

HAND/ UPPER EXTREMITY SERVICE

The Accreditation Council for Graduate Medical Education requires the educational program to provide a curriculum that must contain the following educational components to its Trainees; overall educational goals for the program, competency-based goals and objectives for each assignment (at each education level), delineation of responsibilities for patient care, progressive responsibility for patient management, and supervision of residents over the continuum of the program.

As required by the ACGME, please find enclosed overall educational goals for the program, service competency-based goals and objectives, and delineated lines of responsibility.

- Goals and Objectives
 - Overall Educational Goals for the Program
 - Service Competency-based Goals and Objectives
 - Patient Care
 - Medical Knowledge
 - Practice-based Learning and Improvement
 - Interpersonal and Communication Skills
 - Professionalism
 - Systems-based Practice
- Delineated Lines of Responsibility
 - Outpatient
 - Inpatient
 - Operative
- Supervision
 - Purpose
 - Definitions
 - Attending Physician Responsibilities
 - Graduate Medical Trainee Responsibilities

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OVERALL EDUCATIONAL GOALS

The Duke Orthopaedic Program enables the orthopaedic trainee to obtain adequate clinical and surgical skills in all areas of orthopaedic surgery for medical practice in the specialty in either an academic or community practice. This training occurs over a five-year period and is hospital based and defined by a curriculum that includes patient care on the wards, in the clinics, in the emergency department, and in the operating room. Progressive responsibility is accomplished in keeping with individual knowledge, skills and performance, always stressing safety and appropriate care of patients. Faculty members provide daily and continuous supervision, which is a mainstay of the Program. The faculty members' full time clinical practices are on site, and rotation assignments are arranged so that trainees have experience in all subspecialty areas of orthopaedic surgery. Research opportunities abound, with most of the faculty involved in laboratory and clinical research and providing guidance for project selection, completion, and adequate funding support. Ongoing and continuing medical education is assured and accomplished by at least eight hours of teaching conferences each week, attended by faculty, trainees, students and allied health personnel. The Duke orthopaedic trainee has daily and continuous contact with the faculty in the clinics, operative theater, ward rounds, teaching conferences, and individual rotation conferences.

Success is monitored by faculty observance of clinical performance, faculty evaluations on each resident every three months, weekly presentations at conferences, performance on yearly in-training examinations, success in obtaining top post-training fellowships, and performance on specialty Board examinations. Each Chief Resident must complete a written thesis on an orthopaedic topic, which is presented and judged at a symposium prior to graduation from the Program.

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GOALS AND OBJECTIVES

Patient Care

Junior Resident(s) (PGY-2/ PGY-3):

- Able to perform a thorough and accurate history and physical examination for a patient seen for Hand/Upper Extremity complaints. This includes the history of the chief complaint, history of injury, and the mechanism of injury, past medical and surgical history, as well as social history.
- The physical examination should include an exam for the identification of peripheral nerve compression at the carpal, cubital, and radial tunnels, common tendinitis/tendonopathies (DeQuervain's tendinitis, ECU tendinitis, or A-1 pulley stenosis) as well as the presence of arthritis (CMC arthritis, PIP, DIP, or MCP arthritis).
- Effectively able to evaluate the following conditions via a thorough history and physical examination and to perform most or all of their corrective surgical procedures:
- Arthritis of the thumb-carpometacarpal joint, animal bites, carpal tunnel syndrome, DeQuervain's tenosynovitis, extensor tendon injuries, fingertip and palmar infections, fingertip injuries and amputations, fractures of the metacarpals, infections of the flexor tendon sheath, ganglion of the wrist and hand, human bites, mallet finger, sprains and dislocations of the CMC, MCP, and PIP joints, static carpal instability, trigger finger, and cubital tunnel syndrome.
- Competent in developing initial management plan for patients with hand-related injuries and/or other complaints.
- Demonstrates knowledge and application of knowledge of non-operative treatment, which includes anti-inflammatories, hand therapy, applications of heat and cold as well as basics of splinting.
- Able to perform simple invasive procedures for patients with hand-related complaints such as injections of trigger-finger, carpal tunnel, and base of thumb arthritis at the CMC joint.
- Demonstrates the ability to perform commonly-encountered surgical procedures in hand surgery such as carpal tunnel release, trigger finger release, release of first dorsal compartment for DeQuervain's tenosynovitis and excision of dorsal/volar carpal ganglion.

Senior Resident(s) (PGY-4/ Chief Resident PGY-5):

- Able to perform a thorough and accurate history and physical examination for a patient seen for Hand/Upper Extremity complaints. This includes the history of the chief complaint, history of injury, and the mechanism of injury, past medical and surgical history, as well as social history.
- Able to responsively and effectively demonstrate expertise in the finer points of hand and wrist history and physical examination, in addition to properly ordering the necessary radiographic evaluations, most appropriate to the differential diagnosis and perform appropriate algorithms (treatment plan) based on the patient and the diagnosis of the following conditions:
- All conditions described at the junior resident(s) level and arthritis of the hand, boutonniere deformity, Dupuytren's disease, flexor tendon injuries, fractures and malunions of the distal radius, fractures of the scaphoid, osteonecrosis of the carpus, fractures of the phalanges, fractures of the base of the thumb metacarpal, tumors of the hand and wrist, dynamic carpal instability, hand in cerebral palsy, the stroke hand, tendon transfers for radial and combined median-ulnar nerve paralysis, treatment of the rheumatoid hand, including thumb MP arthrodesis and MCP interposition arthroplasty, basic wrist arthroscopy, ulnar-sided wrist pain and instability and radial tunnel syndrome.

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Medical Knowledge

Junior Resident(s) (PGY-2/PGY-3):

- Possesses and understanding of the scientific basis of the diagnosis and treatment of commonly-encountered hand conditions.
- Demonstrates knowledge of the indications for basic surgical procedures in hand surgery such as carpal tunnel release, trigger finger release, release of the first dorsal compartment, and excision of dorsal and volar ganglion.
- Demonstrates knowledge of non-operative treatment, hand therapy, application of heat and cold as well as the basics of splinting.
- Demonstrates familiarity and understanding of reading materials described in diagnosis and treatment of carpal tunnel, trigger finger, tendonopathies, and thumb base arthritis.
- Has successfully completed and mastered the concepts outlined in the OKU Subspecialty Series: Hand Surgery.
- Has successfully completed the OKU Subspecialty Series Self-Assessment Examination: Hand Surgery.
- Has successfully read and understand the principles and concepts outlined in the Hand/Upper Extremity Reading Reference List.

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GOALS AND OBJECTIVES

Practice-based Learning and Improvement

Junior Resident(s) (PGY-2/PGY-3):

- Prepares for and attends the weekly Hand/Upper Extremity conference.
- Prepares for and attends the Hand Journal Clubs.
- Demonstrates proficiency in using on-line search engines to locate and assess appropriate educational materials and peer-review reference articles relevant to individual patient care.
- Able to locate, appraise, and assimilate evidence for past and ongoing scientific studies related to specific patient health issues.
- Able to use information technology and manage information access on-line medical information to support his/her education.
- Able to obtain and use information about his/her patient population and the larger population from which patients are drawn.
- Able to apply knowledge of study designs and statistical methods to the appraisal of clinical studies.

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Interpersonal and Communication Skills

Junior Resident(s) (PGY-2/PGY-3):

- Demonstrates communication skills that result in effective information exchange with patients, their families, and caregivers, and other physicians and members of the health care team.
- Creates and sustains a therapeutic and ethically sound relationship with patients and their families.
- Able to effectively use listening skills in communication with all parties involved in inpatient care.
- Able to effectively provide information via various methodologies and technologies.
- Able to work effectively with other members of the team, specifically medical assistants, fellow residents, and hand therapists.

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Professionalism

Junior Resident(s) (PGY-2/PGY-3):

- Demonstrates a commitment to carry out professional responsibilities, and adherence to ethical principles and standards and sensitivity to diverse patient populations.
- Demonstrates professionalism and responsiveness to patient's sensitivity to age, culture, gender, and disabilities.
- Understands and demonstrates the ability to obtain an informed consent from a patient, which includes presentation of the natural history of both surgical and nonsurgical care of the patient's condition.
- Demonstrates an understanding of the value and importance of patient confidentiality.
- Demonstrates appropriate conduct in the timely completion of dictated operative notes, chart operative summaries and discharge summaries, as well as clinic notes.

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Systems-based Practice

Junior Resident(s) (PGY-2/ PGY-3):

- Demonstrates competency in coordinating all aspects of perioperative and postoperative rehabilitation and physical therapy.
- Has an understanding of various health funding systems including private insurance, Medicare, Medicaid, Workers Compensation, and Vocational Rehabilitation.
- Demonstrates an understanding of how patient care and other professional practices affect other health care professionals, health care organizations, and the large society and how these elements or systems affect one's own practice.
- Practices cost-effective health care and resource allocation that does not compromise quality of care.
- Has the opportunity to practice medicine in various health care systems, include an academic teaching hospital, Veterans Administration Hospital, community hospital, pediatric orthopaedic hospital, and community health department.
- Demonstrates understanding of the impact of correct coding during patient office visits and surgery.
- Effectively partners with health care managers and health care providers to assess, coordinate, and improve health care, and know how these activities can affect system performance.

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DELINEATED LINES OF RESPONSIBILITY

Outpatient

Junior Resident(s) (PGY-2/PGY-3):

- The Junior Resident(s) will see patients with attendings in the Hand/Upper Extremity Clinic.
- Duties will include pre and postoperative evaluation of patients, preoperative work-up of patients, follow-up evaluation of operative patients and management of non-operative hand and upper extremity problems.

Senior Resident(s) (PGY-4/ Chief Resident PGY-5):

- The Junior Resident(s) will see patients with attendings in the Hand/Upper Extremity Clinic.
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Inpatient

Junior Resident(s) (PGY-2/PGY-3):

- Junior Resident(s) responsibilities include floor rounds twice daily on patients admitted through the Hand and Upper Extremity Service.
- The activities of the Junior Resident(s) are supervised by the Senior Resident(s) and/or the Attending Orthopaedic Surgeon

Senior Resident(s) (PGY-4/ Chief Resident PGY-5):

- The Senior Resident(s) will assist the Junior Resident(s) with inpatient rounds and report in coordination with the Junior Resident(s) to the Attending Orthopaedic Surgeon as appropriate.

Operative

Junior Resident(s) (PGY-2/PGY-3):

- In the operating room, the Junior Resident(s) is responsible for assisting the attending orthopaedic surgeon.
- The Junior Resident(s) will perform appropriate portions of the surgical procedure as directed by the attending orthopaedic surgeon and under the direct supervision of the attending orthopaedic surgeon.

Senior Resident(s) (PGY-4/ Chief Resident PGY-5):

- The Senior Resident(s) responsibilities in the operating room include assisting the attending orthopaedic surgeon in all aspects of orthopaedic care.
- The actual performance of all or part of the operative procedure will be accomplished under the direct supervision or semi-independently in those situations deemed appropriate by the attending orthopaedic surgeon.

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SUPERVISION

Purpose

- The training of graduate medical trainee physicians is a core mission of Duke Hospital, the Duke University School of Medicine and Health System. Graduate Medical Trainees must be supervised by teaching staff in such a way that trainees assume progressively increasing responsibility according to their level of education, ability, and experience. This document describes the principles and general guidelines for the supervision of trainees in the Duke University Health System. Individual graduate medical training programs may require additional supervision, and the guidelines for supervision in such programs will be described in their separate program documents. The education of graduate medical trainees requires a partnership of teaching physicians, teaching hospitals, and educational organizations. The policies outlined here provide a framework into which are integrated the pertinent policies of the Private Diagnostic Clinic (PDC), the bylaws of Duke University Hospital, and the standards of educational accrediting agencies. In addition to providing an environment for outstanding trainee education and clinical experience, these policies are expected to support the goal of delivering high quality patient care.

Definitions

- **Attending Physician:** A licensed independent practitioner who holds admitting and/or attending Physician privileges consistent with the requirements delineated in the Bylaws, Rules and Regulations of the Medical Staff of Duke University Hospital or with the requirements delineated in the governing regulations of the assigned and approved off-site healthcare entity.
- **Trainee:** A physician who participates in an approved graduate medical education (GME) program. The term includes interns, residents, and fellows in GME programs approved by the Duke Institutional Committee on Graduate Medical Education. (A medical student is never considered a graduate medical trainee).

Attending Physician Responsibilities

- In hospitals participating in a professional graduate medical education program(s), the medical staff has a defined process for supervision of each participant in the program(s) in carrying out patient care responsibilities. Such supervision will be provided by an attending physician with appropriate clinical privileges, with the expectation that the graduate medical trainee will develop into a practitioner who has the knowledge, skills and experience and abilities to provide care to the patients with the disease states applicable to his/her training program.
- The medical staff has overall responsibility for the quality of the professional services provided by individuals with clinical responsibilities. In a hospital, the management of each patient's care (including patients under the care of participants in professional graduate medical education programs) is the responsibility of a member of the medical staff with appropriate clinical privileges. Therefore, the medical staff assures that each participant in a professional graduate medical education program is supervised in his/her patient care responsibilities by a member of the medical staff who has been granted clinical privileges through the medical staff process.
- Each Program Training Director is responsible for providing written descriptions of the role, responsibilities, and patient care activities of participants in professional graduate medical education programs to the medical staff. It is the obligation of each attending physician to be knowledgeable of these responsibilities.
- The position of attending physician entails the dual roles of providing quality patient care and effective clinical teaching. Although some of this teaching is conducted in the classroom setting, the majority of it is through direct contact, mentoring, and role modeling with trainees. All patients

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seen by the trainee will have an assigned attending physician. The attending physician is expected to:

- Exercise control over the care rendered to each patient under the care of a resident, either through direct personal care of the patient or through supervision of medical trainees and/or medical personnel.
- Document the degree of participation according to existing hospital policies.
- Effectively role model safe, effective, efficient and compassionate patient care and provide timely
- Documentation to program directors required for trainee assessment and evaluation as mandated by the program's Residency Review Committee (RRC), where applicable.
- Participate in the educational activities of the training programs, and as appropriate, participate in institutional orientation programs, educational programs, and performance improvement teams, and institutional and departmental educational committees.
- Review and co-sign the history and physical within 24 hours,
- Review progress notes, and sign procedural and operative notes and discharge summaries.
- In general, the degree of attending involvement in patient care will be commensurate with the type of care that the patient is receiving and the level of training, education and experience of any medical trainee(s) involved in the patient's care.
- The intensity of supervision required is not the same under all circumstances; it varies by specialty, level of training, the experience and competency of the individual trainee, and the acuity of the specific clinical situation. An Attending may provide less direct personal care of a patient seen for routine care when supervising a senior level trainee, and may provide more direct personal care of a patient receiving complex care when supervising a junior level trainee. An Attending physician may authorize the supervision of a junior trainee by a more senior level trainee based on the attending physician's assessment of the senior level trainee' experience and competence, unless limited by existing or future hospital policies, such as the use of lasers.
- Medical care teams frequently are involved in the management of patients and many different physicians may act as the attending physician at different times during the course of a patient's illness. However, within the medical care team, the faculty attending physician must provide personal and identifiable service to the patient and/or appropriate medical direction of the trainee and when the trainee performs the service as part of the training program experience.
- The following are specific instances in which involvement of the attending physician is required.
- For Inpatient Care:
 - Review the patient's history, the record of examinations and tests, and make appropriate reviews of the patient's progress;
 - Examine the patient within 24 hours of admission, when there is a significant change in patient condition, or as required by good medical care;
 - Confirm or revise the diagnosis and determine major changes in the course of treatment to be followed;
 - Either perform the physician's services required by the patient or supervise the treatment so as to assure that appropriate services are provided by trainees or others, and that the care meets a proper quality level;
 - Be present and ready to perform any service that would be performed by an attending physician in a nonteaching setting. For major surgical or other complex, high-risk medical procedures, the attending physician must be immediately available to assist the trainee who is under the attending physician's direction;

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- Make decision(s) to authorize or deny elective and urgent admissions, discharge from an inpatient status or release from observation or outpatient status;
 - When an in-patient is to be transferred to another service, the attending physician or a designee of the referring service shall inform the patient of the change in service as soon as possible prior to the transfer. The receiving service shall assign a new attending physician who shall accept responsibility for patient care. Confirmation of the transfer to another level of care or acceptance of patients in transfer is the responsibility of the attending physician.
 - An attending physician's decision shall be required to authorize an in-patient's discharge, or release from observation or outpatient status.
 - Issue all "No Code" or DNR orders. "No Code" or DNR orders shall be issued only by an attending physician. In extenuating circumstances the order may be issued by the attending physician verbally, by telephone, while the responsible registered nurse and trainee listen to and witness the verbal-telephone order; such verbal-telephone order shall be signed 2010 - 2011 GME Trainee Manual - 100 - February 2, 2010 within twenty-four hours of issuance by the attending physician.
 - Assure a completed history and physical and a completed, appropriately signed, and witnessed consent form is placed in the patient's record prior to the performance of an operative or invasive procedure involving substantial risk.
 - Assure appropriate documentation is made immediately in the medical record when a procedure is completed on a patient.
- For Outpatient Care:
 - The extent and duration of the attending's physical presence will be variable, depending upon the nature of the patient care situation, the type and complexity of the service. The responsibility or independence given to trainees depends on their knowledge, manual skills and experience as judged by the responsible attending physician. The attending physician supervisor must be designated and available to all sites of training in accordance with Accreditation Council for Graduate Medical Education (ACGME) institutional and program requirements and specific departmental policies.

Graduate Medical Trainee Responsibilities

- Each graduate medical trainee physician must meet or may exceed the qualifications for appointment to Associate member of the Medical Staff of Duke Hospital, whether in an Accreditation Council for Graduate Medical Education (ACGME) or non-ACGME graduate medical education program.
- Graduate Medical Trainees are expected to
 - Participate in care at levels commensurate with their individual degree of advancement within the teaching program and competence, under the general supervision of appropriately privileged attending physicians.
 - Perform their duties in accordance with the established practices, procedures and policies of the institution and those of its programs, clinical departments and other institutions to which the trainee is assigned.
 - Adhere to state licensure requirements, federal and state regulations, risk management and insurance requirements, and occupational health and safety requirements.

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- Fulfill all institutional requirements, such as attending the Graduate Medical Trainee Orientation, maintaining BLS/ACLS certification, completing required instructional exercises, as detailed in their annual Agreement of Appointment.

This policy is consistent with that of Duke's Graduate Medical Education, Associate Dean and DIO; approved by the GMEC (ICGME) and by ECMS October 21, 2002.