medical Center and Highland Hospital to allow for improvement in the educational experience

The Department of Orthopaedic Surgery and Rehabilitation
Division of Pediatric Orthopaedics

The overall goals are to:

- Develop interpersonal skills needed to effectively engage patients and family members to enhance communication and education
 - Create and sustain a therapeutic and ethically sound relationship with patients and parents
 - Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills
 - Work effectively with others as a member or leader of a healthcare team or other professional group
 - Develop skills in dealing with sick or injured children and their parents
 - *These will be assessed by observation of the resident in the outpatient clinic, discussion with parents and their families, and other involved professionals*

- Demonstrate practice-based learning and improvement that involves investigation and evaluation of patient care, appraisal and assimilation of scientific evidence and improvements in patient care
 - Locate, appraise, and assimilate evidence from scientific studies related to patients' health problems
 - Attend didactic lectures
 - Organize and conduct pediatric orthopaedic journal clubs, twice per rotation
 - Be aware of internet sources of information, how to perform systematic reviews, and exhibit knowledge of evidence based medicine principles.
 - *These will be assessed by interaction in preoperative conferences, discussion of patients conditions, didactic conferences and journal clubs*

- Demonstrate professionalism as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population
 - Maintain patient confidentiality
 - Maintain appropriate relations with patients and parents
 - Listen attentively and respond humanely to the concerns of patients and parents
 - Work cooperatively and communicate effectively to achieve common patient care and educational goals of all involved health care providers
 - *These will be assessed by observation in the outpatient and inpatient clinic, discussions with parents and their families, and other involved professionals.*

- Demonstrate system-based practice, as manifested by actions that demonstrate awareness of and responsiveness to the larger context and system of health care and ability to effectively call on system resources to provide care that is of optimal value.
 - Develop a better understanding of how your patient care and other professional practices affect other healthcare professionals, the healthcare organization, and the larger society, and how these elements of the system affect their own practice

- Practice cost-effective healthcare and resource allocation that do not compromise quality of care
- Advocate for quality patient care and assist patients in dealing with system complexities
- Know how to partner with healthcare managers and healthcare providers to assess, coordinate, and improve healthcare, and knowing how these activities can affect system performance
- Develop an understanding for in-hospital services and systems such as imaging and lab studies, prescriptions, patient safety concerns, home health-care services, rehab services and child protective services
- *These will be assessed by interaction in preoperative conferences, rounds, discharge and treatment planning.*

General Expectations and Necessary Knowledge Base

- Provide patient care
 - Rounding on patients
 - Arrive in the OR on time and prepared
 - Participate in private office hours
 - Provide effective and compassionate communication with patients and families
 - Ability to conduct thorough and accurate patient history
 - Have a thorough knowledge of each patient
 - Complete physical examination skills
 - Delivery of appropriate and conscientious clinical care

- Acquire medical knowledge of the following:

The Junior resident on the pediatric Orthopaedic service will be able to describe the pathogenesis and treatment alternatives for the following:

 - Children's Fractures including the upper and lower extremities, spine, and pelvis
 - Physeal injuries
 - Long bone fractures
 - Special children's injuries including the elbow, knee, hip, and ankle
 - Slipped capital femoral epiphysis
 - Clubfoot, cavus foot and flatfoot including tarsal coalitions
 - Human gait and its deviations
 - Back, hip, and knee pain in children and adolescents
 - Idiopathic, congenital, and neuromuscular scoliosis
 - Intoeing, genu varum and valgum
 - Developmental dysplasia of the hip
 - Cerebral palsy
 - Neuropathies and myopathies
 - Bone and joint infections in children
 - Metabolic bone disease in children
 - Syndromes and skeletal dysplasias
 - Benign and malignant tumors in children
 - Child abuse

- The junior resident will be able to classify children's fractures and dislocations in given an x ray.
- If a trauma talk is scheduled during the rotation, the junior resident will prepare and present the talk in conjunction with the pediatric orthopaedic staff.
- The junior resident will be able to describe the indications for and complications of surgical vs. nonsurgical treatment for the various disorders listed above and proper perioperative patient management.
- The junior resident will demonstrate the following surgical skills:
 - Application of casts including spica casts
 - Closed and open treatment of children's fractures:
 - Technique and application of a clubfoot cast
 - In situ pinning of SCFE
 - Application of a Ponseti clubfoot cast
 - Exposure of the spine and ability to safely place a lumbar pedicle screw
 - Surgical anatomy of any area operated upon

The senior resident on the rotation will be proficient at all areas delineated for the junior resident with more detailed knowledge of recent literature related to clinical examination, investigation, and surgical treatment of pediatric Orthopaedic patients.

The senior resident will be able to problem solve in these cases by initiating investigations and recommending a treatment plan. The senior resident will know the natural history of the condition, and the effectiveness of recommended and potential complications of treatment.

The senior resident will have all the knowledge and skills expected of the junior resident and develop skills in:

- Evaluating complex patients including those with congenital abnormalities and multiple problems
- Communication skill with parents and patients with difficult issues and problems
- Preoperative planning of osteotomies, spinal instrumentations, and external fixators (Taylor Spatial Frame, Ilizarov, Monolateral frames).
- Surgical performance of osteotomies and spine instrumentation, children's fractures

The senior resident will complete a project on pediatric Orthopaedics to be decided in conjunction with the pediatric Orthopaedic staff.

- Presentation to all of the residents a topic in pediatric orthopaedics prepared in conjunction with the pediatric orthopaedic staff
- Options: original study, case presentation, chapter authorship

Rotation Reading
General Reading:

Lovell and Winter's Pediatric Orthopaedics is a good general textbook for residents. Source for many OITE questions

Tachdjian's Paediatric Orthopaedics is more detailed and should be reviewed when more specific knowledge is needed

Rang and Wenger's the Art and Practice of Children's Orthopaedics is a well written book for a quick overview and appreciation of children's orthopaedic issues.

OKU Pediatrics - everyone knows about this series.

Fractures:

Rockwood, Wilkins, and Green's Fractures in Children is the best encyclopedic book on children's fractures

Rang and Wenger's Fractures in Children is quick, enjoyable, and will make you much more comfortable with children's fractures. It is suggested to read early in the rotation and will only take you one or two days.

Swiontkowski's book is intermediate between the two with lots of diagrams. It neither has the benefit of Rang's ease of reading nor the encyclopedic coverage of Rockwood.

Exposures:

Hoppenfeld S, DeBoer, P, Surgical Exposures in Orthopaedics, Lippincott

Journals: The following journals deal with pediatric Orthopaedics

JBJS-A The flower of all orthopaedic journals. All children's articles during your rotation (and throughout your life) should be read in detail.

JBJS-B Often has some interesting pediatric Orthopaedics. Worth glancing through.

Spine - the primary journal including spinal deformity

Trauma - Tends not to be read by pediatric orthopedists and children's articles are rare.

CORR - sometimes the topical selections are worth reading.

Journal of Pediatric Orthopaedics (A) - The primary source for much children's Orthopaedics. Articles range from excellent to mediocre.

Journal of Pediatric Orthopaedics (B) - A lesser journal with occasional articles of interest.

Journal of Children's Orthopaedics - A new journal which will probably overtake JPO-B and has a number of interesting articles

The Department of Orthopaedic Surgery and Rehabilitation
Division of Hand and Upper Extremity

The goals are to provide a broad exposure to conditions which cause pain and/or impaired function to the upper extremity, including, but not limited to nerve entrapment, injury, and palsy, vascular problems, fractures, arthritis, carpal instability, and tendonitis.

Have a clear understanding of the following:

1. Basic Science Knowledge:
 - Normal anatomy
 - Pathologic anatomy
 - Basic normal wrist and elbow biomechanics
 - Basic wrist and elbow pathomechanics
 - Basic cellular mechanisms of repair and regeneration of tendon and nerve
 - Anatomic variations relevant to the conditions encountered in the upper extremity
 - Basic wrist and elbow pathomechanics, and the anatomic bases for these observations
 - More complex cellular mechanisms of repair and regeneration of tendon and nerve

2. Clinical Knowledge:
 - Emergency care of acute fractures of the hand and wrist, small joints of the finger and nail bed injuries.
 - Basic physical exam of the hand, wrist, elbow and shoulder
 - Interpretation of plain radiographs
 - Knowledge regarding the basic clinical features of routine problems like carpal and cubital tunnel syndromes, common carpal instability patterns, metacarpal, phalangeal, scaphoid, and distal radius fractures, flexor and extensor tendon injuries, basic features of osteoarthritis and rheumatoid arthritis, and basic infection
 - Should be able to make a diagnosis based on physical examination and interpretation of imaging studies
 - Should be able to assess Neurophysiologic studies and MR images
 - Should have an in depth understanding of more complicated conditions like Rheumatoid disease, brachial plexus injury, Dupuytren's and Kienbock's disease, ulnar wrist pain, and complex infections
 - The role of wrist arthroscopy in diagnosis and treatment
 - Contraindications to surgical alternatives for a given condition
 - Surgical complications, and the treatment thereof
 - Identification of complications such as infection and complex regional pain syndrome

3. Technical Skills:
 - Should have an understanding of the surgical anatomy for the purpose of designing incisions, performing approaches, and wound closures

- Should be able to perform basic procedures like carpal tunnel release, tennis elbow debridement, distal radius open reduction and internal fixation and external fixation, DeQuervain's release and trigger finger release
- Should have an understanding of the surgical anatomy for the purpose of designing incisions, performing approaches, and carrying out the main components of most procedures
- Should be able to perform the majority of many operations including complex fracture work, flexor tendon repair, wrist and shoulder arthroscopy--and possibly microarterial and neural repair, tendon transfers and non-complex wrist reconstruction

EDUCATIONAL PROGRAM

1. Clinical Work

- While on the service, Residents/Fellows are expected to be in clinics 2 days each week and in the operating room each of the others, unless surgical cases have less educational value – because of duplication – than additional time spent in the office.

2. Didactic Activities

- A monthly core lecture, weekly Indications conference, and bimonthly Journal club are mandatory

SCHEDULE OF ACTIVITY

At the beginning of a rotation the Resident and Fellow meets with the Division Chief to review expectations, goals and objectives – with the knowledge that an informal session will be held at the conclusion of the rotation for an oral examination, and additional performance feedback.

EVALUATION AND FEEDBACK

See above

REQUIRED READING

Operative Hand Surgery, Green, 5th Edition

Principles of Hand Surgery and Therapy, Trumble.

Core Orthopaedic Knowledge: Hand, Elbow, and Shoulder. Trumble, Cornwall, Burdoff.

Articles in Hand Reading folder on orthoshare

The Department of Orthopaedic Surgery and Rehabilitation
Division of Foot and Ankle

The overall goals are to:

- Develop interpersonal skills needed to effectively engage patients and family members to enhance communication and education
 - Create and sustain a therapeutic and ethically sound relationship with patients
- Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills
 - Work effectively with others as a member or leader of a healthcare team or other professional group
- Demonstrate practice-based learning and improvement that involves investigation and evaluation of patient care, appraisal and assimilation of scientific evidence and improvements in patient care
 - Locate, appraise, and assimilate evidence from scientific studies related to patients' health problems
 - Attend didactic lectures daily
 - Organize and conduct Foot and Ankle journal club, once per rotation
- Demonstrate professionalism as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population
 - Maintain patient confidentiality
 - Maintain appropriate relations with patients
 - Listen attentively and respond humanely to the concerns of patients
 - Work cooperatively and communicate effectively to achieve common patient care and educational goals of all involved health care providers
- Demonstrate system-based practice, as manifested by actions that demonstrate awareness of and responsiveness to the larger context and system of health care and ability to effectively call on system resources to provide care that is of optimal value.
 - Develop a better understanding of how your patient care and other professional practices affect other healthcare professionals, the healthcare organization, and the larger society, and how these elements of the system affect their own practice
 - Practice cost-effective healthcare and resource allocation that do not compromise quality of care
 - Advocate for quality patient care and assist patients in dealing with system complexities
 - Know how to partner with healthcare managers and healthcare providers to assess, coordinate, and improve healthcare, and knowing how these activities can affect system performance
 - Develop an understanding for in-hospital services and systems such as imaging and lab studies, prescriptions, patient safety concerns, home health-care services, rehab services, nursing home services and assisted living services
- Provide patient care
 - Rounding on patients
 - Arrive in the OR on time and prepared
 - Participate in private office hours

- Provide effective and compassionate communication with patients and families
- Ability to conduct thorough and accurate patient history
- Have a thorough knowledge of each patient
- Complete physical examination skills
- Delivery of appropriate and conscientious clinical care
- Acquire medical knowledge of the following:
The Junior resident on the foot and ankle service will be able to describe the pathogenesis and treatment alternatives for the following:
 - Traumatic conditions affecting the ankle, hindfoot, midfoot and forefoot
 - Diabetic foot
 - Hallux valgus lesser toe deformities
 - Inflammatory arthropathy of the foot and ankle
 - Congenital and adult acquired neurologic disorders of the foot and ankle
 - Tendon disorders of the foot and ankle

The junior resident will be able to classify fractures and dislocations in this region given an x ray.

The junior resident will be able to describe the indications for and complications of

- ORIF ankle
- ORIF calcaneus
- Ankle fusion
- ORIF Lisfranc Fracture/dislocation
- Midfoot fusion
- Surgery for foot or ankle infection
- Amputations of the lower extremity
- Correction of hallux valgus or lesser toe deformities

The junior resident will demonstrate the following surgical skills:

- Interpretation of x-rays and general surgical approach to trauma, infection, degenerative and inflammatory conditions of the foot and ankle
- Exposures of the malleoli, subtalar joint, and MTC joint of greater toe
- Reconstruction for hallux valgus
- Correction of lesser toe deformities

The senior resident on the foot and ankle rotation will be proficient at clinical examination, investigation, and surgical treatment of patients with traumatic, inflammatory, degenerative and neuropathic conditions affecting the ankle and foot.

The senior resident will be able to describe and use classifications for:

- Fractures and/or dislocations of the foot and ankle
- Diabetic involvement of the foot and ankle
- Structural and functional foot deformities

The senior resident will be able to problem solve in these cases by initiating investigations and recommending a treatment plan. The senior resident will know the natural history of the condition, and the effectiveness of recommended and potential complications of treatment.

The senior resident will develop skills in:

- Posterior exposure of the ankle
- Lateral exposure of calcaneus and stabilization of fractures

Ankle, hindfoot, midfoot and forefoot fusions
Surgical approach to infections of the foot and/or ankle
Amputations of the lower extremity
Tendon transfers of the foot and/or ankle
Diabetic foot pathology

Rotation Schedule

Year 3 Resident: 7-8 week rotation block
Year 4 Resident: 7-8 week rotation block

Resident Responsibilities / Expectations

Active participation in outlined schedule.

During first week:

- List of Top 10 Personal Goals for rotation**
- List of core topics to be covered during Tuesday Core Topic and Topic Specific Journal Club**
- Choose date for Journal Club** (check Attending availability)

PGY 3 and PGY 4 Residents: Project on foot and ankle topic of choice.

- goal:** in depth knowledge of a foot and ankle topic
- Options: Original study, case presentation, chapter authorship
 - Publication quality
- End of rotation presentation (last day of indication conference)

Journal Club

A weekday at 6:00 pm.

- To be held during 2nd half of resident block
- Once every 3 months, once every two resident blocks
 - Organized by current and immediate-past PGY3 resident
- Location: local restaurant, casual
- Invite Year 3 and Year 4 residents

Five or Six Articles

- Foot and Ankle International
- Journal of Bone and Joint Surgery
- Journal of Orthopaedic Trauma
- American Journal of Sports Medicine

Journal Months (3)

- Typically 3 month prior

Each Tuesday – 6:30 am

“Core Topic Conference and Topic Specific Journal Club”
Responsibility rotates among PGY3, PGY4 and Fellow

-Year 3/4 Residents

- Resident core topics to be covered
 - Modified to meet goals of individual resident
- Individualized by each PGY3/4 resident, TO INCLUDE:
 - Review article
 - Literature review: 2-3 recent papers
- Last Tuesday of the rotation: rotation project presented

-**Fellow** – **Every third week/conference**, the Fellow chooses core topic and runs conference

-Covers Core Fellow Topics

-Topic specific articles to be added to Electronic F/A Library

OR Expectations

Resident to see patient in holding area (sign the site).

Resident in OR when patient arrives in the room.

Resident prepares and reads for each case and demonstrates knowledge before and during case.

Floor Expectations

7:25am Monday - Friday: attendings + residents touch base (text page / meet)

-Residents round independently prior to division rounds

-Attending post-call: one resident typically rounds with attending

Weekend Rounds:

-PGY3, PGY4 and Fellow evenly divide up weekend rounding responsibilities

Visit to Strong Orthotic and Prosthetics (O&P), at Clinton Crossings (pedorthotist, orthotist)

-midway through rotation

-call Alicia and make appointment to spend a couple of hours with pedorthist and orthotists: orthotics / bracewear

Monthly Department Foot and Ankle Conference

-To follow established 2 year Foot/Ankle core conference schedule

-Residents and Fellow assist with organization and presentation of conference

-Attending coverage alternates month to month

Curriculum

Management of foot and ankle sprains and nondisplaced fractures in the outpatient clinic

Use of casts, splints, braces, restricted activity

Evaluation and management of orthopaedic conditions of the foot and ankle in the orthopaedic clinic.

Hammertoes: Exercises, padding, footwear, shoe modifications

Bunions: Footwear, splinting, shoe inserts

Neuroma / nerve injury: Footwear, diagnostic/therapeutic injections

Metatarsalgia: Shoe modifications, exercises, shoe inserts, skin care

Acquired flatfoot: exercises, shoe inserts, shoe modification, bracing

Plantar heel pain: exercises, shoe modification, shoe inserts, injection, oral medication, casting, splinting

Diabetic foot care-shoes, shoe inserts, skin & nail care casting/bracing

Tendinitis / tendinosis / tendon rupture and laceration: exercises, casts/splints, shoe inserts/modifications, injections

Arthritis (osteoarthritis, inflammatory arthritis, post-traumatic arthritis): injections, shoe inserts / modifications, bracing

Ankle instability: exercises, bracing

Neurologic disorders / pes cavus: exercises, bracing

Surgery and postoperative care of the foot and ankle: When, and upon whom, to operate

Hammertoes: arthroplasty, arthrodesis, tendon adjustments
Bunions: corrective osteotomy, capsular adjustment, arthroplasty, arthrodesis
Neuroma / nerve injury: resection, decompression, excision and redirection
Metatarsalgia: osteotomy, with hammertoe reduction
Acquired flatfoot: selective arthrodesis, calcaneal osteotomy, tendon transfer
Heel pain: fascia release/excision, nerve decompression, bone resection
Diabetic foot care: debridement, osteotomy, amputation, arthrodesis
Amputation surgery-toe, partial foot, whole foot, transtibial
Fracture / dislocation surgery: toe, metatarsal, Lisfranc's dislocation, talar neck & body, calcaneus, ankle malleolar and plafond
Tendinitis / tendinosis / tendon rupture and laceration: debridement, repair, tendon transfer
Arthritis (osteoarthritis, inflammatory arthritis, post-traumatic arthritis): debridement, osteotomy, arthrodesis
Ankle instability: secondary anatomical repair, tendon transfer
Neurologic disorders / pes cavus: tendon lengthening / transfers, osteotomy, arthrodesis

Required Reading

OKU, Foot and Ankle 4

Coughlin and Mann: Surgery of the Foot and Ankle - Select chapters

-Diabetic foot chapter

-Pes Cavus chapter

-2 Textbooks above loaned to PGY3 and PGY4 Resident, and they are responsible for handing off 2 books to next rotation similar year resident last day of rotation

Reference Textbook and Journals

Journals

Foot and Ankle International

Foot and Ankle Clinics

Journal of Bone and Joint Surgery

Journal of Orthopaedic Trauma

American Journal of Sports Medicine

Textbooks

Gould: Operative Foot Surgery

Meyerson: Foot and Ankle Disorder

Coughlin, Mann: Surgery of the Foot and Ankle

Adelarr: Complex Foot and Ankle Trauma

Shereff: Atlas of Foot and Ankle Surgery

Sarraffian: Anatomy of the Foot and Ankle

OKU Foot and Ankle 4

The Department of Orthopaedic Surgery and Rehabilitation
Division of Orthopaedic Oncology

General Goals – The goals of this rotation are to gain expertise in the evaluation, diagnosis, treatment, and management of patients with musculoskeletal tumors and metabolic bone disease.

Learning Objectives – By the end of the PGY 1 year, the resident will have a clear understanding of the following:

Basic Science Knowledge:

Musculoskeletal Oncology:

A basic or initial understanding of 1) molecular events involved in carcinogenesis, such as tumor suppressors and oncogenes. 2) molecular events understanding of events involved in tumor metastasis. 3) the manner in which benign and malignant tumors grow in the bone environment and the differences between the two. 4) the lexicon of musculoskeletal oncology with knowledge of the names of the various benign and malignant tumors derived from different tumors. 5) a complete understanding of the staging system of musculoskeletal tumors. 6) a basic understanding of the evaluation and treatment of soft tissue tumors with an understanding of some of the differences between benign and malignant tumors

Clinical Knowledge:

Musculoskeletal Oncology: **A basic or initial understanding** of 1) the evaluation of the musculoskeletal oncology patient; 2) an understanding of important elements of the history, including duration of symptoms such as pain, mass, swelling, weight loss and the significance of these findings. 3) an understanding of the use of various laboratory tests, including blood work, and radiographic tests, including an understanding of the relative strengths and weaknesses of MRI, CT scan, bone scans, and PET scan. 4) the indications for biopsy. 5) the follow-up of patients, including duration and type of follow-up, and staging studies used for these patients. 6) the ability to determine on plain radiographs whether a tumor has a slow or rapid rate of growth and whether its characteristics are benign or malignant.

Technical Skills:

1) A **complete understanding** of how to perform a biopsy, including the principles of a longitudinal incision with minimal dissection and the ability to perform this procedure on soft tissue masses. 2) The ability to remove benign superficial or deep soft tissue masses that are not adjacent to important neurovascular structures.

By the end of the PGY-3 year, the resident will have mastered the following:

Basic Science Knowledge:

A complete understanding of 1) molecular events involved in carcinogenesis, such as tumor suppressors and oncogenes. 2) molecular events involved in tumor metastasis. 3) the manner in which benign and malignant tumors grow in the bone environment and the differences between the two. 4) the lexicon of musculoskeletal oncology with knowledge of the names of the various benign and malignant tumors derived from different tumors. 5) a complete understanding of the evaluation and treatment of soft tissue tumors with an understanding of the differences between benign and malignant tumors.

A basic or initial understanding of 1) evaluation a histologic tumor section with the ability to determine whether the lesion is benign or malignant and develop a differential diagnosis based upon the histologic features 2) specific molecular abnormalities that occur in some tumors, such as Ewing's Sarcoma, liposarcoma, fibromatosis, and chondrosarcoma, and others.

Clinical Knowledge:

Complete understanding of the 1) the evaluation of the musculoskeletal oncology patient; 2) the important elements of the history, including duration of symptoms such as pain, mass, swelling, weight loss and the significance of these findings. 3) an the use of various laboratory tests, including blood work, and radiographic tests, including an understanding of the relative strengths and weaknesses of MRI, CT scan, bone scans, and PET scan. 4) the indications for biopsy. 5) the follow-up of patients, including duration and type of follow-up, and staging studies used for these patients. 6) the ability to determine on plain radiographs whether a tumor has a slow or rapid rate of growth and whether its characteristics are benign or malignant.

A basic or initial understanding and ability to 1) form a differential diagnosis following work up of a patient presenting with a musculoskeletal tumor.

Technical Skills:

A basic or initial understanding and ability to perform 1) complex benign soft tissue excisions adjacent to neurovascular bundles. 2) simple superficial excisions of malignant soft tissue tumors.

complete understanding of how to perform 1) simple tumor excisions of benign soft tissue and bone tumors. 2) stabilization of simple metastatic lesions involving the long bones.

By the end of the PGY-5 year, the resident will have mastered the following:

Basic Science Knowledge:

A complete understanding of 1) molecular events involved in carcinogenesis, such as tumor suppressors and oncogenes. 2) molecular events involved in tumor metastasis. 3) the manner in which benign and malignant tumors grow in the bone environment and the differences between the two. 4) the lexicon of musculoskeletal oncology with knowledge of the names of the various benign and malignant tumors derived from different tumors. 5) a complete understanding of the evaluation and treatment of soft tissue tumors with an understanding of the differences between benign and malignant tumors. 6) evaluation of a histologic tumor section with the ability to determine whether the lesion is benign or malignant and develop a differential diagnosis based upon the histologic features 7)

specific molecular abnormalities that occur in some tumors, such as Ewing's Sarcoma, liposarcoma, fibromatosis, and chondrosarcoma, and others.

Clinical Knowledge:

Complete understanding of the 1) the evaluation of the musculoskeletal oncology patient; 2) the important elements of the history, including duration of symptoms such as pain, mass, swelling, weight loss and the significance of these findings. 3) an the use of various laboratory tests, including blood work, and radiographic tests, including an understanding of the relative strengths and weaknesses of MRI, CT scan, bone scans, and PET scan. 4) the indications for biopsy. 5) the follow-up of patients, including duration and type of follow-up, and staging studies used for these patients. 6) the ability to determine on plain radiographs whether a tumor has a slow or rapid rate of growth and whether its characteristics are benign or malignant. 7) form a differential diagnosis following work up of a patient presenting with a musculoskeletal tumor.

Technical Skills:

A basic or initial understanding and ability to perform 1) complex malignant tumor resections involving bone and soft tissues adjacent to neurovascular bundles. 2) Stabilization of complex metastatic lesions with massive bone loss involving the long bones and pelvis.

complete understanding of how to perform 1) simple tumor excisions of benign soft tissue and bone tumors. 2) stabilization of simple metastatic lesions involving the long bones. 3) stabilization of moderately complex metastatic lesions requiring use of methylmethacrylate and metal implants. 4) superficial excisions of malignant soft tissue tumors.

PREREQUISITIES: General Surgery and other orthopaedic rotations

EDUCATIONAL PROGRAM

Clinical Work

- a. Residents are assigned to patient care on the services of Dr. O'Keefe are expected to be in clinics 2 days and in the operating room 3 days per week. Only a single resident should be in the OR on a given operation unless there is a significant learning opportunity for both residents. Residents not in the OR are required to be present in the clinic.

Didactic Activities:

- b. The residents are required to present 2 or more interesting cases from the prior week/weeks on each Tuesday at the indications conference. All residents should demonstrate complete knowledge of the presentation, work up, differential diagnosis, treatment and ongoing management of these cases.

- c. The Chief Resident (R5) and Junior Resident (R3) are responsible for developing a single complete case presentation (as an unknown) with powerpoint slides of the x-ray, histologic slides, etc. to be used in a conference of unknowns.

Directed Independent Study

- d. The resident should read the musculoskeletal oncology OKU during the rotation. The progress through the OKU and any questions will be addressed each Tuesday during indications conference.

RESIDENT'S SCHEDULE OF ACTIVITIES

The schedule of activities follows the OR and Clinic schedules of Drs. Rosier/O'Keefe and Dr. Bukata and is separately attached.

RESIDENT EVALUATION AND FEEDBACK

It is required that each of the residents perform an evaluation of the rotation. The standard University of Rochester form, which has been adopted by the Department of Orthopaedics will be used for this purpose. Completion of the evaluation is necessary for successful completion of the rotation.

REFERENCES

OKU Musculoskeletal Tumors 2
Metabolic Bone Disease Chapter of OKU 9

The Department of Orthopaedic Surgery and Rehabilitation
Division of Spine

The overall goals of this rotation are to:

- Develop interpersonal skills needed to effectively engage patients and family members to enhance communication and education
 - Create and sustain a therapeutic and ethically sound relationship with patients
 - Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills
 - Work effectively with others as a member or leader of a healthcare team or other professional group
- Demonstrate practice-based learning and improvement that involves investigation and evaluation of patient care, appraisal and assimilation of scientific evidence and improvements in patient care
 - Locate, appraise, and assimilate evidence from scientific studies related to patients' health problems
 - Attend didactic lectures
- Demonstrate professionalism as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population
 - Maintain patient confidentiality
 - Maintain appropriate relations with patients
 - Listen attentively and respond humanely to the concerns of patients
 - Work cooperatively and communicate effectively to achieve common patient care and educational goals of all involved health care providers
- Demonstrate system-based practice, as manifested by actions that demonstrate awareness of and responsiveness to the larger context and system of health care and ability to effectively call on system resources to provide care that is of optimal value.
 - Develop a better understanding of how your patient care and other professional practices affect other healthcare professionals, the healthcare organization, and the larger society, and how these elements of the system affect their own practice
 - Practice cost-effective healthcare and resource allocation that do not compromise quality of care
 - Advocate for quality patient care and assist patients in dealing with system complexities
 - Know how to partner with healthcare managers and healthcare providers to assess, coordinate, and improve healthcare, and knowing how these activities can affect system performance
 - Develop an understanding for in-hospital services and systems such as imaging and lab studies, prescriptions, patient safety concerns, home health-care services, rehab services, nursing home services and assisted living services
- Provide patient care
 - Rounding on patients
 - Arrive in the OR on time and prepared

- Participate in private office hours
 - Provide effective and compassionate communication with patients and families
 - Ability to conduct thorough and accurate patient history
 - Have a thorough knowledge of each patient
 - Complete physical examination skills
 - Delivery of appropriate and conscientious clinical care
- Acquire medical knowledge of the following:
 - The Junior resident on the spine service will be able to describe the pathogenesis and treatment alternatives for the following:
 - Degenerative spine disease
 - lumbar HNP
 - lumbar spinal stenosis
 - lumbar spondylolisthesis
 - lumbar spondylosis with and without myelopathy
 - cervical HNP
 - spine infection
 - spine tumors (primary and metastatic)
 - spine trauma
 - congenital and developmental spine conditions
 - metabolic and inflammatory spine disorders

The junior resident will be able to classify radiographic studies of the cervical, thoracic and lumbar spine including plain radiographs, MRI, CT, myelogram and bone scans

The junior resident will be able to perform and document a clinical evaluation of a patient with neck pain, back pain, extremity pain, spinal deformity or spine injury. This will include appropriate history, physical exam including neurological and musculoskeletal assessments.

The junior resident will be able to place a patient with a spinal injury on a Roto-rest bed for immobilization. Describe the appropriate orders and in-patient evaluation for non-operative care of a spinal injury. Discuss orthotic and cast management of spinal injuries. Understand indications for, contraindications to, and complications of non-operative management.

The junior resident on the spine service will study and be able to discuss the following topics:

- Definition of rehabilitation
- The Team Approach to rehabilitation
- Complication: preventable barriers to rehabilitation
- Common problems in spinal cord injury (SCI)
 - inadequate nutrition
 - pressure sores
 - bladder control and urinary tract infections
 - spasticity
 - contractures
 - acquired deformities
 - muscle weakness and physiologic deconditioning

- thromboembolic disease
- gait substitution
 - wheelchair
 - orthotics
 - functional electrical stimulation
- epidemiology of SCI
- types of SCI
 - complete injury - tetraplegia and paraplegia
 - anterior cord syndrome
 - central cord syndrome
 - posterior cord syndrome
 - Brown-Sequard syndrome
 - mixed syndrome
 - associated root injury
- prognosis of SCI
- management of the SCI patient
 - lower extremities
 - upper extremities
 - skin
 - bladder function
 - sexual dysfunction
 - autonomic dysreflexia
 - post-traumatic spinal cord cyst

The junior resident will be able to describe the indications for, contraindications to, and the complications of

- Posterior lumbar arthrodesis
- Lumbar discectomy
- Lumbar decompression for spinal stenosis
- Anterior cervical discectomy/corpectomy and reconstruction
- Anterior/posterior decompression and/or stabilization for injuries of the cervical, thoracic and lumbar spine
- Surgery for axial back pain
- Skeletal traction and closed reduction of spinal injuries

The junior resident will be able to demonstrate the following skills:

- Application of cervical traction (tongs) and halo ring and vest
- Posterior exposure of lumbar spine for decompression
- Posterior exposure for intertransverse function
- Harvesting iliac crest bone graft (anterior and posterior)
- Located pedicle in lumbar and lower thoracic spine
- Demonstrate cervical lateral masses

In addition it is expected that the senior resident will be able to:

- Demonstrate efficiency and proficiency at clinical examination, investigation and management of patients with degenerative, traumatic (including spinal cord injury),

infection and neoplastic conditions of the spine. Address issues of neurologic impairment, instability and deformity.

- Classify spinal disorders. The senior resident will know the natural history of the condition and effectiveness, risks and benefits of treatment options. They will be able to formulate a workup and a treatment plan and defend the chosen treatment method over the other options.
- Demonstrate skills in:
 - Anterior and posterior exposures of the cervical, thoracic and lumbar spine
 - Lumbar discectomy
 - Lumbar decompression for stenosis
 - Posterior lumbar fusion
 - Posterior cervical arthrodesis

Suggested Reading:

Benzel Spine Surgery - Techniques, Complication Avoidance, and Management, Elsevier 2005

Herkowitz, et al Rothman-Simeone The Spine, Saunders 2006.

Vaccaro, et al Principles and Practice of Spine Surgery, Mosby, 2003.

Vaccaro and Baron, Operative Techniques Spine Surgery, Elsevier, 2008.

Journals for Reference:

Spine

Journal of Spinal Disorders and Techniques

The Spine Journal

Journal of Spinal Cord Medicine

Occasional articles in JBJS related to spine

The Department of Orthopaedic Surgery and Rehabilitation
Division of Orthopaedic Trauma

The goals of this rotation are to provide a broad exposure to traumatic conditions of the entire body, and with advancement through the program to shift from an acute care/nonoperative emphasis toward a delayed reconstruction/intensive operative experience of complex fractures and post-traumatic reconstruction.

The PGY-2 residents should have a clear understanding of the following:

1. Basic Science Knowledge:
 - Normal anatomy of the extremities
 - Basic cellular mechanisms of fracture healing
 - The physiologic response to trauma
 - The physiologic benefits to early stabilization

2. Clinical Knowledge:
 - Basic physical exam of the extremities and pelvis
 - Early treatment of the traumatized patient according to ATLS principles
 - Appropriate ordering and interpretation of plain radiographs
 - Appropriate classification of fractures
 - Should be able to make a diagnosis based on physical examination and interpretation of imaging studies
 - Should understand and recognize what constitutes emergency
 - Should be able to, in a quick and organized manner, present complex patient problems at fracture conference.
 - Absolute contraindications to surgery in polytrauma
 - Surgical complications, and the treatment thereof

3. Technical Skills:
 - Closed reduction and splinting of common fractures
 - Reduction of hip, knee, shoulder and elbow dislocations
 - Insertion of traction pins
 - Hematoma blocks
 - Should be comfortable treating hip fractures in elderly patients
 - Should be able to perform irrigation and debridement of traumatic wounds
 - Should be able to function as a critical member of the multidisciplinary trauma team at a regional trauma center.
 - Should be comfortable using basic orthopaedic instruments in the operating room.

3. Clinical Work

- PGY-1 Residents on the Ward/OR Rotation are expected to be available on the wards, in the clinic, or in the OR from 6 a.m. – 6 p.m. Monday – Friday. Weekend rounding and call will be scheduled with the other residents on the service to assure proper coverage.
- PGY-2 Residents on the Ortho/ED Rotation are expected to work either the night float, or every third day for 24-27 hours, covering the ED and the wards. If they are not busy elsewhere, they are expected to observe/participate in the OR.

4. Didactic Activities

- Trauma Conference Monday 6:30 – 7:15.
- Indications Conference Tuesday 6:30 – 7:15.
- Fracture Sign-Out Conference Monday – Friday 7:15 – 7:30.

SCHEDULE OF ACTIVITY

At the beginning of a rotation the Residents meets with the Orthopaedic trauma attendings to review expectations, goals and objectives – with the knowledge that an informal session will be held at the conclusion of the rotation for additional performance feedback.

EVALUATION AND FEEDBACK

See above

REFERENCES

- Skeletal Trauma. Browner, Jupiter, Trafton and Levine.
- The Rationale of Operative Fracture Care. Schatzker and Tile.
- Surgical Approaches. Hoppenfeld.
- Rockwood and Green's Fractures in Adults
- Rockwood and Green's Fractures in Children

The PGY-4 residents should have a clear understanding of the following:

1. Basic Science Knowledge:
 - Normal anatomy of the extremities
 - Physical examination of the extremities
 - Basic cellular mechanisms of fracture healing
 - The physiologic response to trauma
 - The rationale of damage control in trauma

2. Clinical Knowledge:
 - Basic physical exam of the extremities and pelvis
 - Early treatment of the traumatized patient according to ATLS principles
 - Appropriate ordering and interpretation of radiographs, CT scans and MRIs
 - Should be able to make a diagnosis and formulate a treatment plan based on physical examination and interpretation of imaging studies
 - Should be comfortable with most orthopaedic emergencies
 - Absolute contraindications to surgery in polytrauma
 - Surgical complications, and the treatment thereof
 - Should be prepared for each and every surgery in the operating room.
 - Should be able to communicate effectively with all members of trauma team to advocate for orthopaedic concerns in polytrauma patients.

3. Technical Skills:
 - Open reduction and internal fixation of common fractures.
 - Should be able to perform surgery for straightforward articular fractures.
 - Intramedullary nailing of femur and tibia fractures
 - Should be able to, in a quick and organized manner, present a treatment plan for complex problems at fracture conference.
 - Should be able to choose the appropriate surgical approach for an injury.
 - Should be comfortable performing tissue-preserving exposure of fractures.
 - Should be comfortable with performing surgery for multiple fractures in trauma patients.
 - Should understand the surgical approaches to pelvis and acetabulum.

EDUCATIONAL PROGRAM

Clinical Work

- PGY-4 Residents are expected to be available on the wards, in the clinic, or in the OR from 6 a.m. – 6 p.m. Monday – Friday. Weekend rounding and call will be scheduled with the other residents on the service to assure proper coverage.

Didactic Activities

- Trauma Conference Monday 6:30 – 7:15.
- Indications Conference Tuesday 6:30 – 7:15.
- Fracture Sign-Out Conference Monday – Friday 7:15 – 7:30.

SCHEDULE OF ACTIVITY

At the beginning of a rotation the Residents meets with the Orthopaedic trauma attendings to review expectations, goals and objectives – with the knowledge that an informal session will be held at the conclusion of the rotation for additional performance feedback.

EVALUATION AND FEEDBACK

See above

REFERENCES

- Skeletal Trauma. Browner, Jupiter, Trafton and Levine.
- The Rationale of Operative Fracture Care. Schatzker and Tile.
- Surgical Approaches. Hoppenfeld.
- Rockwood and Green's Fractures in Adults
- Rockwood and Green's Fractures in Children

The PGY-5 residents should have a clear understanding of the following:

1. Basic Science Knowledge:
 - Normal anatomy of the pelvis and hip.
 - Basic cellular mechanisms of fracture healing
 - The physiologic response to trauma
 - The rationale of damage control in trauma

2. Clinical Knowledge:
 - Basic physical exam of the extremities and pelvis in traumatized patients.
 - Physical examination of the extremities in traumatic and post-traumatic conditions.
 - Early treatment of the traumatized patient according to ATLS principles
 - Appropriate ordering and interpretation of radiographs, CT scans and MRIs
 - Staged treatment of chronic osteomyelitis.
 - Should be able to make a diagnosis and formulate a treatment plan based on physical examination and interpretation of imaging studies
 - Should be comfortable with orthopaedic emergencies
 - Absolute contraindications to surgery in polytrauma
 - Surgical complications, and the treatment thereof.

3. Technical Skills:
 - Should be able to perform the majority of all operations.
 - Open reduction and internal fixation of articular fractures
 - Intramedullary nailing of femur and tibia fractures
 - Should be able to, in a quick and organized manner, present a treatment plan for complex problems at fracture conference.
 - Should be comfortable with performing surgery for multiple fractures in trauma patients
 - Should be comfortable performing surgical approach to pelvis and acetabulum.

EDUCATIONAL PROGRAM

Clinical Work

- PGY-4 Residents are expected to be available on the wards, in the clinic, or in the OR from 6 a.m. – 6 p.m. Monday – Friday. Weekend rounding and call will be scheduled with the other residents on the service to assure proper coverage.

Didactic Activities

- Trauma Conference Monday 6:30 – 7:15.
- Indications Conference Tuesday 6:30 – 7:15.
- Fracture Sign-Out Conference Monday – Friday 7:15 – 7:30.

SCHEDULE OF ACTIVITY

At the beginning of a rotation the Residents meets with the Orthopaedic trauma attendings to review expectations, goals and objectives – with the knowledge that an informal session will be held at the conclusion of the rotation for additional performance feedback. The residents should obtain direct performance feedback midway through each rotation and at the end of the rotation.

EVALUATION AND FEEDBACK

See above

REFERENCES

Skeletal Trauma. Browner, Jupiter, Trafton and Levine.
The Rationale of Operative Fracture Care. Schatzker and Tile.
Surgical Approaches. Hoppenfeld.
Rockwood and Green's Fractures in Adults
Rockwood and Green's Fractures in Children

Rotation Specific Goals for PGY-1 on Orthopaedic Trauma

The goals of this rotation are to provide an introduction to traumatic conditions of the entire body, with specific attention to acute care and in-hospital care of orthopaedic trauma patients.

The PGY-1 residents should have a clear understanding of the following:

1. Basic Science Knowledge:
 - Normal anatomy of the extremities
 - The physiologic response to trauma
 - The physiologic benefits to early stabilization

2. Clinical Knowledge:
 - Basic physical exam of the extremities and pelvis
 - Early treatment of the traumatized patient according to ATLS principles
 - Appropriate ordering and interpretation of plain radiographs
 - Should be able to make a diagnosis based on physical examination and interpretation of imaging studies
 - Should understand and recognize what constitutes an emergency

3. Technical Skills:
 - Application of splints and dressings.
 - Closed reduction and splinting of common fractures
 - Reduction of hip, knee, shoulder and elbow dislocations
 - Should be able to function as a critical member of the multidisciplinary trauma team at a regional trauma center.

4. Clinical Work
 - PGY-1 Residents on the Orthopaedic Trauma Rotation are expected to be available on the wards, in the clinic, or in the OR from 5:30 a.m. – 6 p.m. Monday – Friday. Weekend rounding and call will be scheduled with the other residents on the service to assure proper coverage within work hours restrictions.
 - The PGY-1 Resident is responsible for completion of all hospital care and discharge planning documentation (i.e. progress notes, discharge summaries, discharge medications/prescriptions, and physical therapy orders) for orthopedic trauma service patients.

5. Didactic Activities
 - Trauma Conference Monday 6:30 – 7:15.
 - Indications Conference Tuesday 6:30 – 7:15.
 - Fracture Sign-Out Conference MTWF 7:15 – 7:30; Th 8:15-8:30.

REFERENCES

- The Rationale of Operative Fracture Care. Schatzker and Tile.
- Surgical Approaches. Hoppenfeld.
- Rockwood and Green's Fractures in Adults
- Rockwood and Green's Fractures in Children

The Department of Orthopaedic Surgery and Rehabilitation
Division of Sports Medicine

ROTATION OVERVIEW

The Orthopaedic Sports Medicine rotation is designed to educate residents in a broad variety of aspects regarding primarily upper and lower extremity sports injuries, with concentration on clinical evaluation, and non operative as well as operative treatment of shoulder and knee injuries, but also including topics on elbow injury, foot and ankle injury, and spinal injury. The residents will focus on developing proficiencies in diagnostic arthroscopy of the shoulder, knee, and ankle and will become familiar with procedures, particularly involving treatment of meniscal and chondral injuries, ligament reconstruction, and patellofemoral problems in the knee, rotator cuff injuries and instability of the shoulder, ligament injuries and chondral injuries of the ankle, and various athletic overuse injuries including stress fractures and tendinopathy. Residents will participate in team coverage at the professional level for the Rochester Amerks, Rochester Rattlers, and Rochester Rhinos. These include the evaluation of athletes in athletic training rooms at these facilities, as well as on-site physician coverage for sporting events.

The residents must demonstrate knowledge of the current literature in relationship to the disease processes that are encountered. The residents will be encouraged to learn from their clinical experience by performing regular reviews of the literature in preparation for patient care, as well as in preparation for morning conference, journal club, and M&M reporting. The residents will be expected to work and interact with the health care team including ancillary personnel and other health care providers. The residents rotating on the sports medicine service are expected to provide patient care that is compassionate & appropriate and to effectively communicate with patients, their families, and other members of the health care team.

By the end of the rotation the resident should be able to:

- Take an appropriate history including the date of injury, duration of symptoms, mechanism of injury, prior treatment and present it in a concise synopsis.
- Perform a thorough physical examination of the involved area and present the pertinent findings, both positive and negative.
- Discuss and point out the salient findings, both on plain films and imaging studies.
- List an appropriate differential diagnosis in the order of likelihood.
- Be able to list the various treatment options available for the presumed diagnosis.
- Describe an overview of the rehabilitation "milestones" relative to that particular diagnosis.
- Understand the principles of rehabilitation as they relate to sports injuries and be able to properly order (prescribe) rehabilitation services e.g. physical therapy, orthotics, braces, etc.
- Understand issues relative to athletic injury and performance such as return to play, prophylactic bracing, impairment, compliance.

Surgical skills should include:

- Comprehensive knowledge of the surgical anatomy.

- Ability to describe, demonstrate and perform routine arthroscopic portal placement in the shoulder, elbow, knee, and ankle.
- Ability to perform a routine diagnostic arthroscopy in the shoulder and knee.
- The residents should be familiar with all instrumentation used to perform arthroscopic procedures on these joints.
- With respect to the knee, be able to:
 - Detail the steps and perform a routine knee meniscectomy.
 - Detail the steps of an uncomplicated primary anterior cruciate ligament reconstruction.
 - Detail the steps of proximal and/or distal realignment procedure for the treatment of patellar instability.
- With respect to the shoulder, be able to
 - Detail the steps to properly position the patient and arthroscopic equipment
 - Detail the steps of evaluation and debridement of the gleno-humeral joint, including labral pathology
 - Detail the steps in performing a subacromial decompression, arthroscopic AC joint decompression, and evaluation and repair of the rotator cuff.
- Understand the principles of arthroscopy of other joints such as the elbow, ankle, and hip.
- Identify & treat the common post-operative complications
- Understand rehabilitation protocols for the various reconstructive procedures
- Recognize problems related to rehabilitation and therapy.

Evaluation:

The residents will be evaluated during and at the completion of their sports medicine rotation. Evaluation will be based on achievement of the rotation specific objectives and observations by the sports medicine attendings of the resident's overall performance in conferences, clinic, and surgery. The end-of-rotation evaluation form will be used.

Required Reading:

Orthopaedic Sports Medicine: Principles and Practice, DeLee and Drez, Vol 1, 2nd Ed.
The Shoulder, Rockwood & Matsen

The Department of Orthopaedic Surgery and Rehabilitation
Division of Adult Reconstruction

Overall Goals:

Develop interpersonal skills needed to effectively engage patients and family members to enhance communication, education and medical management

- Create and sustain a therapeutic and ethically sound relationship with patients and families
- Use effective listening skills and elicit information using effective nonverbal, explanatory, questioning and writing skills
- Work effectively with others as a member or leader of a healthcare team or other professional group

Demonstrate practice-based learning and improvement that involves investigation and evaluation of patient care, appraisal and assimilation of scientific evidence and improvements in patient care

- Locate, evaluate and assimilate evidence from scientific studies related to specific healthcare problems
- Attend didactic lectures as scheduled
- Attend and participate in weekly Adult Division indications conference
- Organize and conduct the departmental adult reconstructive conference once a month @ Highland Hospital

Demonstrate professionalism as manifested through a commitment to carrying out designated responsibilities, adherence to ethical principles and sensitivity to a diverse patient population

- Maintain patient confidentiality
- Maintain appropriate relations with patients and families
- Listen attentively and respond humanely to the concerns of patients and families
- Work cooperatively and communicate effectively to achieve patient care and educational goals of all involved health care providers

Demonstrate system-based practice, as manifested by actions that demonstrate awareness of responsiveness to the larger context of health care and ability to effectively call on system resources to provide care that is of optimal value

- Develop a better understanding of how your patient care and other professional practices affect other healthcare professionals, the healthcare organization and society in general
- Practice cost-effective healthcare and resource allocation that do not compromise quality of care
- Advocate for quality patient care and assist patients in dealing with system complexities
- Develop an understanding for in-hospital services and systems such as imaging, laboratory studies, prescriptions, patient safety issues, rehabilitation options and home healthcare services

Patient care objectives:

- Oversee inpatient care through daily rounds and through consultation as indicated
- Timely arrival in OR and preparation for all cases
- Develop and carry out patient management plans
- Counsel and educate patients and their families

- Develop ability to conduct a thorough and accurate patient history
- Improve skills for physical examination relevant to hip and knee problems
- Communicate effectively with other healthcare professionals to provide optimal patient-focused care

Medical knowledge base:

- Residents are expected to demonstrate an investigatory and analytic approach to clinical situations
- Understand how to apply basic and clinical science information to patient problems
- Know how to locate, appraise and assimilate information relevant to patient care
- Understand how to apply basic and clinical science information to patient problems
- Develop radiological skills as they apply to reconstructive problems

The junior resident on the adult service will be able to describe the pathogenesis and treatment alternatives for the following:

- Degenerative arthritis of the hip and knee
- Inflammatory arthritis of the hip and knee
- Osteonecrosis of the hip and knee
- Failed arthroplasty of the hip and knee

The junior resident will be able to accurately assess radiographs of hip and knee reconstructive problems

The junior resident will be able to describe the indications for and complications of

- Primary hip and knee replacement
- Revision hip and knee replacement
- Resurfacing arthroplasty of the hip
- Osteotomies of the hip and knee
- Basic principles of computer assisted surgery

The junior resident will demonstrate basic surgical skills related to primary hip and knee arthroplasty.

The senior resident on the adult service will be proficient at physical examination, clinical investigation and surgical treatment of patients with degenerative and inflammatory conditions of the hip and knee

The senior resident will demonstrate problem-solving skills related to basic and complex conditions affecting the hip and knee. The senior resident will know the natural history of the condition, and the effectiveness of recommended and potential complications of treatment.

The senior resident will demonstrate surgical skills related to primary hip and knee arthroplasty.

The senior resident will demonstrate surgical skills related to revision hip and knee arthroplasty.

The senior resident will gain proficiency in hip resurfacing arthroplasty.

The senior resident will gain proficiency in computer assisted surgery for the hip and knee.

The senior resident will work effectively as a mentor for the junior resident in all aspects of patient care and educational objectives

Rotation reading for both the junior and senior residents:

Surgical Exposures in Orthopaedics. Hoppenfeld s, et al

OKU - Hip and Knee Reconstruction Update. Vol. 3. 2006

The Adult Hip. Callaghan J, et al 1998.

Campbell's Operative Orthopaedics. 11th ed.

The Journal of Arthroplasty articles as indicated.

JBJS articles as indicated.

CORR articles as indicated.

The Department of Orthopaedic Surgery and Rehabilitation
Highland Hospital Rotation

Rotation Overview

The primary goal of the orthopaedic rotation at Highland Hospital is to provide the resident with an experience in general orthopaedic surgery. Highland Hospital has a significant population of patients with musculo-skeletal disorders. Because of the age demographics of these patients at Highland Hospital the residents will be involved in the evaluation and treatment of elderly patients with degenerative and/or fracture conditions common to this population.

The orthopaedic residents will be involved in the evaluation of these patients in both an outpatient and in-patient setting. The residents will be responsible for formulation of treatment options (with appropriate supervision) involving both non-surgical and surgical care.

The surgical experience for the orthopaedic residents will include general types of adult reconstruction surgery with an emphasis on surgical treatment of arthritis; fracture care especially geriatric fractures; arthroscopy primarily of the knee and shoulder for a variety of joint problems; and common surgical procedures of the hand and foot.

PGY3

The PGY3 resident will assume primary responsibility for inpatient care, participate in all outpatient clinics, and perform surgical procedures under the direct supervision of the orthopaedic chief resident and/or an attending physician. The resident will participate in all department teaching conferences.

At the end of this rotation the PGY 3 resident should be able to demonstrate his/her ability to perform a thorough evaluation and examination of the musculoskeletal system; this includes both clinical and radiographic examinations. The resident should be able to correctly diagnose common musculoskeletal problems and be able to formulate a treatment plan. The resident should be able to demonstrate basic surgical skills and perform common orthopaedic surgical procedures with increasing skill.

Evaluation

Evaluation of the PGY 3 resident will be based on daily observations by the senior resident and attending staff, and ability to demonstrate this knowledge and these skills in the clinical setting including the outpatient clinics, surgery, and clinical conferences. The end of rotation evaluation form will also be used and discussed with the resident at the end of the rotation.

PGY 4

The PGY 4 resident will function as a chief resident. This resident is responsible for all patient care activities of the orthopaedic service and for day-to-day supervision of the PGY 3 resident. The PGY 4 resident will participate in all outpatient clinics, coordinate the decision making and scheduling process for all patients for whom surgical treatment is being considered, and perform surgical procedures independently and/or under the direct supervision of the orthopaedic faculty. The senior resident will participate in all department teaching conferences.

At the end of this rotation the PGY4 resident should be able to demonstrate his/her ability to function as an orthopaedic surgeon capable of entering practice as an independent practitioner. This includes appropriate evaluation of patients, correct interpretation of diagnostic studies, and proper decision making regarding treatment options. This resident should be able to demonstrate the ability to plan and perform orthopaedic surgical procedures and provide the proper postoperative care including the

rehabilitation as needed. The PGY 5 resident should be capable of providing the highest standards of care for patient with musculoskeletal disorders.

Evaluation

Evaluation of the PGY 4 resident will be based on frequent observations by the attending staff at Highland Hospital including ability to demonstrate this knowledge and these skills in the outpatient clinics, surgery, and clinical conferences. The end of rotation evaluation form will also be used and discussed with the resident at the end of the rotation.

PGY 3 and PGY 4 Education Experience

Staff Outpatient Clinic every Wednesday afternoon

Orthopaedic Conference every Wednesday morning

Basic Science Conference (at SMH) every Thursday morning

Grand Rounds (at SMH) every first Thursday morning of the month

Operative experience with the affiliated orthopaedic faculty at Highland Hospital at the University faculty during trauma call experiences

Geriatric Orthopaedic Journal Club when scheduled

The Department of Orthopaedic Surgery and Rehabilitation
Division of Sports Medicine – Highland Hospital

ROTATION OVERVIEW

The Orthopaedic Sports Medicine Highland Hospital rotation is designed to educate residents in a broad variety of aspects regarding primarily upper and lower extremity sports injuries, with concentration on clinical evaluation, and non operative as well as operative treatment of shoulder, knee, and hip injuries, but also including topics on elbow injury, foot and ankle injury, and spinal injury. The residents will focus on developing proficiencies in diagnostic arthroscopy of the shoulder, knee, and ankle and will become familiar with procedures, particularly involving treatment of meniscal and chondral injuries, ligament reconstruction, and patellofemoral problems in the knee, rotator cuff injuries and instability of the shoulder, ligament injuries and chondral injuries of the ankle, and various athletic overuse injuries including stress fractures and tendinopathy. Residents will participate in team coverage at the professional level for the Rochester Amerks, Rochester Rattlers, and Rochester Rhinos. These include the evaluation of athletes in athletic training rooms at these facilities, as well as on-site physician coverage for sporting events.

The residents must demonstrate knowledge of the current literature in relationship to the disease processes that are encountered. The residents will be encouraged to learn from their clinical experience by performing regular reviews of the literature in preparation for patient care, as well as in preparation for morning conference, journal club, and M&M reporting. The residents will be expected to work and interact with the health care team including ancillary personnel and other health care providers. The residents rotating on the sports medicine service are expected to provide patient care that is compassionate & appropriate and to effectively communicate with patients, their families, and other members of the health care team.

By the end of the rotation the resident should be able to:

- Take an appropriate history including the date of injury, duration of symptoms, mechanism of injury, prior treatment and present it in a concise synopsis.
- Perform a thorough physical examination of the involved area and present the pertinent findings, both positive and negative.
- Discuss and point out the salient findings, both on plain films and imaging studies.
- List an appropriate differential diagnosis in the order of likelihood.
- Be able to list the various treatment options available for the presumed diagnosis.
- Describe an overview of the rehabilitation "milestones" relative to that particular diagnosis.
- Understand the principles of rehabilitation as they relate to sports injuries and be able to properly order (prescribe) rehabilitation services e.g. physical therapy, orthotics, braces, etc.
- Understand issues relative to athletic injury and performance such as return to play, prophylactic bracing, impairment, compliance.

Surgical skills should include:

- Comprehensive knowledge of the surgical anatomy.

- Ability to describe, demonstrate and perform routine arthroscopic portal placement in the shoulder, elbow, hip, knee, and ankle.
- Ability to perform a routine diagnostic arthroscopy in the shoulder and knee.
- The residents should be familiar with all instrumentation used to perform arthroscopic procedures on these joints.
- With respect to the knee, be able to:
 - Detail the steps and perform a routine knee meniscectomy.
 - Detail the steps of an uncomplicated primary anterior cruciate ligament reconstruction.
 - Detail the steps of proximal and/or distal realignment procedure for the treatment of patellar instability.
- With respect to the shoulder, be able to
 - Detail the steps to properly position the patient and arthroscopic equipment
 - Detail the steps of evaluation and debridement of the gleno-humeral joint, including labral pathology
 - Detail the steps in performing a subacromial decompression, arthroscopic AC joint decompression, and evaluation and repair of the rotator cuff.
- Understand the principles of arthroscopy of other joints such as the elbow, ankle, and hip.
- Identify & treat the common post-operative complications
- Understand rehabilitation protocols for the various reconstructive procedures
- Recognize problems related to rehabilitation and therapy
- With respect to hip arthroscopy be able to
 - Gain a fundamental understanding of hip and gait biomechanics to be able to identify the various clinical spectrum of non-arthritic hip conditions such as FAI, peritrochanteric space disorders, instability, and coxa saltans (snapping hip conditions)
 - become comfortable with a basic hip exam and be able to identify "hip mimickers" such as lumbar spinal disorders, abdominal visceral pathology, and athletic pubalgia
 - be comfortable objectively analyzing radiographs, CT, and MRI findings characteristic of each disorder and the subtle findings associated with athletic hip conditions
 - become comfortable with the setup and careful patient positioning for hip arthroscopy and understand the importance of this step
 - be aware of the potential complications associated with hip arthroscopy and the indications for surgery with each form of pathology
 - be able to atraumatically enter the joint and perform a diagnostic examination

Evaluation:

The residents will be evaluated during and at the completion of their sports medicine rotation. Evaluation will be based on achievement of the rotation specific objectives and observations by the sports medicine attendings of the resident's overall performance in conferences, clinic, and surgery. The end-of-rotation evaluation form will be used.

Required Reading:

Orthopaedic Sports Medicine: Principles and Practice, DeLee and Drez, Vol 1, 2nd Ed.
The Shoulder, Rockwood & Matsen

The Department of Orthopaedic Surgery and Rehabilitation
Research Rotation

During the first week of the resident's first research block, the resident should complete the Human Subjects Protection Program. The text to read and answer sheet is available from Vicki Rocco.

In addition, any residents planning to do research with animals will need to complete the required coursework as follows:

Animal orientation

Animal resource tour

Biomethodology and Surgical Care CDs – available from Janet Cushing

CO2 euthanasia – this is an online course – to register go to urmc.rochester.edu/vivarium/ and sign up under “Training”

Lab Safety Training (on an annual basis) www.safety.rochester.edu/training/biochemanimal.pdf

There is a quiz to be given to Janet Cushing for processing

An evaluation form has been set up that will go to Drs. Puzas, Schwartz and your faculty mentor for completion at the end of the research block.

First Year Resident Rotations

HIGHLAND HOSPITAL GENERAL SURGERY

By the end of the rotation, the resident should be comfortable with pre-operative preparation of the patient, including what is necessary from a laboratory, radiological, informed consent, and prophylactic standpoint. The resident should begin to develop post operative awareness of shock, ischemia, and respiratory insufficiency. The resident should be able to determine what laboratory or radiologic tests are necessary and to order the appropriate tests with attention to cost effectiveness. The resident should suture and make incisions, and begin to develop a base of information regarding instrumentation and suturing materials. The resident should be able to perform basic procedures (eg. abscess drainage) under supervision.

PGY1

Patient Care

- Write medically appropriate, legible notes with stamped signature.
- Write medically appropriate orders, with stamped signature.
- Dictate records in a timely fashion.
- Report on time to OR, office/clinic, and conferences.

Medical Knowledge

- Exhibit general knowledge of abdominal wall hernias, gallbladder disease, morbid obesity, evaluation of acute abdomen and recognition of peritonitis.
- Differentiate surgical risks in elective and emergency operations.
- Identify straightforward problems correctly.
- Exhibit mastery of basic principles of hyperalimentation, fluid management, and antibiotic choice.

Practice-Based Learning and Improvement

- Discuss basic laboratory evaluation of the surgical patients.
- Describe indications for CT Scans, Barium Swallows, Ultrasounds and Barium Enemas in the surgical population. Attempt to view as many of these interventional procedures as possible.
- Develop a practice of safe handling of instruments and tissues.
- Participate in daily rounds, outpatient clinic, weekly M&M, Grand Rounds and teaching conferences.
- Perform simple procedures under supervision such as central lines, chest tubes, and simple skin procedures including subcuticular skin closure, open appendectomies, and umbilical hernia repairs.

Interpersonal Relationships and Communication

- Keep patients informed of treatment and operations under consideration after discussion with attending staff.
- Develop an effective communication style with senior residents, attending staff, and other members of health care team.
- Refrain from conflict with peers or ancillary staff.

Professionalism

- Show initiative and integrity.
- Exhibit a pattern of reliability and honesty.
- Exhibit honesty in doctor-patient relationships and other medical interactions.
- Display cordial and respectful behavior toward patients, families, fellow residents and the ancillary staff.

Systems-Based Practice

- Pay attention and learn from the assessment of patients during staff rounds and at weekly M& M conference.
- Develop the ability for cost benefit analyses, medical economics and outcomes analysis.
- Develop the ability to use clinical pathways and make use of standardized order.

Research

- Learn how to evaluate surgical literature
 - Understand how clinical research is performed and potential shortcomings

CARDIAC SURGERY

The PGY1 house officer is expected, by the completion of the rotation, to be able to organize laboratory, radiologic, and pathologic data in a concise and coherent fashion. The individual should be able to perform an efficient and thorough history and physical examination. The PGY1 house officer should, based on the history and physical examination, be able to initiate the laboratory evaluation and any other initial diagnostic studies. PGY1 should be comfortable in the preoperative preparation of the patient for surgery and routine postoperative care. The individual should be exposed to and begin to master the skills necessary to care for the ICU patient. The individual should perform, under supervision, simple procedures as assigned by faculty.

PATIENT CARE

- Maintain a habit of efficient and organized management of patient care.
- Inform senior resident and attendings about patient status issues.
- Obtain detailed history with high degree of accuracy.
- Regularly perform complete and thorough physical examinations.
- Formulate patient management plans and make decisions for straightforward cases under the supervision of more senior residents and attendings.
- Write medically appropriate, legible and error-free orders for uncomplicated cases.
- Maintain timely, legible, and thorough medical records.
- Read about cases (pathophysiology, anatomy, and operative techniques) before time of procedure. (Perhaps this should be in the "Medical Knowledge" section.)
- Perform basic operating room procedures under close supervision.
- Develop the ability to anticipate exposure, suction, cutting, and retracting while scrubbed in on more advanced cases as an assistant.
- Provide safe patient care.
- Analyze available data soundly.
- Read chest X-rays and C-T scans.
- Develop skills for placement of nasogastric tubes, Foley catheters, and insertion of chest tubes.
- Discuss the basic concepts of tissue handling and suturing techniques.

MEDICAL KNOWLEDGE

- (See "Competency-Based Knowledge Objectives").
- Develop a general knowledge of fundamental clinical principles and facts, of basic cardiac surgical diseases including the relevant anatomy, physiology, pathology and bacteriology.
- Identify the fundamentals of evaluating surgical risk in both the elective and emergency setting.
- Discuss the basic principles of managing these cases, including elective and emergency cardiac surgery.
- Identify straightforward problems correctly.
- Read regularly about each cardiac surgical problem encountered.

PRACTICE-BASED LEARNING AND IMPROVEMENT

- (See "Competency-Based Knowledge Objectives").

- Describe the basic indications for different radiologic and interventional studies, and diagnostic exams including cardiac catheterization and echocardiography.
- Attempt to be present to view as many interventional or diagnostic procedures as possible.
- Participate actively in teaching rounds, M & M, Grand Rounds, and resident teaching conferences.
- Develop the skills to teach medical students and ancillary health professionals.
- Develop a basic understanding of, and participate in, the evaluation of surgical literature for credibility and applicability.

INTERPERSONAL RELATIONSHIPS & COMMUNICATION

- Develop the habit of talking to patients and their families about their probable diagnosis, its implications, the recommended treatment and any operations under consideration. Keep the patient informed and up-to-date with regard to their clinical status.
- Communicate effectively with residents, attendings, and ancillary staff.
- Enhance team morale.

PROFESSIONALISM

- Behave in a responsible and dependable manner.
- Display initiative and responsibility.
- Dictate records in a timely fashion.
- Show self-initiative and integrity.
- Develop an appreciation for the importance of honesty in the doctor-patient relationship and other medical interactions.
- Develop a system for exposure to ethical issues such as informed consent, patients' rights, end of life issues.
- Develop the ability to participate in discussions and become an effective part of rounds, attending staff conference.
- Develop professional/social skills necessary and appropriate for participating in discussions, and become an effective part of rounds, attending staff conferences and other conferences.
- Maintain a presentable appearance that includes but is not limited to adequate hygiene and appropriate dress. Scrubs should be worn only when operating or while on call.

SYSTEMS-BASED PRACTICE

- Pay attention to and learn from the assessment of patient care as discussed during Staff Rounds and the weekly M & M conference.
- Develop an understanding of cost vs. benefit considerations, medical economics, outcomes analysis, quality improvement and medicolegal issues.
- Utilize "Evidence Based Medicine" through the use of Practice Guidelines and Clinical Pathways.

RESEARCH

- Participate in some clinical research to develop a perception of how it is done, its potential shortcomings and its importance to the improvement in patient care.
- Learn the essentials of obtaining consents for research trials and be able to cooperate with on-going studies.

R1 SMH BURN

The PGY 1 resident is expected to be a part of the Burn Care Team and participate in intensive care delivery, wound management, and appropriate surgical procedures. The resident is exposed to the pathophysiology, evaluation, and treatment of the adult and pediatric burn patient, and is expected to assume primary management of all patients assigned to them in the Burn unit.

Didactic

The PGY-1 resident is expected:

- to participate in the Journal Club, Surgical Grand Rounds, Citywide CPC and Basic Science Conference.
- to participate in the daily teaching rounds.
- to participate and present case material as appropriate to the surgical morbidity and mortality conference.
- to participate in the SICU multidisciplinary teaching conference.
- to participate in burn-specific lectures.

Clinical:

The residents are expected:

- to develop knowledge of pathophysiology, evaluation, and treatment of the adult and pediatric burn patient.
- to develop skills in the ambulatory management of thermal injury patients with emphasis on wound care and pain management.
- to develop skills in providing prognosis including guidelines for long term care and returning to work.
- to develop skills in treatment of pediatric burns.
- to identify burns due to abuse.
- to discuss criteria for referral to burn center.
- to develop skills in stabilization of severely burned patients.
- to participate, when directed by the attending faculty, in the critical care aspects of the severely burned patients including initial evaluation and resuscitation.

And to become competent in the following procedures:

- ◆ Skin grafting with heterograft and homograft tissue as well as autograft tissues.
- ◆ Debridement and excision of burn wounds.
- ◆ IV fluid management.
- ◆ Nutrition management.

SMH TRAUMA & ACUTE GENERAL SURGERY

The overall objective of the trauma rotation is to provide the intern with the basics of acute trauma management including primary survey, secondary survey, tertiary survey and initial stabilization. This includes pre-operative evaluation, exposure to operative decision-making and post operative care of the trauma patient. In addition, the acute general surgery responsibility of the service provides the intern with exposure to common emergency surgical problems as well as an opportunity to diagnose and participate in the surgical intervention of these problems.

Didactic

The PGY-1 resident is expected:

- to participate in the weekly journal club, weekly divisional M&M, weekly didactic lecture series and daily morning report (case-oriented) discussions.
- to complete ATLS certification prior to trauma service rotation.

Clinical

The PGY-1 resident is expected:

- to participate, with the R2 resident and R5, resident in the initial evaluation, management, and stabilization of all trauma patients as they present to the emergency department.
- to participate, as directed, in the initial evaluation and work up of patients presenting with acute surgical problems in conjunction with senior resident supervision.
- to participate in the ambulatory outpatient clinic on Tuesday and Wednesday afternoons, which includes all trauma and general surgical patients in follow-up.
- to participate in the daily care of all trauma and general surgical patients on the inpatient service, under the direction of the senior residents and supervised by an attending surgeon.

Operative

The PGY-1 resident is expected:

- to be the primary participant, with the R2 and R5, in the care of acute surgical emergencies from the ED, and the elective surgical practices of the five trauma surgeons as directed by the chief resident and attending staff.
- to become competent in the following procedures:
 - Wound management
 - NG tube placement.
 - Blood transfusion.
 - Infection management -- incision and drainage.
 - Foley catheter placement.
 - Management of operative post-trauma patient
 - Placement of chest tube
 - Placement of central venous line

VASCULAR SURGERY

GOALS AND OBJECTIVES

The goal of the vascular surgical rotation is to introduce the resident to clinical vascular surgery with knowledge gained and responsibility assigned according to his/her level of training and individual skills and interests. In the sections that follow, objectives for each level of training are listed. It is assumed that the manner in which these competencies are achieved is cumulative and progressive; that is, residents are expected to maintain skills and competencies that are achieved during each year of training and carry them all forward to succeeding years. The faculty of the Department of Surgery evaluates all residents and decides whether a given resident meets all program requirements for graduation from the program or for progression to the next level of training.

1. **COMPETENCY BASED OBJECTIVES OF THE SURGICAL RESIDENCY (ALL LEVELS)**

PATIENT CARE

- Demonstrate the ability to gather essential and accurate patient information
- Make informed decisions about diagnostic and therapeutic interventions
- Efficiently complete patient care activities
- Acquire clinical and technical skills as demonstrated by an appropriate diagnostic workup with an understanding of the tests to be ordered, the development of a differential diagnosis, organization of a management plan, performance of the necessary surgical procedures and care for the postoperative surgical patient in the short and long term.

MEDICAL KNOWLEDGE

- Demonstrate investigatory and analytical clinical thinking
- Knows indications for and technical aspects of surgical procedures
- Understands pathophysiology of basic surgical disease, preoperative and postoperative care
- Knows and applies basic and clinical science appropriate to surgical care.
- Satisfactorily completes annual in-training and mock oral examinations

PRACTICE BASED LEARNING

- Develop a personal program of self-study and professional growth with guidance from the teaching staff and faculty advisor. An understanding of the etiology, pathogenesis, pathophysiology, diagnosis and management of surgical disorders is absolutely necessary. This will allow for sound surgical judgment which relies on knowledge, rational thinking and the surgical literature.
- Participate in teaching and organization of the educational conferences and activities of the Department of Surgery and assume responsibility for teaching and supervision of subordinate surgical housestaff, and medical students.

PROFESSIONALISM

- Participate in compassionate patient care maintaining the highest moral and ethical values with a professional attitude. The resident should be sensitive to the needs and feelings of others, including

the patient's family members, allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.

- Demonstrate respect, compassion and integrity in the care of patients on a daily basis
- Show sensitivity to patients culture, age, gender and disabilities

INTERPERSONAL RELATIONSHIPS AND COMMUNICATION

- Create and sustain a therapeutic and ethically sound relationship with patients
- Work effectively with other members of the medical team including allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.
- Maintain professional interactions with other health care providers and hospital staff

SYSTEMS BASED PRACTICE

- Understand how the health care organization affects surgical practice
- Demonstrates cost effective health care
- Knows how to partner with health care managers and allied health personnel to improve health care
- Follow established practices, procedures, and policies of the Department of Surgery and integrated and affiliated hospitals.
- Completion of medical records operative notes staff sheets and notes, patient database cards and other patient care related documentation in a timely, accurate and succinct manner.

The PGY1 house officer/subintern is expected, by the completion of the year, to be able to organize laboratory, radiologic, noninvasive vascular laboratory, and pathologic data in a concise and coherent fashion. The individual should be able to perform an efficient and thorough history and physical examination. The PGY1 house officer/subintern should, based on the history and physical examination, be able to initiate the laboratory evaluation and any other initial diagnostic studies. The PGY1/subintern should be comfortable in the preoperative preparation of the patient for surgery and routine postoperative care. The individual should perform, under supervision, simple procedures such as abscess drainage, amputation, and wound closure.

PATIENT CARE

- Demonstrate a pattern of reliability and honesty.
- Assume responsibility for all patients on 7-14 (PGY1) or all patients you operate on (subintern), including performance of morning and afternoon rounds and ongoing thorough knowledge of all events.
- Participate in daily attending rounds on all patients.
- Develop a habit of efficient and organized management of patient care.
- Involve your senior resident and attendings.
- Record detailed history with high degree of accuracy.
- Perform complete and thorough physical examinations.
- Begin to keep patient management plans and decisions for straightforward cases under the supervision of more senior residents and attendings.
- Develop skills to write medically appropriate, legible and error-free orders for uncomplicated cases.
- Maintain timely, legible, and thorough medical records.
- Dictate records in a timely fashion.
- Provide safe patient care.

MEDICAL KNOWLEDGE

- Develop a general knowledge of fundamental clinical principles and decision-making process of basic vascular problems, including aneurysmal, carotid, lower extremity, and venous diseases, trauma, and AV access.
- Demonstrate an understanding of the fundamentals of evaluating surgical risk in both the elective and emergency setting.
- Analyze available data soundly.
- Identify straightforward problems correctly.
- Demonstrate up-to-date knowledge about each surgical problem encountered..

PRACTICE-BASED LEARNING

- Develop skills in the basic noninvasive laboratory evaluation of emergent and elective patients.
- Discuss the basic indications for different radiologic and interventional studies, including angiography. Attempt to be present at least one angiogram, and understand findings in detail.
- Reinforce basic concepts of tissue handling, suturing techniques, operating room procedures
- Use instruments appropriately, with even and safe movements.
- Read about cases (pathophysiology, anatomy, and operative techniques) before you scrub in.
- Develop skills to learn to anticipate exposure, suction, cutting, retracting, etc, while scrubbed in on more advanced cases as an assistant.
- Participate actively in daily rounds and all vascular and general surgery conferences.
- Attend clinic with one faculty member (Illig or designee) one day per week.

PROFESSIONALISM

- Demonstrate responsibility and dependability.
- Show self-initiative and integrity.
- Develop an understanding of the importance of honesty in the doctor-patient relationship and other medical interactions.
- Formulate a system for self-exposure to ethical issues such as informed consent, patient's rights, end of life issues, etc.
- Exhibit respectful behavior with your non-surgical and non-physician colleagues.
- Develop professional/social skills necessary to participate in discussions and become an effective part of rounds, attending staff conference, etc.
- Maintain a presentable appearance that sets the standard for the hospital. This includes but is not limited to adequate hygiene and appropriate dress.

INTERPERSONAL RELATIONSHIPS & COMMUNICATION

- Keep the patient informed and up-to-date with regard to their clinical status and communicate with the families as HIPAA allows. Do not discuss complex or difficult subjects or go over plans without first discussing with the team.
- PGY1 - allow subintern to take primary responsibility for his/her patients and attempt to solve problems independently first.
- Subintern - understand that your intern is ultimately responsible for your patient, and may need to act and/or go over your head.
- Communicate effectively with your residents, attendings, and ancillary staff.
- Restrain from conflict with your peers or ancillary staff.
- Enhance team morale.

SYSTEMS-BASED PRACTICE

- Attend to and learn from the assessment of patient care as discussed during Staff Rounds and the weekly M & M conference.
- Develop an understanding of cost vs. benefit considerations, medical economics, outcomes analysis, quality improvement and medicolegal issues.
- Begin to the practice “Evidence Based Medicine” through the use of Practice Guidelines and Clinical Pathways.

RESEARCH

- Develop a basic understanding of, and participate in, the evaluation of surgical literature for credibility and applicability.
- Discuss with faculty potential interest in vascular surgery and/or research opportunities, in order to explore research options.

RESIDENT SELECTION

All residents appointed to programs at the University of Rochester Medical Center must hold the MD or DO degree and be graduates of schools approved by the LCME (Liaison Committee on Medical Education) or the AOA (American Osteopathic Association) or, in the case of international schools, approved for listing by the World Health Organization or equivalent accrediting bodies and possess a valid ECFMG (Educational Commission for Foreign Medical Graduates) certificate. Graduates of medical schools outside the US who have completed a Fifth Pathway program provided by an LCME-accredited medical school are also eligible for appointment. All first year residency positions will be offered through the National Residency Matching Program (NRMP).

All PGY1 applicants will be expected to participate in the National Resident Matching Program (NRMP). All applicants will be expected to apply to the program through the Electronic Residency Application Service (ERAS). The program does not offer "prematch" or "out of the match" PGY1 positions.

The selection of residents is the responsibility of the Program Director who has the opportunity to review application materials, rate residents against the published selection standards such as preparedness, ability, aptitude, academic credentials, communication skills, and personal qualities such as motivation and integrity, and select those residents to be invited for interview. ACGME-accredited programs must not discriminate with regard to sex, race, age, religion, color, national origin, disability, or any other applicable legally protected status.

The final rank list is decided on by members of the full time teaching faculty and a resident representative who the candidate's applications, interview notes and scores. The group agrees on the residents to be ranked and selected through the match.

RESIDENT APPOINTMENT, REAPPOINTMENT, AND PROMOTION POLICY

All contract letters are for one year and each resident must be reappointed for each subsequent year of training, contingent upon satisfactory completion of the current post-graduate year. No resident will be asked to sign a non-competition guarantee. The University will honor the full term of the contract letter except when a resident's performance justifies termination.

Recommendations for the appointment and reappointment of residents are initiated by the Department of Orthopaedics and Rehabilitation and sent to the Office for Graduate Medical Education.

Residents are promoted at the end of each year based upon clinical and basic science knowledge, motor skills, and professionalism and a favorable evaluation by the full and part time faculty members. A resident whose performance has failed to meet the level of competence for reappointment to a subsequent year shall be notified by his/her department in writing. Specific guidelines for decisions on termination or non-reappointment are found in the Disciplinary Procedures and Appeals Policy.

The Department of Orthopaedics and Rehabilitation will give the resident four months notice (March 1) if the appointment will not be renewed for the following year. The resident must give the department at least two months notice (May) if he/she does not intend to return the following year.

These procedures will be followed for initial and all subsequent appointments and reappointments.

Appointment and/or reappointment do not constitute an assurance of successful completion of a residency program or post-graduate year. Successful completion is based on performance as measured by individual departmental standards. Successful completion of a residency program does not entitle a resident to appointment to the Faculty of the School of Medicine and Dentistry or to the Medical Staff of Strong Memorial Hospital. These appointments are governed respectively by the University Faculty Handbook, the School of Medicine and Dentistry Regulations of the Faculty and by the Strong Memorial Hospital Medical Staff Bylaws.

EVALUATION POLICY

There is an ongoing evaluation process of our residents by the full-time faculty. The purpose of the evaluation process is to:

- ◆ Identify strength as well as areas for improvement in order to assist all residents to realize their full potential as orthopaedic surgeons
- ◆ Make timely decisions on promotion, or if necessary, remediation or reappointment
- ◆ Provide the basis for letters of recommendation
- ◆ Identify collective strengths and weaknesses and target areas for modification in the teaching program.

Proper evaluation depends upon clearly articulated goals and objectives which must be communicated to the resident. This is done in writing at the beginning of each rotation. The program's curriculum will be reviewed and updated annually, and given to all residents at the beginning of each academic year.

While the program and its faculty recognize their primary responsibility to provide evaluation and feedback, residents are encouraged to regularly solicit feedback from supervisors. Written or on-line evaluations will be prepared by supervising faculty and residents at the end of each rotation. The Education Administrator will be responsible for tracking and maintaining up to date evaluation files on each resident. All residents shall have access to their evaluations and can review them by logging into the eValue system.

The Program Director will review all evaluations as the program office receives them and will meet twice per year with each resident to review evaluations and summarize progress in the training program. The resident will reflect with the Program Director on their evaluations (including self-assessment), progress, procedural skills, in-training examinations, career and personal plans. Following the meeting, a formal letter from the Program Director addressing the comments/concerns that were discussed in the meeting is shared with the resident and signed by the resident indicating that the resident has seen and understands the substance of the report. Residents are also given the opportunity to indicate in writing where they have disagreements with the written evaluation. Residents are entitled to a copy of this evaluation. The program director may also decide to meet with residents between semiannual reviews to discuss specific evaluations.

As per ACGME guidelines, the Program Director will provide a final evaluation for each resident who completes the program. The evaluation must include a review of the resident's performance during the final period of education and should verify that the resident has demonstrated sufficient professional ability to practice competently and independently. The final evaluation must be part of the resident's permanent record maintained by the institution, both in the department's file and in the GME file.

At the end of each academic year, a summary report of evaluations and associated comments, unmarked by resident name, for all faculty are provided to the Department Chair and Program Director for review and use in annual faculty performance evaluations.

DISMISSAL POLICY

The orthopaedic resident's term of appointment will be for five academic years. The resident that has matched into the research track will be appointed for a total of six academic years. Successful completion of the program shall be contingent on positive evaluations (both written and verbal). Residents shall be formally evaluated at least twice per year in the areas of:

- Medical Knowledge
- Professionalism
- Systems Based Practice
- Professionalism and Communication
- Practice Based Learning and Improvement
- Patient Care

Unsatisfactory performance by a resident may result in the resident being placed on probation. In this case, the resident will be notified of the deficiencies in writing along with a plan to correct deficiencies which includes the manner and time frame in which they will be corrected and the consequences of not correcting them within the time frame. The probationary period will be a minimum of 3 months in length (maximum of 6 months). In the event the resident is unable to correct deficiencies, termination can occur. If the resident is terminated, the appointment will end immediately. The resident would be paid one additional month salary in lieu of notice. The resident will be notified in writing of the action and a copy of the letter will be sent to the GME office.

Immediate Termination: Immediate termination can occur if a resident puts patients, other health care professionals, employees or third parties at risk, or compromises the integrity of the program. The bases for immediate termination include but are not limited to misconduct; any conduct that has the potential to jeopardize patient safety or the quality of patient care, is disruptive of hospital operations, is a serious violation of URMC policy, is a serious violation of law or regulation, or is conduct constituting criminal activity. If a resident is terminated, his/her appointment shall end immediately and no probationary period is required. Residents who are terminated will receive one month's salary and benefits in lieu of notice. Credit for training may be given in the event of any satisfactory performance prior to termination.

SUPERVISION POLICY

All orthopaedic residents will be assigned to individual faculty members who are responsible for all aspects of the care provided to the patient. Residents on that service will work directly with the faculty. The faculty are responsible for providing supervision to all residents and fellows to ensure that all patients receive care of the highest quality at all times in both the inpatient and outpatient settings. At the same time, supervision must provide an opportunity for the individual resident to assume increasing responsibility for patient care commensurate with their level of training, ability and experience.

Procedures will be done under direct supervision until the time the resident has been deemed able to perform the procedure under indirect supervision. This requires sign off by a supervising physician on the **Delineation of Competencies** form and should be completed by the end of the first year of training.

All residents will consult with the attending physician regarding the assessment and treatment of a patient's illness. Treatment plans will be in accordance with the attending physician's recommendation. For in-house consults off-service, the responsible attending will see the patient after the resident, review and confirm with the residents the pertinent history, physical, and the relevant diagnostic studies, including x-rays, and then appropriately document the findings in the chart.

In all surgical situations, attending physician supervision of orthopaedic residents must be direct personal supervision of all surgical procedures performed in an operating room setting and/or requiring a general anesthesia or regional block anesthesia.

All supervision is as listed and documented by resident rotation schedules and attending physician on-call schedules.

RESIDENT WORK HOURS POLICY

Duty hours are defined as all clinical and academic activities related to the residency program, ie, patient care (both inpatient and outpatient), administrative duties related to patient care, the provision for transfer of patient care, time spent in-house during call activities, and scheduled academic activities such as conferences. Duty hours do not include reading and preparation time spent away from the Hospital.

- ◆ Duty hours must be limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house call activities. (NYS Department of Health has placed an additional limit of 84 hours for any one week).
- ◆ Residents/fellows must be provided with 1 day in 7 free from all educational and clinical responsibilities, inclusive of in-house and pager call. One day is defined as one continuous 24-hour period free from all clinical, educational, and administrative activities.
- ◆ Duty periods of PGY1 residents must not exceed 16 hours in duration. Duty periods for PGY2 residents and above may be scheduled to a maximum of 24 hours of continuous duty in the hospital.
- ◆ Adequate time for rest and personal activities must be provided. This should consist of a 10 hour time period and must consist of at least an 8 hour time period between all daily duty periods and after in-house call. Residents who have been assigned a 24 hour work shift must be provided at least 14 hours of time off following such assigned shift.

The NYS Department of Health requires strict adherence of institutions to its duty hour standards. Because state law supercedes accreditation requirements, all University of Rochester programs will comply with the 80 hour per week maximum. The Graduate Medical Education Committee (GMEC) will not consider approving a 10% increase in hours as described in ACGME duty hour requirements.

- ◆ On call Activities – The objective of on-call activities is to provide residents with continuity of patient care experiences throughout a 24-hour period. In-house call is defined as those duty hours beyond the normal work day when residents are required to be immediately available in the assigned institution.
- ◆ In-house call must occur no more frequently than every third night, averaged over a four-week period.
- ◆ Continuous on-site duty, including in-house call, must not exceed 24 consecutive hours. Residents may remain on duty for up to 3 additional hours to participate in didactic activities and transfer care of patients. Any resident that works an in-house, 24 hour shift will leave the hospital post call for at least a 14 hour time period.
- ◆ All residents are required to have at least 8 hours free between duty periods and should have 10 hours off.
- ◆ No new patients may be accepted after 24 hours of continuous duty.
- ◆ At-home call is defined as call taken from outside the assigned Institution.
- ◆ The frequency of at-home call is not subject to the every third night limitation. However, at home call must not be so frequent as to preclude rest and reasonable personal time for each trainee.

- ◆ Residents/fellows taking at-home call must be provided with 1 day in 7 completely free from all educational and clinical responsibilities.
- ◆ When residents are called into the hospital from home, the hours residents spend in-house are counted toward the 80-hour limit.
- ◆ The Program Director and the faculty must monitor the demands of at-home call and make scheduling adjustments as necessary to mitigate excessive service demands and/or fatigue.
- ◆ It is the policy of the Department of Orthopaedics that any resident who is fatigued due to on call activity, should notify the Executive Chief Resident and ask for relief. It is the duty of the senior most resident to locate and assign a healthy, rested resident to cover if someone is ill or excessively fatigued.

Duty Hour Scenarios

1. **Required** research within a program counts as work.
2. Using the library for research/presentation work does not count as work if done after the work day has been completed.
3. Official conference attendance, irrespective of the department/origin of the conference, counts as a structured learning experience, or work.
4. Taking a course **required** for the completion of a training program counts as work. Taking a course **not** required for the completion of a training program does not count as work.
5. Research **required** by a program that must be done on site counts as work.
6. Reading/computer work, etc. done at home does **not** count as work.

The following policies have been implemented to ensure full compliance with work hours regulations:

All Orthopaedic Faculty have been instructed that **only one resident can be in the OR for elective cases at a time** unless (1) it is not physically possible for the attending and a single resident to complete the procedure or (2) the additional resident is not needed anywhere else and the case is a good educational experience. On ED call, only one resident should be scrubbed on a case unless it is not possible or safe for the attending and a single resident to do the procedure. Therefore, for routine cases such as an ankle fracture, hip fracture, wash-out, forearm fracture etc., attendings cannot require multiple residents. Complex multi-trauma is an exception to this rule. The chief residents are empowered to decide which resident participates in the cases on call.

All residents are limited to an 80 hour work week, averaged over a four-week period. If a resident believes that he or she may have violated the work hour policy, including the 10 hours between work duty periods, the resident must report the infraction to the Education Administrator within 24 hours of the event. The Education Administrator, Residency Program Director, and the Department Chair will carefully evaluate each infraction to ensure that systems are in place that provide 100 percent compliance with the work hour policies.

Institutional Oversight/Monitoring of Resident/Fellow Duty Hours

All new trainees are instructed regarding the institution's duty hour policies at general and program-specific orientation sessions.

Full descriptions of institutional policies regarding duty hours, monitoring activities and moonlighting are available to all trainees and faculty via the GME website.

Twice yearly, the GME office will conduct an internal audit of all trainees in ACGME/ABMS sponsored programs within the University. This is mandatory for every resident and fellow.

What you need to know about IPRO's Post-Graduate Trainee Work-Hour Survey:

The New York State Department of Health has informed all training programs within NYS that unannounced visits will occur on at least an annual basis for all training institutions. The University of Rochester and its trainees will participate fully in this NYS monitoring process.

The review process includes, but is not limited to:

- ◆ A face-to-face interview with post-graduate trainees (including fellows). IPRO will contact you to set up a 10-15 minute confidential interview regarding your work hours.
- ◆ Interviews with program directors, coordinators and/or other facility personnel
- ◆ Document review of medical records, operating room logs, birth/delivery room logs, emergency department logs and records. Collection of call, rotation, clinic, academic and other schedules.

The primary role of the on-site survey team in this process is to gather information specific to this hospital. The hospital's compliance is ultimately determined by the New York State Department of Health. All information is confidential.

MOONLIGHTING POLICY

Moonlighting is NOT permitted by trainees in the Department of Orthopaedics and Rehabilitation.

Residents who feel that they cannot cope with personal expenses should meet with the Program Director to have a confidential discussion.

DUTIES OF THE CHIEF (PGY5) RESIDENT

The Chief Residents (PGY-4 and 5) are directly responsible to the attendings on each of the services.
Specific Duties are:

Supervise patient care and operating room procedures.

Round with junior residents and attendings.

Take night call in rotation with other chief residents.

Admit and supervise care for "staff" patients from the Emergency Room, the Orthopaedic Community Care Clinic or from consultations, in conjunction with the supervising attending.

Supervise Emergency Room care when on call; including review of records and x-rays of patients treated by the assistant or associate resident for that particular on-call period, in conjunction with the on-call attending.

Coordinate and direct the junior residents to provide service with minimal delay to ED patients.

Be in attendance at all emergency or semi-emergency operative procedures when on call.

Participate in the Orthopaedic Community Care Clinic with the attending orthopaedic surgeon. With increasing use of ASC and SDA surgery, this is an important part of the educational experience, and is mandated by the Residency Review Committee (RRC)

Communicate regularly with the Staff Clinic Secretary

Organize conference schedules for Basic Science and Pathology, Anatomy, Adult, Pediatrics, Sports, Hand, Spine, Foot/ Ankle, Trauma, Indications QA and Complication Rounds, Grand Rounds, and 7:15 a.m. fracture conference.

Supervise the preparations for all conferences and for Grand Rounds.

Participate in the clinical education of the orthopaedic junior residents and students.

Present Indications/Problems and Complications, and Quality Assurance conferences throughout the year.

Guide and lead monthly resident breakfast to address current problems and follow up with the Residency Program Director on these issues.

Supervise work hours for junior residents of department making sure NYS 405 regulations are followed and notify attendings of any problems in this area.

The R5 class will assign the following duties amongst themselves:

Orthopaedic Community Clinic Liaison

Sports Coverage (Game assignments)

Call, Schedule/Vacation

Journal Club

Lecture Schedule

The chief resident assigned to Spinal Surgery Division will evaluate consultations regarding patients with spine problems or injuries. An active role is expected in medical student instruction.

The disaster call chief resident is responsible for backup for surgery or the ED, when determined by the attending on call to be needed.

DUTIES OF THE EXECUTIVE CHIEF RESIDENT

Each resident will serve as the Executive Chief Resident while assigned to the Pediatric service and is directly responsible to the Chair of the Department and Program Director. The ECR will provide oversight of all resident scheduling working closely with the Program Director.

Specific duties are:

Operating Room Schedules - Responsible for assigning resident, nurse clinicians, and physician assistants to be certain that each operating room is covered and that staff clinic is covered by adequate numbers of residents.

Prepare and distribute to attendings, fellows and residents weekly schedule of conference topics and presenters.

Supervise and help staff at all outpatient clinics.

Arrange for vacation and meeting schedules, with the final approval of the Program Director of the Department.

Maintain communication between the Program Director and the residents.

No faculty member is to unduly pressure or coerce the ECR into making favorable scheduling decisions.

DUTIES OF THE PGY2 AND PGY3 RESIDENTS ASSIGNED TO SMH

The PGY-2 is responsible to the chief resident and attending surgeons on the various Divisions. Duties are, in part:

- ◆ The primary care of patients on the service.
- ◆ Daily work-rounds on the patients and accompanying the attending and chief resident on rounds. Work rounds are to be completed prior to surgery. Appropriate notes in the patients' charts are to be made at that time.
- ◆ To see all orthopaedic consultations in the ED and emergency consultations in the house with the private attending or the appropriate chief resident on call for private and staff cases respectively.
- ◆ To participate actively in the Emergency Department (see paragraph on ED). The primary duty of the associate resident on ED is first to the musculoskeletal patients in the Emergency Department. The ED resident is not to participate in the operating room. The ED resident will also be responsible for presenting to selected attendings and all SMH residents all orthopaedic x-rays from the ED for the previous weekday each weekday morning at the 7:15 A.M. Fracture/ED Sign-Out Conference.

Changes must be appropriately noted on amion.com as soon as they are made. One R3 resident will be assigned the responsibility of the call schedule which must be approved by the chief resident and posted on amion.com.

When on backup call for OR, residents participate in trauma cases until they are at allowed hours (work hour regulations).

The on-call resident is responsible for rounding on all post-operative patients who have not been seen by the patient's primary team of residents. This includes examining all patients operated on that day or receiving casts or other procedures and making appropriate entries into the charts, indicating and insuring the well-being of the patients.

The second on-call resident is to be involved if there is any delay of more than one hour in carrying out the above duties.

Before calling the attending on call, the PGY2 or PGY3 is to consult the Chief resident on call regarding a patient in the ED, when the ED patient is in need of a procedure in the ED or is to be admitted for surgery. The chief resident or junior resident is to call the attending after he/she has fully evaluated the patient.

Inform the chief resident on call of all emergency private assigned or staff admissions to the individual division before admission is arranged. All emergency surgery on staff patients should first be cleared with the chief resident on call and the responsible attending, who will both be present at surgery. It is

the chief resident's responsibility that the attending orthopaedic surgeon has knowledge of the staff patient preoperatively and is available in the operating suite during the operative procedure.

Before leaving each day, each resident should sign out to the resident on night-call and provide complete information about existing or anticipated problems on the service. It is necessary to check the 5-3400 clipboard the first thing each morning for admissions and messages.

- ◆ Help supervise the training of Surgery interns and medical students by providing practical training in ward procedures for Orthopaedic and fracture treatment.
- ◆ Attends all clinics unless otherwise assigned by the Executive Chief Resident.
- ◆ Assists with all cases in the O.R. The assigned PGY2 or PGY3 should be in the O.R. in time to insure adequate preparation. The PGY2 or PGY3 will assist and supervise changeover between cases in order to expedite the day's schedule.
- ◆ Responsible for seeing the x-rays are always available in the O.R. and appropriate films up on the view box or computer.
- ◆ Review at least weekly with the health team on each floor the medications and treatments for the patients.
- ◆ Contact the appropriate social worker each morning to alert him/her about any admissions the previous day so the disposition may be formulated. Discharge summaries for all patients and transfer summaries are to be dictated promptly. Disposition of patients is to be aggressively pursued.
- ◆ Charts are to be signed off and the Discharge Summary dictated prior to discharging the patient. Notifications about work statements and incomplete charts from the Record Room should be promptly pursued and charts completed.
- ◆ Note that the nurse clinicians and physician assistants may help with some admissions, but all residents are expected to be familiar with the history, have done an orthopaedic exam, have seen the x-rays, and read about procedures on all patients for whom they scrub.
- ◆ Meet with the social services team and nursing staff at least weekly for disposition planning to organize discharge planning and placement for orthopaedic patients.

The PGY2 or PGY3 is expected to further an understanding of orthopaedic principles and techniques through intelligent questioning and work in the library. Thorough study, familiarity with each patient, and preparation prior to each operation is mandatory.

RESIDENTS ASSIGNED TO HIGHLAND HOSPITAL

During the PGY 3 and 4 years of the orthopaedic residency program, each resident will have rotations to Highland Hospital. The residents are responsible for the care of the orthopaedic patients, preparation of conferences and rounds, and the teaching of medical students, surgical residents and interns in the various hospitals. The residents must be available for emergency operative procedures that are assigned to part-time faculty.

The residents must not scrub with attendings that are not on the part-time faculty of the Department of Orthopaedics and Rehabilitation. Supervision by non-faculty attending during inpatient or ED care?

The residents will be responsible for preparing and presenting occasional Grand Rounds during the academic year in addition to organizing and presenting conferences at Highland.

The staff service orthopaedic outpatient clinic will be the primary responsibility of the orthopaedic residents. Night call will be covered in conjunction with the other orthopaedic residents assigned to rotations at Highland Hospital.

GENERAL PRIORITIES OF RESIDENT ASSIGNMENTS

1. Inpatient emergencies
2. Emergency Department backup
3. Surgical Assisting -**ONE RESIDENT PER CASE** unless special circumstances necessitate additional help, as determined by the Executive Chief Resident
4. Pre-ops - when possible, the resident will be assigned who will cover the case in the O.R.
5. Staff clinic
6. Scheduled inpatient work (i.e. - casts, procedures)
7. Attending clinics
8. Routine inpatient work (i.e. - dressing changes, paperwork)

EMERGENCY DEPARTMENT SMH

The duties of the resident in this capacity are to direct the care of all patients entering the ED with injuries or abnormalities which are associated with the musculoskeletal system. The assignment in ED is both service and educationally related. First, all efforts should be made to expedite the care of patients so that long waiting periods may be avoided. The second on-call resident must be called in if there are any delays. There is no justification for a patient with a fracture or a sprain to wait more than thirty minutes for care from the time an Orthopaedic resident is notified of the consultation. **All patients must be seen by the orthopaedic resident prior to discharge from ED and the referral made by the orthopaedic resident, who will subsequently notify the appropriate attending. A note by the orthopaedic resident must be in the ED chart. The front sheet must be signed by the orthopaedic resident.** Minor injuries which do not require the attention of an orthopaedic surgeon should be reviewed and referred back to the patient's primary physician. If the patient has a minor injury but no family doctor, he should be given the name of a physician in this area who can furnish this service for him.

Patients without insurance and Medicaid patients, shall be cared for by the chief resident on call that day with appropriate attending involvement. The patient will be given the choice of follow-up care either at SMH or other Orthopaedic clinics in Rochester.

During daytime working hours (6:00 A.M. to 6:00 P.M.) the full-time faculty ED on call schedule is utilized for coverage of private Emergency Room patients. Every patient with a fracture, dislocation, possible major ligamentous injury, or other major injuries of an orthopaedic nature will be seen by the orthopaedic resident, who will, in turn, contact the chief resident before contacting the full-time attending on call. If the specific attending is in the operating room that day or is otherwise unavailable, another of the full-time faculty will be contacted.

During the 6:00 P.M. to 6:00 A.M. period, all private patients will be referred to the Orthopaedic attending on call during these hours, after being treated by the on call resident, unless the patient specifically requests otherwise. All significant injuries should be discussed with the chief resident on call, and in turn with the attending. All x-rays should be reviewed by the chief resident on call at the end of the on-call period.

Patients with hand injuries or spine injuries should be referred to the chief resident on call and the appropriate Hand or Spine Fellow. The attending must be called in regards to such admission. All complex hand, spine, and spinal cord injury problems through the Emergency Department will be supervised by the Hand and Spine Fellows, respectively, who should be notified of the patient's injuries by the chief resident after he/she have reviewed the case with the PGY2 in the ED. Soft tissue disruptions of the knee should be referred to the Sports Fellow and let the Sports Fellow arrange follow-up.

In the absence of the Fellow in Hand, Spine, or Sports, the corresponding chief resident assigned to that Division will assume those above responsibilities. As with all ED patients, the orthopaedic attending is responsible and is to be contacted.

Patients requiring surgery should be discussed with the chief resident and the attending (see highlighted paragraph on page 5). Arrangements should be made expeditiously with the OR explaining the degree of urgency. At night the second on-call PGY2 and the chief resident will assist the attending in the OR and the first on-call PGY2 will continue with the duties in the ED to ensure continuity of care.

If the ED load is such that patients cannot be cared for within 30 minutes of consulting Orthopaedics, i.e. to have been seen and care initiated, the PGY2 should be able to obtain immediate help from the second resident on call and/or the chief resident. If the Orthopaedic resident assigned to the ED is not present between 6 A.M. - 6 P.M. the Orthopaedic resident on that night shall cover.

At all times, the chief resident on call shall be available to assist and direct the care of patients in the Emergency Room.

OPERATING ROOM

The orthopaedic residents will be in the OR and changed into OR attire by 7:30 A.M. (except 8:15 A.M. on Thursday).

The Emergency patients should be booked with the OR staff and the Anesthesia Department only when all pertinent work-ups have been completed. The information provided should be detailed and complete.

CONSULTATIONS

All orthopaedic consultations requests shall be telephoned to the Orthopaedic ED resident. The Orthopaedic ED resident will see the patient, evaluate the situation and in turn, refer the consultation and continued evaluation to the appropriate attending who will see and confirm the findings, diagnoses, and treatment plan. A member of the full-time faculty should be contacted according to the full-time faculty office on call schedule or specific sub-specialty (for spine, hand, sports) on call schedule. If the patient is a staff patient, (after the Orthopaedic ED resident has evaluated the patient and written recommendations), the appropriate staff service team and Chief Resident will be notified, and follow-up will take place on this particular team, in conjunction with the responsible attending. All consultations should be seen on the day the consultation request is received or within 24 hours at the latest.

ORTHOPAEDIC SURGERY CASE LIST

The Residency Review Committee (RRC) and the American Board of Orthopaedic Surgery require that Orthopaedic residents keep a **contemporaneous** list of the case in which they participate either as assistant or as surgeon under the direction of faculty members. In order to facilitate this recordkeeping, all residents are to log their operative case log using the ACGME website, <http://www.acgme.org>.

It will be absolutely impossible to complete these retrospectively. The residents are urged to log these in on a daily basis, with one set of logs for each week. The Program Director will review case lists for each resident twice per year as part of the six month evaluation process.

Failure to complete these and failure to provide a copy for the Department Office at the end of the year will mean that we will be unable to credit the resident for that year of training, and furthermore, may leave the resident unable to take their Boards if they cannot provide this type of record, should the Board so request it.

ORTHOPAEDIC COMMUNITY CARE CLINIC

Attendance at this Clinic is mandatory for all residents who are not in the operating room. The administrative chief resident has the authority to pull residents from the operating room to attend the clinic. The Clinic is held every Thursday at Noon. An attending is assigned to cover each clinic to provide direction and consultation as needed.

An attempt should be made to provide continuity of care by the orthopaedic residents in seeing the same patients on return visits, both in the Clinic and in the private office. This is expected to be a learning experience and discussion with chief residents and attendings at the Clinic is encouraged.

MEDICAL STUDENTS

Residents will have contact with the medical students in several areas and are expected to serve as teachers and role models:

1st year - in conjunction with the full-time faculty in the anatomy dissections with the students.

2nd-3rd year - in conjunction with the full-time faculty in the physical diagnosis and the clinical clerkship courses.

3rd and 4th year – clinical electives.

Chief residents and research residents may be asked to teach clinical teaching modules for 1st and 2nd year students.

R. PLATO SCHWARTZ LIBRARY

It is the responsibility of all users to maintain the general order and cleanliness of the library. One resident will be asked to volunteer for a one year term, to be responsible for the upkeep and maintenance of the library. This resident will have clerical support for this responsibility. Suggestions for the purchase of new books and journals are welcome and should be directed to the Department Coordinator. Electronic materials and books are to be signed out by Dr. Elfar's secretary. Residents are responsible for lost and stolen A/V equipment.

CONFERENCES

Orthopaedic grand rounds will be held on the first Thursday of each month from September-June, from 7:00 – 8:00 A.M in Room K-207. Attendance is mandatory for all residents.

Conferences are held Monday, Tuesday, Wednesday and Friday from 6:30 – 7:15 A.M. and once on Thursday 7:00 - 8:00 A.M. Attendance is mandatory for all residents on all services at SMH. Fracture Conference to review ED patients from the prior night is held from 7:15 - 7:30 A.M. each morning, except Thursday 8:00 - 8:15 A.M.

Residents at the Highland Hospital are to attend conferences at that hospital and must also Grand Rounds, Basic Science and Pathology Conference, Journal Club, and all Anatomy Sessions.

Conference Schedules are distributed to all residents and attendings on a monthly basis and a schedule is also posted on the bulletin board adjacent to the Schwartz Library.

Basic Science course and Pathology: This course is designed to provide in-depth presentations of basic science information necessary for the training of orthopaedics. The curriculum includes topics covering basic anatomy, pathology, histology, physiology, biochemistry and biomechanics, pathology, molecular and cellular biology, pharmacology, as well as selected disease processes and other miscellaneous topics. These conferences meet Thursday 7:00-8:00 A.M. each week in the R. Plato Schwartz Library. Attendance is mandatory for all residents in the program.

Other conferences include Spine, Pediatrics, Adult Reconstruction, Sports, Hand, Trauma, Foot and Ankle.

During the summer months of July and August conferences will be held each morning at these same times, but with a different curriculum. The focus will be on introduction to the basics of the Orthopaedic examination and Orthopaedic care, with an emphasis on musculoskeletal emergencies.

A regular curriculum with a reading list will be followed for all conferences (July through June). The residents are expected to attend all conferences and to be up-to-date on the course materials.

Athletic Medicine Program: Orthopaedic residents are to take an active part in the Athletic Medicine program at the University of Rochester. This includes participation in athletic physical examinations, the Athletic Medicine Clinic, attendance at games and other athletic functions. This program will be arranged by Dr. Bronstein, Dr. DeHaven, Dr. Maloney, Dr. Rouse, the Sports Fellow, and the Service chief resident.

The attendance of each resident is mandatory at each 6:30 AM Conference, at monthly Grand Rounds. Each resident MUST sign in on the attendance sheet provided at conference. The Executive Chief Resident is then responsible for turning in the completed attendance sheet at the end of conference, to the department office. If a resident arrives to a conference that has already begun, they will not be permitted to sign the attendance sheet until speaking with the attending conducting the conference.

Repeated tardiness or missed conferences will result in the removal of one week of vacation from the resident. The only authorized excuses will be for such as:

- 1) *Rendering treatment in the emergency room for a life threatening or limb threatening condition;*
- 2) *Attending to an inpatient care problem which is limb threatening or life threatening;*
- 3) *Scrubbed as the only assistant on a case in the operating room.*

GUIDELINES FOR RESIDENT THESIS

All residents must write and successfully defend a formal thesis as one of the requirements to complete the residency program.

FACULTY SUPPORT:

The Faculty support (i.e., co-authors) may be full-time and/or part-time faculty. Collaboration is encouraged. A list of current full-time and part-time faculty projects will be kept in the Department Office at the University.

RESEARCH PROJECT AS BASIS OF THESIS:

The thesis may be based upon either basic science or clinical studies. If a clinical study is selected, it may be either prospective or retrospective. If prospective, in order to gain adequate follow-up, the resident may need to join in an on-going study already initiated by a faculty member. A case report is not acceptable. A review of the literature is not acceptable.

QUALITY CONTROL:

Quarterly reviews of progress (or more frequent) are expected with collaborating faculty member.

The preliminary presentation of the thesis will be presented one year prior to graduation as part of the R. Plato Schwartz lectureship.

The thesis (study) must either be accepted for publication in a refereed journal or already submitted to a refereed journal.

The thesis (study) must be presented and defended at the Orthopaedic Alumni Scientific Symposium* (in June of the final year of training) in front of full-time faculty, part-time faculty, resident peers, and the Plato Schwartz Visiting Professor.

ILLNESS

If a resident is unable to work as scheduled due to illness or injury, they are to notify the ECR or the chief resident on call. Any resident who is fatigued due to On Call activity or who has been continuously working greater than 24 hours should notify the Executive Chief Resident and ask for relief. It is the duty of the senior most resident to locate and assign a healthy rested resident to cover for someone ill or excessively fatigued.

In the event of an emergency, illness, or unplanned day out, the resident must speak directly with the Program Director, the Assistant Program Director, or the Chairman as well as the Residency Coordinator. The office will then inform the Administrative Chief and service of the unplanned absence and needed accommodations.

To be eligible for Part I of the Board Exam, at least 46 weeks of orthopaedics training must take place each residency year. Any time out of the program in excess of 6 weeks per year must be made up before the resident is eligible to graduate and sit for the board exam.

MEETINGS AND VACATION POLICY

All requests for travel, educational courses, academic time and unplanned time must be approved by the program director and reported to the Education Office before the time can be taken.

Academic Travel Guidelines

Residents are encouraged to present papers and/or posters at national meetings. All requests for travel must be approved by the Program Director.

A paper or poster can be presented at one of the following Orthopaedic professional societies such as:

- ◆ AAOS
- ◆ AOA
- ◆ Scoliosis Research Society, Cervical Spine Research Society
- ◆ American Society for Surgery of the Hand
- ◆ American Orthopaedic Society for Sports Medicine
- ◆ Orthopaedic Trauma Association
- ◆ The American Orthopaedic Foot & Ankle Society
- ◆ American Society for Bone and Mineral Research
- ◆ The Orthopaedic Research Society
- ◆ The Eastern Orthopaedic Association
- ◆ American Society for Shoulder and Elbow Surgery, Arthroscopy Association of North America
- ◆ Or a meeting approved by the Program Director

The department will provide funding for each resident to attend one AO Basic Fracture Course or OTA Fracture Course during their PGY 2 or 3 year. The time away will be taken out of the resident's academic days.

Reimbursement for Travel

Reimbursement for travel and accommodations will be made by the Department of Orthopaedics and Rehabilitation for travel related to the initial presentation of a paper or poster at a meeting in the Continental US or Canada. There is no reimbursement for rental cars unless approved in advance by the program director.

Educational Courses

The time spent at a board review course or other educational courses will not be reimbursed by the Department and must be taken as vacation time.

National Meetings

Each PGY 4/5 is entitled to attend either the annual AAOS meeting or a Board Review Course for a period of 5 weekdays during either their PGY4 or PGY5 year. Reimbursement for travel and accommodations will be made by the department. Each resident will be provided a budget of \$200 to be used towards the cost of educational courses at the meeting. The time spent at this meeting will count towards the 10 day academic travel time annual allocation.

Academic Travel Time

Time spent at an approved meeting is not to exceed three weekdays (with the exception of the AAOS meeting) and is not considered vacation time. Each resident is eligible for annual academic travel time of 10 weekdays each academic year. If additional meeting time is approved, vacation time will be used and expenses will not be reimbursed by the Department.

Vacations

PGY 1 residents receive 3 weeks of vacation per year. One week of vacation is scheduled by the Department of Surgery and the remainder will be scheduled by the Education Office. No vacation can be taken during the Radiology/ Anesthesiology rotation or while on Orthopaedic rotations.

PGY 2-5 residents receive 4 weeks vacation per year. The vacation schedule is developed in May of each year through the Chief Resident with the approval of the Program Director. Vacation time starts after patient care rounds on Friday afternoon. All medical records/dictations are to be complete before starting vacation.

No vacations are allowed during June or July. Chief residents may not take vacation during the first two weeks of June. Special circumstances may be considered as an exception to this rule but must be approved by the Program Director. There will be no vacations allowed during the week of the annual AAOS meeting or the Schwartz Lecture.

In the event of an emergency, illness, or unplanned day out, the resident must speak directly with the program director and notify the Education Office. The resident will also inform the administrative chief and service of the unplanned absence.

Weekdays spent interviewing for post-residency positions or fellowships is considered vacation time or academic time.

Approved 12/9/08

Effective 6/26/09

Revised 9/21/09

Revised 5/5/2011

BOOK POLICY

All first year residents will be provided with the following general Orthopaedics textbooks at the beginning of the residency:

Hoppenfeld's Surgical Approaches
Orthopaedic Basic Science
OKU General Orthopaedics 10
Lovell and Winter's Pediatric Orthopaedics
Rockwood and Green's Fractures in Children
Rockwood and Green's Fractures in Adults
AOS Comprehensive Orthopaedic Review
One year subscription to JBJS

Each Division will select books for a library for use by the residents rotating on that service. Any electronic versions selected for division libraries will be provided to all residents.

The Plato Schwartz Library will have books for use by all residents at any time. Any additions to the library should be requested through Dr. Elfar.

Any requests for additional textbooks to be provided to all residents must be submitted to the Education Committee for approval.

Approved 12/9/08
Revised 3/22/11