

TRAUMA SERVICE GOALS AND OBJECTIVES

The PGY2 takes in-house call and is responsible for initial evaluation of all trauma patients seen in the emergency department, urgent care, trauma bay and during OR resuscitation. This resident manages all initial stabilization of fractures, including closed reductions, splinting, and traction. The junior resident is expected to recognize and initiate timely treatment of orthopedic emergencies. He is expected to evaluate consults in a timely manner and communicate the recommendations to the requesting service in a professional manner.

The more senior level residents take home-call and are responsible for close communication with the junior resident when on-call. Indications for nonoperative treatment and operative treatment are learned. Operative treatment of fractures involves all level residents. The residents are involved with more complex cases as their experience is advanced.

There is an outpatient trauma clinic at Hillcrest, which is created for follow up of non-urgent fractures seen in the emergency department. The resident is therefore involved with initial examination, history and physical, as well as planning treatment. Treatment options are discussed in clinic and implemented accordingly. The team is fortunate to have a daily Orthopaedic Trauma Room for 12 hours Monday through Friday. This allows for more cases to be done during the daytime, thereby increasing resident involvement and minimizing middle-of-the-night cases. Multi-system trauma patients are common at the University. There is a close working relationship with the general surgery trauma service, including weekly multidisciplinary in-patient review. Poly-trauma patients are usually managed by general surgery until their critical condition stabilizes. The orthopedic service rounds daily on all primary and consult patients and is closely involved with interdisciplinary care. In addition, there is a bimonthly combined general surgery orthopedic trauma conference where interesting cases are discussed.

Progressive responsibilities are granted to residents. Operative skills and principles of proper soft tissue handling, external fixation, internal fixation, intramedullary nailing, and soft tissue repair are learned and improved upon over the progressive rotations.

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.

Clinical Year 1 Residents are expected to:

- Learn and be proficient with musculoskeletal survey in poly-traumatized patients
- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their family members.
- Review patient's chart and clinical history, and be involved with initial reports from field personnel when indicated
- Be proficient with ATLS protocols
- Perform thorough history and physical exam

- Make informed decisions about diagnostic procedures 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.
- Participate in continuity of care of the patient, including preoperative assessment, discussion of treatment options (nonoperative and operative), postoperative assessment, inpatient rounds, and clinic follow up.
- Use information technology to support patient care decisions and patient education.
- Utilize electronic medical record to document information
- Competently perform basic orthopedic procedures including joint aspirations and injections, fracture reductions, splinting and casting, traction pins, and joint reductions.
- Participate in health care services aimed at preventing injuries, recognizing and potentially treating osteoporosis, and maintaining health work with health care professionals, including those from other disciplines, to provide patient-focused care

Clinical Year 3 Residents are expected to:

- Be proficient with musculoskeletal survey in poly-traumatized patients, including tertiary surveys after initial exam by junior resident. This is to be done on all trauma patients.
- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and family members.
- Review patient's chart and clinical history, and be involved with initial reports from field personnel when indicated. Guide junior resident when needed for more pertinent history.
- Perform and supervise a thorough history and physical exam
- Make informed decisions about diagnostic procedures 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.
- Participate in continuity of care of the patient, including preoperative assessment, discussion of treatment options (nonoperative and operative), postoperative assessment, inpatient rounds, and clinic follow up.
- Use information technology to support patient care decisions and patient education.
- Utilize electronic medical record to document information
- Competently perform and teach basic orthopedic procedures including joint aspirations and injections, fracture reductions, splinting and casting, traction pins, and joint reductions.
- Participate in more complex orthopedic procedures, such as operative treatment of long bone fractures, periarticular fractures, pelvic fractures, and open fractures.
- Ensure patients receive appropriate health care services aimed at preventing injuries ie ATV accidents, recognizing and potentially treating osteoporosis, and maintaining health work with health care professionals, including those from other disciplines, to provide patient-focused care

Clinical Year 4 Residents are expected to:

- Master and teach a musculoskeletal survey in poly-traumatized patients

- Communicate effectively as team leader with other services and demonstrate caring and respectful behaviors when interacting with patients and their family members.
- Be aware of all components of patient's chart and clinical history, and be involved with initial reports from field personnel when indicated
- Master and teach a thorough history and physical exam
- Make informed decisions about diagnostic procedures 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. Be able to perform an informed consent.
- Participate in continuity of care of the patient, including preoperative assessment, discussion of treatment options (nonoperative and operative), postoperative assessment, inpatient rounds, and clinic follow up.
- Use information technology to support patient care decisions and patient education.
- Utilize electronic medical record to document information
- Competently perform more complex orthopedic trauma procedures such as acetabular fracture exposures and fixation, complex pelvic fractures, including initial stabilization with external fixation in hemodynamically unstable patients, and understand treatment principles in nonunion and malunion surgery, as well as complex osteomyelitis.
- Provide health care services aimed at preventing injuries, recognizing and potentially treating osteoporosis, and maintaining health work with health care professionals, including those from other disciplines, to provide patient-focused care
- Act as a consultant to other services, as well as consulting specialty care such as infectious disease, vascular surgery, plastic surgery, and general surgery.

MEDICAL KNOWLEDGE

Residents must demonstrate knowledge about established and evolving biomedical, clinical, and basic sciences and the application of this knowledge to patient care.

Clinical Year 1 Residents are expected to:

- Understand non-operative treatment of common fractures
 - Indications for nonoperative treatment
 - Perform closed reductions
 - Type of immobilization/ cast/ bracing
 - Weight-bearing status
 - Time to union
 - Rehabilitation protocol
- Understand operative treatment of common fractures
 - Indications for operative treatment
 - Operative risks, benefits, possible complications
 - Assist and perform appropriate parts of operative fixation of common fractures, including humerus, forearm, femur and tibia.
 - Perioperative treatment
 - Antibiotic coverage
 - DVT prophylaxis
 - Postoperative protocol

- Time to union
- Salvage procedure for failed surgery
- Self-study for orthopaedic trauma by reading journals, books including but not limited to the Trauma Orthopedic Knowledge Update (OKU). A weekly review of one to two chapters of OKU will be held with the entire team.
- OITE review based on trauma topics
- Attendance and presentation at weekly fracture conference
- Attendance and presentation at bi-weekly combined general surgery trauma and orthopaedic trauma conference

Clinical Year 3 Residents are expected to:

- Understand non-operative treatment of common fractures
 - Indications for nonoperative treatment
 - Proper application of cast or splint, including proper molding
 - Perform and teach closed reductions
 - Weight-bearing status
 - Time to union
 - Rehabilitation protocol
- Understand operative treatment of common fractures
 - Indications for operative treatment
 - Operative risks, benefits, possible complications
 - Perform and teach operative fixation of common fractures, including humerus, forearm, femur and tibia.
 - Perioperative treatment
 - Antibiotic coverage
 - DVT prophylaxis
 - Postoperative protocol
 - Time to union
 - Salvage procedure for failed surgery
- Self-study for orthopaedic trauma by reading journals, books including but not limited to the Trauma Orthopedic Knowledge Update (OKU). A weekly review of one to two chapters of OKU will be held with the entire team. The clinical year 3 resident is expected to contribute to discussion.
- OITE review based on trauma topics
- Attendance and presentation at weekly fracture conference
- Attendance and presentation at bi-weekly combined general surgery trauma and orthopaedic trauma conference

Clinical Year 4 Residents are expected to:

- Teach non-operative treatment of common fractures
 - Indications for nonoperative treatment
 - Type of immobilization/ cast/ bracing
 - Splint and cast placement, including evaluation of post reduction xrays
 - Weight-bearing status
 - Time to union
 - Rehabilitation protocol
- Understand operative treatment of common fractures
 - Indications for operative treatment

- Operative risks, benefits, possible complications
- Perform and teach operative fixation of common fractures, including humerus, forearm, femur and tibia. Assist and perform appropriate parts of more complex surgeries, including acetabulum, pelvis, periarticular fractures, and non/ malunions
- Perioperative treatment
 - Antibiotic coverage
 - DVT prophylaxis
- Postoperative protocol
- Time to union
- Salvage procedure for failed surgery
- Self-study for orthopaedic trauma by reading journals, books including but not limited to the Trauma Orthopedic Knowledge Update (OKU). A weekly review of one to two chapters of OKU will be held with the entire team.
- OITE review based on trauma topics
- Attendance and presentation at weekly fracture conference
- Attendance and presentation at bi-weekly combined general surgery trauma and orthopaedic trauma conference

PRACTICE-BASED LEARNING AND IMPROVEMENT

Clinical Year 1, 3 and 4 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.
- 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
- Instill the importance of lifelong commitment to learning
- Preparation and presentation of cases at M&M, including presentation of relevant literature search, lessons learned from the complication, and how to avoid similar complications in the future.

INTERPERSONAL AND COMMUNICATION SKILLS

Clinical Year 1, 3 and 4 Resident will at all times demonstrate behavior that is beyond reproach. 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:

- Demonstrate honest, open, civil, and effective communication with patients, staff, and colleagues (medical students, residents, attendings).
- Utilize interpreters in order to assure patient understanding if language barriers exist
- Create and sustain a therapeutic and ethically sound relationship with patients
- Use effective listening skills.
- Elicit and 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

PROFESSIONALISM

Clinical Year 1, 3 and 4 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 in all interactions
- Evaluation of consults in a timely manner
- Accountability to patients, society, and the profession
- Commitment to excellence and on-going professional development
- Commitment to life-long learning
- Demonstrate a commitment to ethical and moral principles
- Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities
- Progressive responsibility from junior resident to chief resident level
- Serve as role models to more junior residents, medical students, and staff
- Incorporate feedback from patient evaluations and 360 degree evaluations for self-improvement
- Regular and active participation at grand rounds
- Communicating with patient families on rounds, for consents when necessary, and postoperatively
- Participation in AAOS/ ORS meetings as research residents and chief residents, sponsored by the Department
- Regular attendance at educational activities and committee meetings
- Compliance with hospital policies
- Prompt completion of medical records/ dictation

SYSTEMS-BASED PRACTICE

Clinical Year 1, 3 and 4 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
- Participation on utilization review/ discharge planning teams
- Proper use of PCIS and EPIC to gather data
- Proper use PACS (digital imaging), including templating for fracture management
- Proper and complete dictations for outpatients, consults, and operative reports
- Introduction to billing held at the beginning of the trauma rotation.
- Appropriate use of consultants including communication with them. Appropriate response to consultants, including timely evaluation of consults
- Chart review done by JCAHO members and internal review